Initial Study
Trimble and Agnews Municipal Groundwater Wells

TRIMBLE AND AGNEWS MUNICIPAL GROUNDWATER WELLS

File No. ER20-015

Prepared by

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

February 2021

MITIGATED NEGATIVE DECLARATION

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

PROJECT NAME: Trimble and Agnews Municipal Groundwater Wells Project

PROJECT FILE NUMBER: ER20-015

PROJECT DESCRIPTION: Public project to construct four new municipal groundwater production wells, along with associated connections to the existing potable water distribution system, at two separate locations to secure additional sources of potable water supplies for its North San Jose/Alviso Service Area.

PROJECT LOCATION: North of Trimble Road; West of Cabrillo Road

ASSESSORS PARCEL NO.: 101-18-004, 097-04-042 **COUNCIL DISTRICT:** 4

APPLICANT CONTACT INFORMATION: City of San Jose Environmental Services Department (Attn: Juan Renteria), 200 E. Santa Clara Street, CA, 95113, (408) 277-3671

FINDING

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

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

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

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

C. AIR QUALITY.

Impact AIR-1: Project construction could have temporary air quality impacts on nearby sensitive receptors.

MM AIR-1:

- 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 offsite 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 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 visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours.

D. BIOLOGICAL RESOURCES.

Impact BIO-1: Implementation of the Project could have a substantial adverse effect on nesting raptors, other migratory birds, and their nests.

MM-BIO-1:

Construction activities shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st (inclusive). If possible, the necessary tree and any vegetation removal shall be conducted before the start of breeding bird season to minimize the opportunity for birds to nest at the Project sites and conflict with Project construction activities.

If construction cannot be scheduled to occur between September 1st and January 31st (inclusive) to avoid the nesting season, Municipal Water or its contractor shall retain a qualified wildlife biologist to conduct a survey for nesting raptors and migratory birds no more than 14 days prior to the initiation of demolition/construction activities during the breeding season (February 1st through August 31th, inclusive) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May 1st through August 31st, inclusive). The retained qualified wildlife biologist would also conduct a survey for nesting raptors and migratory birds after any construction breaks of 14 days or more, within 7 days prior to the resumption of construction. Pre-construction surveys for nesting raptors and other migratory nesting birds shall be conducted for the Project area and for suitable habitat within 300 feet of the site. Construction activities that are

scheduled to begin outside the breeding season (September 1st through January 31st, inclusive) can proceed without surveys.

If an active nest is found in or close enough to the Project area to be disturbed by construction activities, a construction free buffer zone shall be established around the nest. Buffer zones are typically 300 feet (radius) for raptors and 100 feet (radius) for other birds; however, the buffer zone widths may be adjusted if an obstruction, such as a building, is within line-of-sight between the nest and construction. The construction free buffer zone shall be marked with flagging or fencing that is easily identified and avoided by the construction crew, and shall not affect the nesting birds. Buffer zone widths and other avoidance measures may be modified based on consultation with California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS). The construction-free buffer zones shall be maintained until after the nesting season has ended, or as long as the nest is active or young remain in the area and are dependent on the nest.

Prior to construction during the nesting bird season, all workers shall take part in an environmental awareness program conducted by an agency approved biologist. The biologist shall train work crews in standard procedures for identifying and avoiding impacts to all special-status species with the potential to occur in the work area. The awareness program shall be conducted at the start of construction and thereafter as required for new construction personnel. A sign-in sheet for crew receiving the training shall be maintained on file by the Project proponent.

Municipal Water shall notify the Director of Planning Building and Code Enforcement or Director's Designee when the mitigation actions will occur for approval prior to the start of construction.

Impact BIO-2: Implementation of the project could have a direct impact on Tricolor Blackbirds.

MM BIO-2:
To avoid or minimize direct impacts of Project activities on Tricolored blackbirds, the Project proponent shall ensure the following procedures are implemented consistent with the Habitat Plan. This survey methodology is consistent with accepted survey protocols for this species under Habitat Plan.

Preconstruction Survey: If the Project cannot avoid potential nesting habitat and establish a 250-foot buffer, a nesting survey shall be conducted. Prior to any construction activities, a qualified biologist shall:

1. Determine if there has been nesting at the site in the past 5 years. This includes checking the CNDDB, contacting local experts, and looking for evidence of historical nesting (i.e., old nests).
2. If no nesting in the past 5 years is evident, a qualified biologist shall conduct a preconstruction survey in areas identified in the habitat survey as supporting potential tricolored blackbird nesting habitat. Surveys shall be made at the appropriate times of year when nesting use is expected to occur. The nesting season for most birds in the San Francisco Bay area extends from February 1st through August 31st (inclusive). The surveys shall document the presence or absence of nesting colonies of tricolored blackbird. Surveys shall conclude no more than two calendar days prior to construction.

If a tricolored blackbird nesting colony is present (through step 1 or 2 above), a 250-foot buffer shall be applied from the outer edge of all riparian vegetation associated with the Project site; the site plus the buffer shall be avoided (see below for additional avoidance and minimization details). CDFW shall be notified immediately of nest locations. Municipal Water shall also notify the

Director of Planning Building and Code Enforcement or Director's Designee when the mitigation actions will occur for approval prior to the start of construction.

Avoidance and Minimization: The Project proponent shall avoid tricolored blackbird nesting habitat that is currently occupied or has been used in the past 5 years. If tricolored blackbird colonies are identified during the breeding season, the Project proponent shall be prohibited within a 250-foot no-activity buffer zone around the outer edge of all hydric vegetation associated with the colony. This buffer may be reduced in areas with dense forest, buildings, or other habitat features between the construction activities and the active nest colony, or where there is sufficient topographic relief to protect the colony from excessive noise or visual disturbance.

Depending on site characteristics, the sensitivity of the colony, and surrounding land uses, the buffer zone may be increased. Construction activities potentially affecting a colony shall be observed by a qualified biologist to verify that the activity is not disrupting the colony. If it is, the buffer shall be increased. The qualified biologist shall coordinate with CDFW and evaluate exceptions to the minimum no-activity buffer distance on a case-by-case basis.

Construction Monitoring: If construction takes place during the breeding/nesting season (February 1st through August 31st, inclusive) when an active colony is present, a qualified biologist shall monitor construction to ensure that the 250-foot buffer zone is enforced. If monitoring indicates that construction outside of the buffer is affecting a breeding colony, the buffer shall be increased if space allows (e.g., move staging areas farther away). If space does not allow, construction shall cease until the colony abandons the site or until the end of the breeding/nesting season, whichever occurs first. The qualified biologist shall also conduct training of construction personnel on the avoidance procedures, buffer zones, and protocols in the event that tricolored blackbirds fly into an active construction zone (i.e., outside the buffer zone).

Impact BIO-3, 4: Protected trees may be disturbed or removed by construction operations.

MM BIO-3:
Protected trees to be removed at the Agnews site shall be replaced in accordance with the City of San José Parks, Recreation, and Neighborhood Services Park Tree Removal Policy. The Project proponent shall retain a certified arborist to survey trees proposed for removal and trees potentially exposed to construction disturbance in the Project site and identify and evaluate protected trees that will be removed. A tree that has a trunk greater than 18 inches in diameter (56 inches in circumference measured at 2 feet from the ground) should be replaced at a 4:1 ratio, pending a site evaluation and resource review. Below that measurement, tree replacement at a 1:1 ratio should be done. The certified arborist may be consulted to assist with selecting an appropriate replacement species for the site.

MM BIO-4:
The Project proponent shall implement the following tree-protection measures prior to and during Project construction.

- Retain a certified arborist to oversee protection of native trees to be retained on the Project site.
- Require that any tree or root pruning occurring for construction is first approved by the certified arborist.
- Require that the certified arborist evaluate injuries to retained trees as soon as possible for appropriate treatment.

Impact BIO-5: The project may impact landcover types and special status species under the Santa Clara Valley Habitat Plan.

MM BIO-5:
The project is subject to applicable Habitat Plan conditions and fees (including the nitrogen deposition fee) prior to the start of construction. The Project proponent would be required to submit the Santa Clara Valley Habitat Plan Coverage Screening Form to the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee for approval and payment of the nitrogen deposition fee prior to the start of construction.

E. CULTURAL RESOURCES

Impact CUL-1: Implementation of the Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to Section §15064.5

MM CUL-1:
If archaeological resources, including resources determined to be tribal cultural resources, are encountered by construction personnel during Project implementation, all construction activities within 100 feet shall halt and the contractor shall notify the Municipal Water personnel and the Director of Planning, Building and Code Enforcement or Director's Designee. The work shall not commence again until a qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualification Standards for archaeology, can assess the significance of the find. Municipal Water or its contractor shall retain a Secretary of the Interior-qualified archaeologist to inspect the findings within 24 hours of discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, hand stones, or milling slabs); battered stone tools, such as hammer stones and pitted stones. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

If the City determines, based on recommendations from a qualified archaeologist and a Native American representative (if the resource is Native American-related), that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in PRC Section 21080.3), the resource shall be avoided if feasible. If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is Native American-related), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3). The documentation shall be submitted the Director of Director of Planning, Building and Code Enforcement or Director's Designee.

Impact CUL-2: Implementation of the Project could disturb human remains, including those interred outside of formal cemeteries

MM CUL-2:

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

1. The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being given access to the site.
2. The MLD identified fails to make a recommendation; or
3. The landowner or his authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

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

G. GEOLOGY AND SOILS

Impact GEO-1, 2: Project construction and operation could impact geologic soils and paleontological resources.

MM GEO-1:

- To avoid or minimize potential damage from seismic shaking, the project shall be constructed using standard engineering and seismic safety design techniques. The design and construction of facilities at the site shall be completed in conformance with the recommendations of an approved geotechnical investigation. The report shall be reviewed and approved by the City of San José Department of Public Works as part of the project review process. The facilities shall meet the requirements of applicable Building and Fire Codes as adopted or updated by the City, as applicable. The project facilities shall be designed to withstand soil hazards identified on the site and the project shall be designed to reduce the risk to life or property on site and off site to the extent feasible and in compliance with the Building Code.
- All excavation and grading work shall be scheduled in dry weather months or construction sites shall be weatherized.
- Stockpiles and excavated soils shall be covered with secured tarps or plastic sheeting.
- Ditches shall be installed to divert runoff around excavations and graded areas if necessary.
- The project shall be constructed in accordance with the standard engineering practices in the California Building Code, as adopted by the City of San José. A grading permit from the San José Department of Public Works shall be obtained prior to the issuance of a Public Works clearance. These standard practices would ensure that the future facilities on the site are designed to properly account for soils-related hazards on the site.

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

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

I. HAZARDS AND HAZARDOUS MATERIALS.

Impact HAZ-1: Project construction has the potential to disturb contaminated soils that may post a risk to the environment and construction workers if exposed.

MM HAZ-1:
Prior to issuance of a grading permit, the City shall contract with a qualified environmental contractor to obtain and analyze representative surface soil samples for the proposed areas of soil disturbance located at the Trimble site in accordance with the findings of the Phase I Environmental Site Assessment, dated May 20, 2020. The soil sample collection, analysis of results, and recommendations for development of a health and safety plan, soil and groundwater management plan, or further characterization or remediation, if any, shall be provided to the Director of Planning, Building, and Code Enforcement or the Director's Designee, and the Environmental Compliance Officer in the City of San José's Environmental Services Department, and implemented accordingly.

J. HYDROLOGY AND WATER QUALITY

Impact HYD-1: Project construction has the potential to produce erosion and stormwater pollution.

MM HYD-1:
Contract specifications for the construction contractor shall include requirements to implement the following best management practices, as applicable to site specific conditions, and without limitation:

- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities shall be suspended during periods of high winds.
- All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
- Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
- All trucks hauling soil, sand, and other loose materials shall be covered and all trucks shall maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the

construction sites shall be swept daily (with water sweepers).

- Vegetation in disturbed areas shall be replanted as quickly as possible.
- All unpaved entrances to the site shall be filled with rock to remove mud from tires prior to entering City streets. A tire wash system shall be installed if requested by the City.
- The project applicant shall comply with the City of San José Grading Ordinance, including implementing erosion and dust control during site preparation and with the City of San José Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction.

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

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

M. NOISE

Impact NOI-1: Project construction could have temporary noise impacts on nearby sensitive receptors.

MM NOI-1:
The following noise reduction measures shall be implemented by the project proponent to reduce the impact of temporary construction-related noise on nearby receptors:

1. Limit construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities shall be permitted on the weekends at sites within 500 feet of a residence.
2. Require construction equipment and trucks used for project construction to utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) that are maintained in good condition and appropriate for the equipment.
3. Prohibit unnecessary idling of internal combustion engines. Turn off construction equipment when not in use, where applicable.
4. Locate stationary equipment such as air compressors and portable power generators, construction staging areas, and construction material areas as far from offsite receptors as possible. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses to minimize noise exposure to receptors.
5. Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
6. Utilize "quiet" equipment for air compressors and other stationary noise sources where technology exists. Require any impact equipment used for project construction to be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, the use of an exhaust muffler on the compressed air exhaust is recommended to lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment should also be incorporated to achieve a further reduction of 5 dBA. In the event that external jackets on impact equipment are not feasible, other BMP techniques shall be employed to reduce noise by 5 dBA. Whenever feasible, require the use of quieter procedures.

7. When construction takes place within 100 feet of sensitive receptors, use specific techniques such as, but not limited to, use of sound blankets on construction equipment, and the use of temporary plywood walls and noise barriers to block and deflect noise.
8. Notify neighbors within 300 feet of the project site of the construction schedule in writing, at least 10-days prior to start of construction. The notification shall provide the start date of construction, construction activities, the duration of construction activity, and construction hours for the project. The same information shall also be conspicuously posted at each project site.
9. Designate a "disturbance coordinator" who will be responsible for responding within 24-hours to any complaints regarding construction noise. The coordinator will determine the cause of the complaint and will require that reasonable measures to correct the problem, be implemented.
10. If complaints are received or excessive noise levels cannot be reduced using the measures above, erect a temporary noise control blanket barrier along surrounding the construction activity(ies) that face the construction sites.
11. A daytime and nighttime telephone number for the noise disturbance coordinator shall be conspicuously posted

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

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

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

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

R. TRIBAL CULTURAL RESOURCES

Impact TRC-1: Implementation of the Project could cause a substantial adverse change in the significance of a tribal cultural resource pursuant to §21074.

See Cultural Resources section, above for MM CUL-1 and MM CUL-2.

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

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

U. MANDATORY FINDINGS OF SIGNIFICANCE

Cumulative impacts would be less than significant. The proposed Project would implement the identified mitigation measures and would have either have no impacts or less-than-significant impacts on riparian habitat or other sensitive natural communities, migration of species, or applicable biological resources protection ordinances. Therefore, the proposed Project would not contribute to any cumulative impact for these resources. The Project would not cause changes in

the environment that have any potential to cause substantial adverse direct or indirect effects on human beings.

PUBLIC REVIEW PERIOD

Before 5:00 p.m. on **Monday, April 5th, 2021** any person may:

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

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

Rosalynn Hughey, Director
Planning, Building and Code Enforcement

03/10/2021
Date

Deputy

Kara Hawkins
Environmental Project Manager

Circulation period: **March 16th, 2021 to April 5th, 2021**

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CHAPTER 1
Introduction

1.1 Purpose of the Initial Study

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

The Project would construct four new municipal groundwater production wells, along with associated connections to the existing potable water distribution system, at two separate locations to secure additional sources of potable water supplies

1.1.1 Public Review Period

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

Kara Hawkins, Planner
City of San José
Department of Planning, Building, and Code Enforcement
200 East Santa Clara Street, Third Floor
San José, California 95113

kara.hawkins@sanjoseca.gov

1.1.2 Consideration of the Initial Study and Project

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

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CHAPTER 2
Project Information

2.1 Project Title

Trimble and Agnews Municipal Groundwater Wells

2.2 Lead Agency Contact

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

Environmental Review

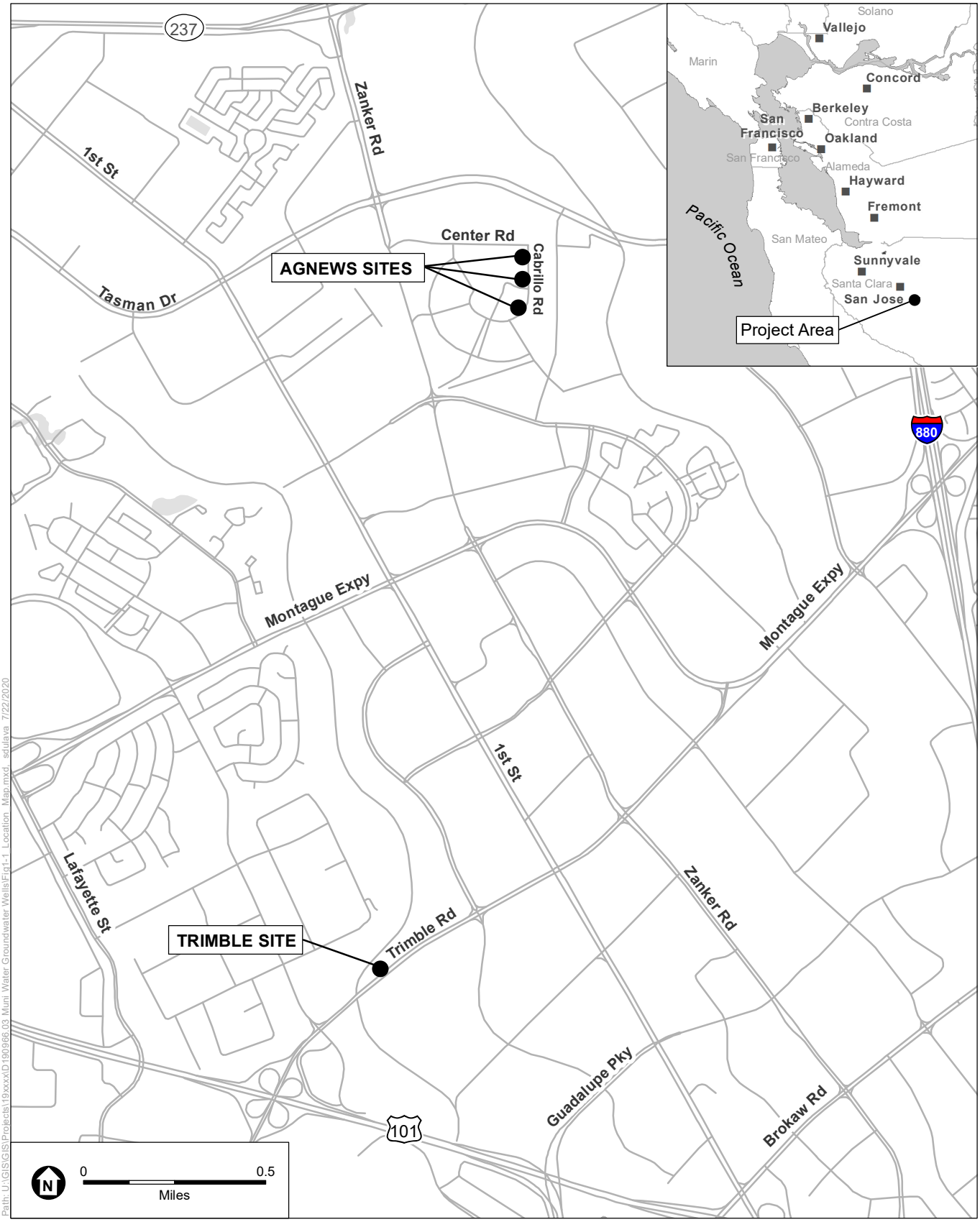
Kara Hawkins, Planner
Environmental Planning, City of San José
Planning, Building & Code Enforcement
200 East Santa Clara Street, 3rd Floor
San José, CA 95113
Phone: (
Email: kara.hawkins@sanjoseca.gov

2.3 Project Applicant

City of San José Environmental Services Department
Water Resources Division
3025 Tuers Rd
San José, CA 95121
Contact: Juan Renteria, Engineer
Phone: (408) 277-3671
Email: Juan.Renteria@sanjoseca.gov

2.4 Project Location

The City has identified two candidate sites for the municipal groundwater wells, the Trimble Site and the Agnews Site. Both are shown in **Figure 2-1** and described below:



SOURCE: ESA, 2020

Trimble and Agnews Municipal Groundwater Wells

Figure 2-1
Regional Location Map

ESA

Trimble. One well (NSJ #5) is proposed at the approximately 1.02-acre Trimble site. The Trimble site is located at 491 West Trimble Road on an existing San José Municipal Water System (SJMWS) property.

Agnews. Three wells (NSJ #6, NSJ #7, and NSJ #8) are proposed within an approximately 1.6-acre portion of the 22-acre Agnews East Parklands Project area at the Agnews site. The Agnews site is located off Zanker Road, near the corner of Cabrillo Road and Center Road, at the former Agnews Hospital site, now proposed as City park property known as the Agnews East Parklands Project (City of San José 2014).

2.5 Assessor's Parcel Numbers

- Trimble: Assessor's Parcel No.: 101-18- 004
- Agnews: Assessor's Parcel No.: 097-04-042

2.6 General Plan Designation and Zoning District

The Trimble site has an Envision San José 2040 General Plan (General Plan) land use designation of Industrial Park and is located in the Industrial Park zoning district.

The Agnews site has a General Plan land use designation of Public/Quasi-Public and is located in the Industrial Park zoning district.

2.7 Habitat Plan Designation

Trimble

- Land Cover Designation: Urban - Suburban
- Fee Zone: Urban Areas (No Land Cover Fee)
- Wildlife Survey Area: Tricolored Blackbird

Agnews

- Land Cover Designation: Urban - Suburban
- Fee Zone: Urban Areas (No Land Cover Fee)
- Wildlife Survey Area: N/A

2.8 Project-Related Approvals, Agreements and Permits

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

Federal

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

State

- SWRCB Drinking Water Division – Domestic Water System Permit Amendment

Local/Regional

- Santa Clara Valley Water District– Well permit
- Bay Area Air Quality Management District – Permit to construct and Permit to operate emergency stationary diesel engine
- City of San José– City Council certification of the Focused Initial Study

CHAPTER 3
Project Description

3.1 Project Overview

The City proposes to construct four new municipal groundwater production wells, along with associated connections to the existing potable water distribution system, at two separate locations to secure additional sources of potable water supplies for its North San Jose/Alviso Service Area. The Project includes drilling of boreholes up to 800 feet in depth and the installation of steel casings, gravel packs, contamination sealants/screenings, submersible pumps, motors, and power supplies. Pipes and appurtenances would also be installed to connect the groundwater wells to the existing distribution system.

The Project is being evaluated in accordance with the California Environmental Quality Act (CEQA) to identify the physical environmental impacts of the Project. The City is the CEQA Lead Agency.

3.2 Existing Setting

The Trimble site is owned by the City, and a majority of the site is paved and developed. The proposed well site would be located adjacent to an existing pump station and 3-million-gallon above ground reservoir (storage tank) on a strip of bare ground containing sparse ruderal vegetation. This location is within the fenced area between the storage tank and the adjacent Guadalupe River trail. The Trimble site is bordered by the Guadalupe River Trail to the north and west, commercial development to the east, and Trimble Road and commercial development to the south.

The Agnews site lies parallel to Cabrillo Road and consists of a combination of paved areas and areas containing either bare ground or ruderal vegetation. It is bordered by industrial land uses to the north and east, and the on-going construction of Santa Clara Unified School District campus in the south. Based on plans for the proposed school campus, the nearest school buildings would be located 640 feet from the proposed wells locations at the Agnews site. The wells would be located within the boundary of the proposed Agnews East Parklands Project area, which extends west of the proposed well sites (City of San José 2014).

3.3 Background

The City operates the SJMWS, a retail water supplier that provides water service within the City of San José. SJMWS is one of three drinking water suppliers in San José, along with privately-owned San Jose Water Company and Great Oaks Water Company. The SJMWS supplies potable

drinking water to four service areas: North San José (NSJ)/Alviso, Evergreen, Edenvale, and Coyote Valley (**Figure 3-1**).

The SJMWS relies on three sources of potable water supply for its four service areas: surface water from San Francisco Public Utilities Commission (SFPUC), local and imported surface water from Santa Clara Valley Water District (now called Valley Water), and groundwater from the Santa Clara groundwater basin. The SJMWS also relies on non-potable recycled water supplies from the South Bay Water Recycling (SBWR) Program. The City is served by the SFPUC under a Water Sales Contract[1] and is currently allocated for 4.5 million gallons per day (MGD) of potable water through June 2028, making the supply temporary and interruptible[2]. Groundwater is used to supplement this allocation to meet demand for potable water supply, through pumping by retail water agencies or individual well owners.

The NSJ/Alviso service area's potable water supply is comprised of primarily water from the SFPUC's Hetch Hetchy System and is supplemented by four existing groundwater wells that are owned and operated by SJMWS, with a pumping capacity of approximately 1,500 gallons per minute (gpm), each. Two of the wells are permitted to be used under normal conditions to supply water, and two are available for emergency use purposes (City of San José, 2016). Supply received by SJMWS from the SFPUC for the North San Jose/Alviso Service Area is generally considered to be consistent, except during times of prolonged drought when supplies are decreased in proportion to wholesale supplies available.

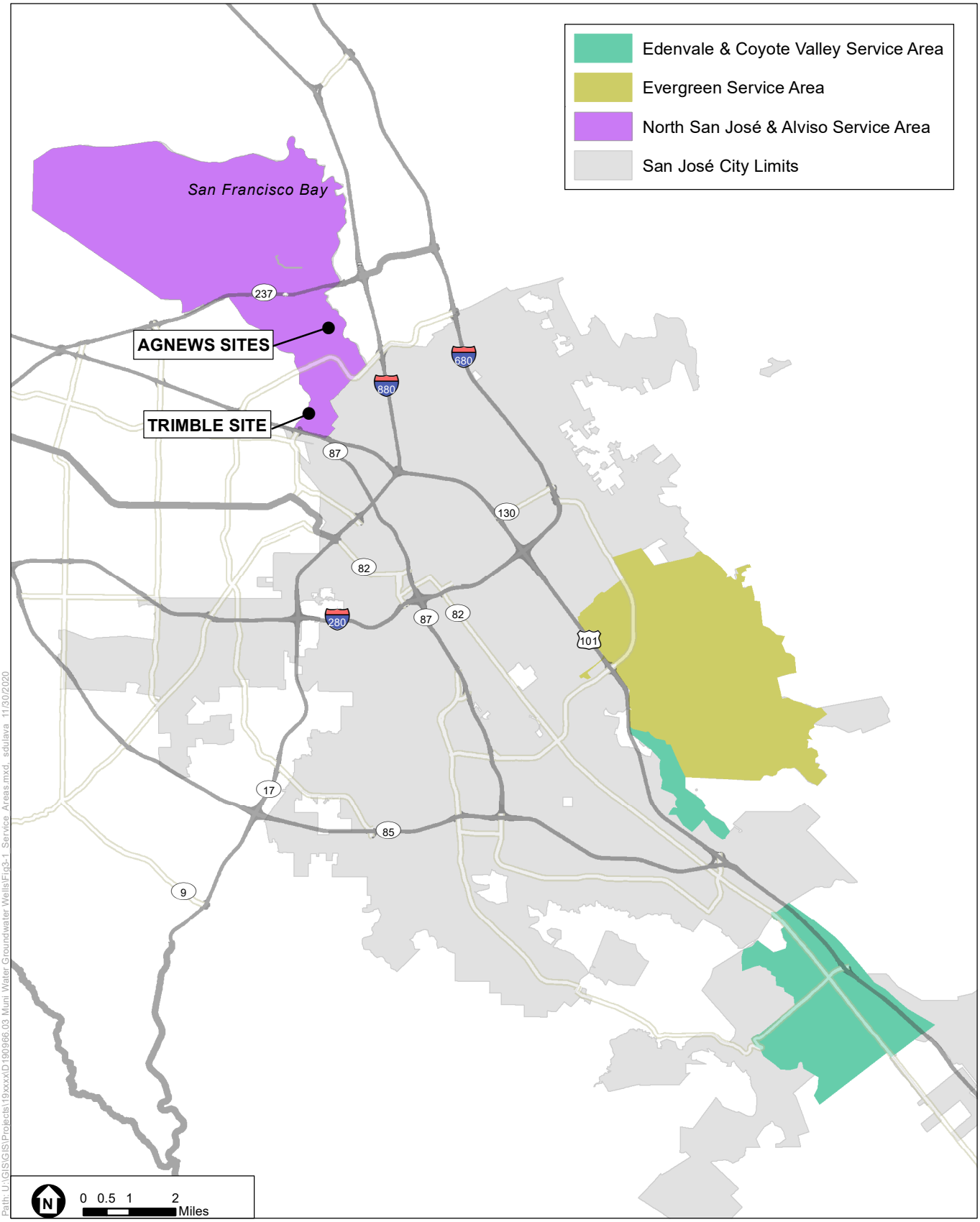
3.3.1 Historical, Existing and Projected Water Demand

The SJMWS currently provides water service to approximately 26,000 metered connections with a population of over 100,000. Population growth in SJMWS service areas is expected to increase in the next 25 years by approximately 63 percent due to proposed development identified within the Envision San José 2040 General Plan Update (City of San José 2016). As shown in **Table 3-1**, which summarizes historical, current, and projected water use in the SJMWS service area by customer type, projected water demands are expected to grow significantly through 2040.

Potable water demands are expected to nearly double in the NSJ/Alviso service area, from 4,962 acre feet per year (AFY) in 2015 to 9,887 AFY by 2040, and are described in further detail in Section 3.7, below. These demands would greatly exceed the current SFPUC potable water allocation of 4.5 MGD, or 5,041 AFY.

1 https://records.sanjoseca.gov/Contracts/CON6348980.PDF

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



SOURCE: City of San José 2016

Trimble and Agnews Municipal Groundwater Wells

Figure 3-1
San José Municipal Water System Service Areas

ESA

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

Use Type	2005	2010	2015	2020	2025	2030	2035	2040
Single Family	10,235	9,280	6,815	10,321	10,789	11,281	11,797	12,339
Multi-Family	3,224	2,050	2,689	2,556	2,835	3,130	3,439	3,763
Commercial	2,065	1,193	1,294	1,663	1,986	2,325	2,681	3,055
Industrial	2,072	2,303	2,173	3,894	5,335	6,850	8,442	10,110
Institutional/Governmental	0	327	219	295	309	324	340	357
Landscape/Irrigation	4,429	3,047	2,262	3,835	4,239	4,664	5,110	5,577
Losses	753	646	187	587	663	743	827	915
TOTAL	22,778	18,846	15,707	23,151	26,156	29,317	32,636	36,116

SOURCE: City of San José 2016

The City's 2015 Urban Water Management Plan (UWMP) describes the appropriate level of water service reliability to meet demand during normal, dry, and multiple dry years (City of San José 2016). The greatest challenge to water supply reliability is multiple dry years. Although supply in each year may be greater than in a single dry year, multiple dry year periods deplete wholesale water supply reserves. Per Valley Water's supply assessment, which was included in the UWMP, supplies are insufficient to meet demands in year 2 and year 3 of multiple dry years. Unlike a single dry year, using reserves to meet demands throughout a multiple dry year period could deplete groundwater storage to an untenable level and put northern Santa Clara County at resumed risk of land subsidence. To help bridge the gap between supplies and demands during a multi-year drought, Valley Water would likely implement a combination of calls for short-term water use reductions, use of reserves, and obtaining additional supplement supplies through transfers and/or exchanges.

3.4 Project Objectives

The specific objectives of the Project are:

- Provide backup potable water supplies for existing customers in the North San Jose/Alviso Service Area, in the event that deliveries from the SFPUC are interrupted during an emergency or during a drought.
- Secure supplemental water supplies to provide sufficient supplies to support future growth and economic development in the North San Jose/Alviso Service Area.

The City proposes to meet these objectives by constructing four municipal groundwater supply wells with a pumping capacity of approximately 2,000 gpm each to provide supplemental supplies to the NSJ/Alviso service area. The extent to which the City would be able to utilize groundwater from the proposed wells is dependent on factors including variable diurnal demands, water quality, and other operational constraints.

3.5 Project Components

One new groundwater well (NSJ #5) is proposed for the Trimble site, and up to three new groundwater wells (NSJ #6, #7 and #8) are proposed for the Agnews site.

3.5.1 Trimble Well

One municipal groundwater well, NSJ #5, is proposed at the Trimble site (**Figure 3-2**). The proposed well would be used, similar to existing wells, for the reliability of water deliveries to existing customers. When there are any short term interruptions in the SFPUC supply, the proposed groundwater well would pump groundwater into the distribution system (i.e. water main) or a future connection (not a part of the Project) to the existing tank (i.e. reservoir) at the Trimble site to supplement and blend with treated water supplies.

Well NSJ #5 is projected to have a pumping capacity of approximately 1,800 to 2,000 gpm. The vertical well would be constructed with an approximately 18-inch well casing, have a maximum borehole depth of up to 800 feet, and would be comprised of standard well components including the well casing, sanitary seal, filter pack, and well screen. A maximum 300 horsepower submersible pump would be located inside the well casing. **Figure 3-3** is illustrative, and depicts a typical well profile.

The well would tie directly to the potable water distribution system transmission main (i.e. water main) in Trimble Road. Approximately 190 linear feet of 12-inch diameter ductile iron pipe would be installed within a 48-inch deep trench from the groundwater well to the water main in Trimble Road, with a future connection point to the water storage tank (i.e., reservoir). The new well would utilize the existing power source and motor control center on site. Above ground features would not exceed one story in height (i.e., 15 feet), and would include above ground piping, control valves, and a well pump and discharge assembly.

The existing Trimble site is almost entirely paved and developed. The new well NSJ #5 would include an approximate 9-foot by 9-foot concrete pad footprint in an area that is currently not paved, between the property fence line and asphalt curb near the Guadalupe River Trail. The new pipeline would be installed under the existing paved area. Stormwater runoff is expected to drain to the existing onsite catch basin or to Trimble Road, where existing stormwater infrastructure exists.

3.5.2 Agnews Wells

Three municipal groundwater wells, NSJ #6, NSJ #7, and NSJ #8, are proposed at the Agnews site (**Figure 3-4**). The proposed wells would be used to meet future demand that is not met by SFPUC contract water and would pump groundwater supply directly into the distribution system. Each well would have a pumping capacity of approximately 1,800 to 2,000 gpm. The 18-inch diameter vertical wells would have maximum borehole depths up to 800 feet and would be comprised of standard well components as described above for well NSJ #5. Wells NSJ #6, NSJ #7, and NSJ #8 would be located approximately 300 feet apart from each other.

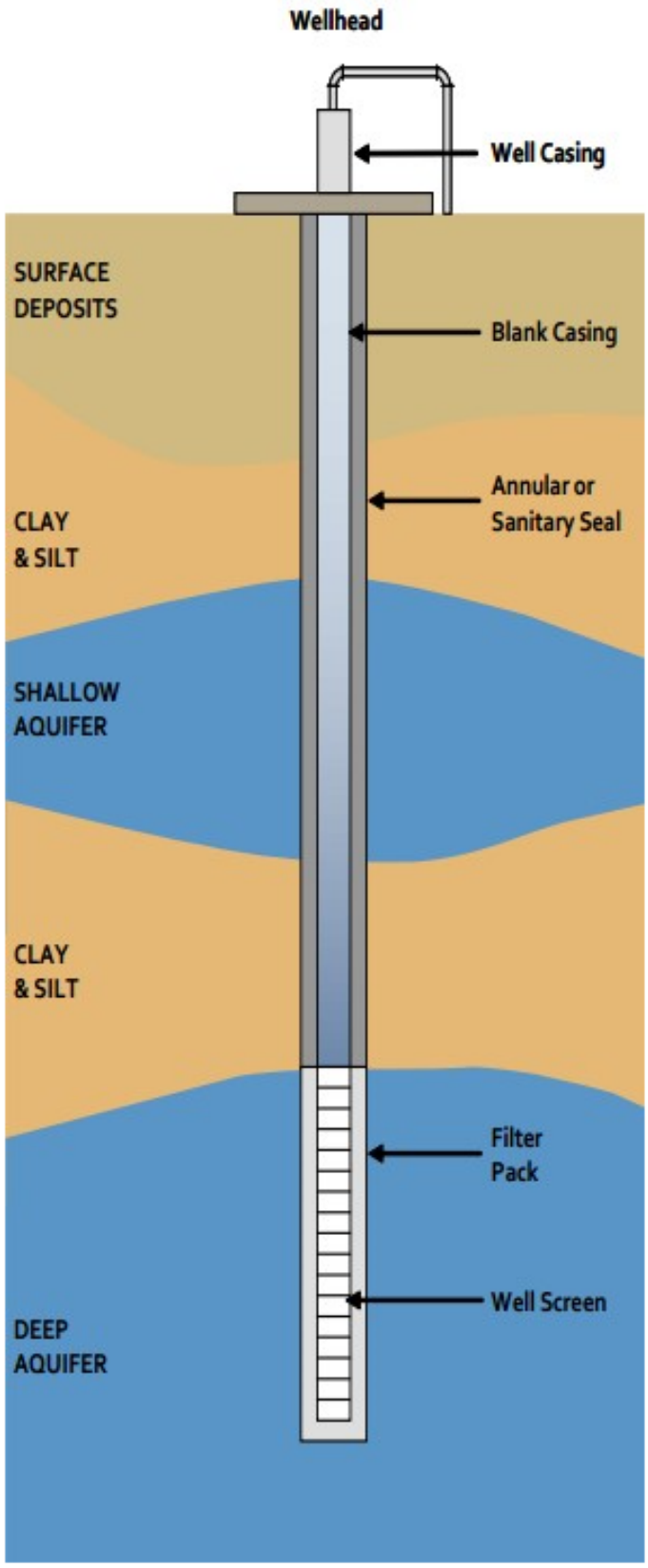
Path: U:\GIS\GIS\Projects\19xxxx\D190966.03 Muni Water Groundwater Wells\Fig3-2_Trimble3.mxd sdulava 12/8/2020

SOURCE: City of San José, Proposed Trimble Road NSJ-5 Well Site, July 2020

Trimble and Agnews Municipal Groundwater Wells

Figure 3-2
Proposed Trimble Well Site Plan

ESA



SOURCE: California Department of Water Resources

Trimble and Agnews Municipal Groundwater Wells

Figure 3-3
Vertical Well Profile

ESA

SOURCE: City of San Jose, Proposed Agnews Well Sites, July 2020

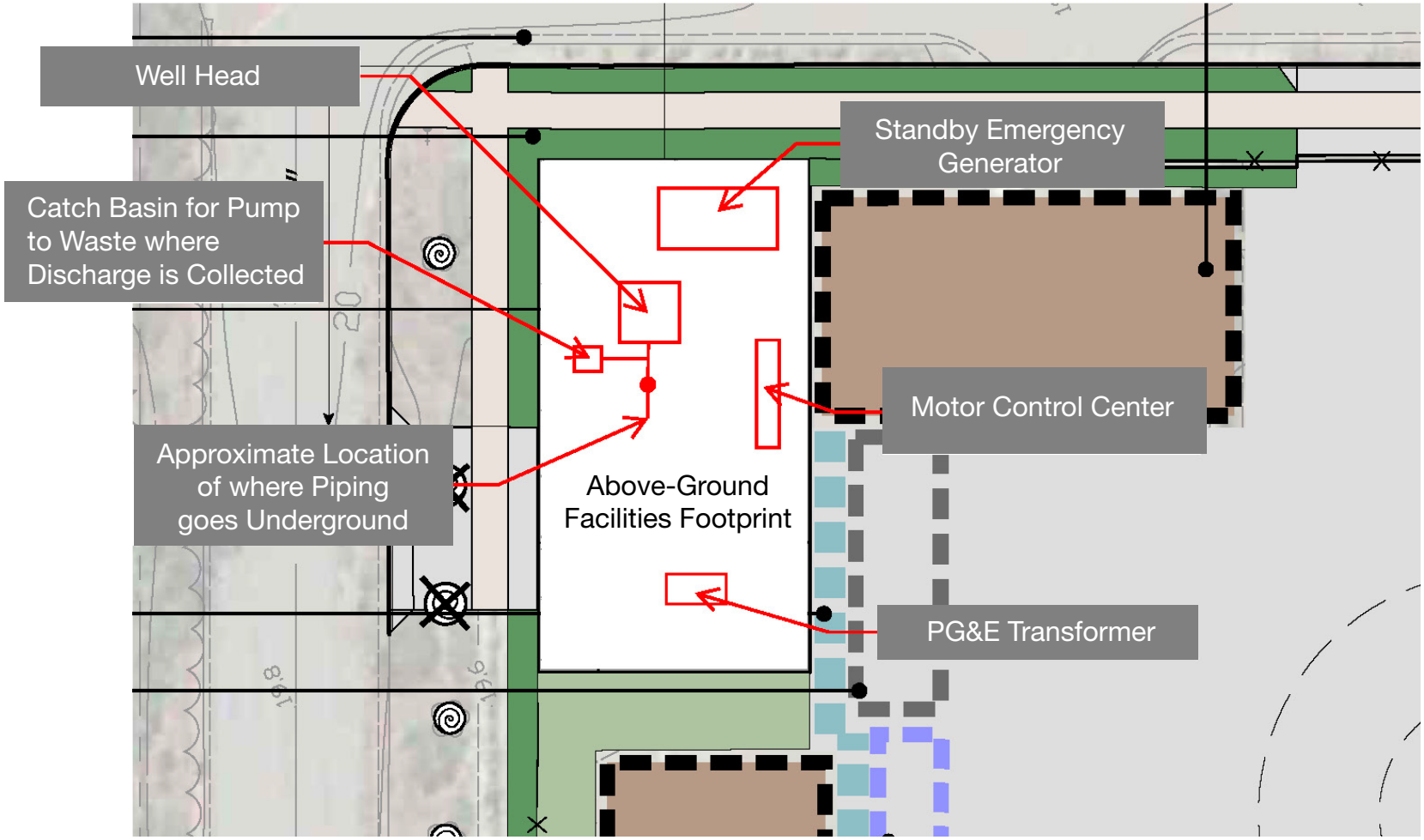
Trimble and Agnews Municipal Groundwater Wells

Figure 3-4
Proposed Agnews Wells Site Plan

ESA

The Agnews site consists of a combination of paved areas and areas containing either bare ground or ruderal vegetation. Above ground facilities would be installed within the maximum 10,000-square foot (100 feet by 100 feet) footprint for each well site. This footprint would include the motor control center, above ground piping and control valves, emergency backup generator, transformer and power plant appurtenances, storm drainage utilities, and control and communication equipment. **Figure 3-5** provides an illustrative depiction of the above ground components layout for the well. Above ground features would not exceed one story in height (i.e., 15 feet). Each well head would sit on a maximum 81-square foot (9 feet by 9 feet) concrete pad, for a total of 243 square feet of concrete padding. The motor control center for each well would have an approximately 130-square foot (26 feet by 5 feet) footprint, for a total of 390 square feet of concreate padding. A 500 kilowatt, 489-volt emergency standby diesel generator serving the three proposed wells in the event of power outage would be set in a 200-square foot (20 feet by 10 feet) covered enclosure along with a 500-gallon fuel sub tank. Approximately 3,000 linear feet of a distribution pipeline would be installed in Cabrillo Road and Center Road, where it would ultimately connect to the distribution main in Zanker Road. The distribution pipelines would consist of 18-inch diameter ductile iron pipe and appurtenances installed with a 48-inch cover from the finish grade to the top of the pipe that would connect to the distribution main in Zanker Road.

NSJ #6 would be constructed on a previously paved surface. Wells NSJ #7 and NSJ #8 would be constructed on areas directly adjacent to existing paved road and increases to impervious surfaces in the area are expected to be minimal. Storm drainage utilities would consist of a maximum 24-inch reinforced concrete pipe (RCP) that would collect runoff from a catch basin and then connect to the existing 84-inch pipe on Zanker Road. Alternatively, future stormwater runoff may eventually be routed to a planned bio-retention area in the proposed Agnews East Parklands Project area.



SFO/D190966.05 - Biosolids Disposition/05 Graphics-GIS-Modeling/Illustrator

SOURCE: City of San Jose, December 2020

Trimble and Agnews Municipal Groundwater Wells

Figure 3-5
Typical Above Ground Well Components Layout

ESA

3.6 Project Construction

3.6.1 Construction Phasing and Work Hours

Work for both the Trimble and Agnews sites will be completed between 7:00am and 7:00pm Monday through Friday, except during well drilling and well installation, which would each require 24-hour construction operations (including weekends) over an approximately 3-week period. Construction for the Trimble site, including the well and connection to the existing potable water system, would occur over approximately 18 months. Construction for the Agnews site, including all three wells and connection to the existing potable water system, would occur over approximately 30 months. Lighting required during nighttime construction periods would include a portable light tower and lights on the drill rig mast. The lights would be directed toward work areas, and consist of lights designed with low light spillover utilizing shields or other light pollution reduction features, to ensure that no fugitive light spills out into natural lands.

Trimble

Construction of well NSJ #5 would occur in two phases, as shown in **Table 3-2**, below:

TABLE 3-2
CONSTRUCTION PHASING FOR PROPOSED TRIMBLE WELL

Phase	Components	Timeframe
1	Well NSJ#5	June 2021-February 2022
2	Connections to existing potable water system	April-December 2022

Agnews

Proposed construction of wells NSJ #6, NSJ #7, NSJ #8 would occur over four phases, as shown in **Table 3-3**, below:

TABLE 3-3
CONSTRUCTION PHASING FOR PROPOSED AGNEWS WELL

Phase	Components	Timeframe[a]
1	Well NSJ #6	June 2021-February 2022
2	Connections to existing potable water system for NSJ #6	April-December 2022
3	Well NSJ #7 and Connections to existing potable water system	April-December 2023
4	Well NSJ #8 and Connections to existing potable water system	April-December 2024

NOTE:

a Construction may occur sooner for Well NSJ #7 and Well NSJ #8 than the above schedule depending on several factors such as water needs and availability of funding.

3.6.2 Construction Access and Staging

Trimble

The Trimble site is accessible from an existing approximately 15-foot wide driveway on Trimble Road, approximately a half-mile northeast from Highway 101. Construction laydown, staging, and parking (including parking for construction workers) would be onsite within the existing, paved Trimble pump station facility.

Agnews

The Agnews site is accessible from Zanker Road and through two approximately 20-foot wide driveways; one on Center Road and one on Cabrillo Road, approximately one mile southwest from Interstate 880. An existing, vacant parking lot located at the southwest corner of Center Road and Cabrillo Road would be utilized for construction laydown, staging, and parking (including parking for construction workers).

3.6.3 Construction Activities

Wells

Construction activities for the wells would be similar for both sites and would include site preparation; minimal grading and excavation; drilling, installation, and development; and testing and startup.

Site Preparation

During site preparation, trucks would deliver construction equipment and miscellaneous materials to the Project area and field offices would be set up. Removal of one mature privet, City ordinance-size tree at the well NSJ #8 site would be required.

Grading and Excavation

Approximately 9cubic yards of spoils[3] would be generated from excavation of the Trimble well site, and 230 cubic yards of spoils would be generated from drilling.

Approximately 40 cubic yards of spoils would be generated from excavation and trenching of each Agnews well site (total of 120 cubic yards), and 230 cubic yards of soil would be generated from drilling of each well (total of 690 cubic yards).

Both sites would generate a grand total of approximately 3,200 cubic yards of spoils due to excavation, drilling and trenching (refer to pipelines discussion below regarding trenching).

[3] Construction waste material like earth and rock.

There will be waste management on-site where soil cuttings would be temporarily stored in a 20-yard bin located adjacent to the rig system and subsequently hauled by truck to a Class II or Class III landfill[4], depending on the chemical composition of the soil. No excavated material will be re-used for backfill. During construction, the contractor will be responsible to find the location of acceptable landfills to haul off either hazardous or non-hazardous soil cuttings from the sites.[5]

Drilling, Installation, and Development

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

The borehole would be drilled using a truck-mounted reverse-circulation mud-rotary drilling rig. A drilling fluid would be used to cool the drill head and transport the cuttings up from the bottom of the borehole during drilling operations. Drilling fluids and initial development water (dirty water that cannot be placed into the storm drain) would be disposed of into the sanitary sewer. Before discharging to the sanitary sewer, fluids would go through a series of two filter tanks to allow solids to settle out.[6]

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

Testing and Start-up

Upon completion of well construction and prior to finalizing connections to water distribution systems, the newly installed distribution pipelines would be flushed and disinfected. At NSJ #5, the source of water for flushing would be 100 percent groundwater. This water would then be discharged to the existing storm drain system in accordance with regulatory storm discharge requirements[7]. For NSJ #6, NSJ #7, and NSJ #8, the source of water for flushing the distribution pipes as part of the disinfection would be the fire hydrant located at the NSJ #6 location or the

4 Non-hazardous waste generated during Project construction could be off-hauled to either Kirby Canyon Landfill or Newby Island Landfill (both Class III, non-hazardous waste facilities). Hazardous waste generated during Project construction could be off-hauled to Kettleman Hills Hazardous Waste Facility (a Class I - hazardous and nonhazardous and Class II – hazardous waste facility).

5 If the excavated soil from construction is considered non-hazardous material, then it would be taken to the Newby Island C&D Recycling Facility as stated in the current agreement between City of San José and International Disposal Corporation.

6 All discharge would pass through the tanks to allow for solids (primarily soil and sediment) to settle before entering the sewer system. The drilling fluids would not contain hazardous materials.

7 California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, November 19, 2015. This document is available online at https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/R2-2015-0049.pdf

existing distribution system main in Zanker Road. After disinfection, flushing will take place and de-chlorinated water will be discharged into an existing storm drain inlet on Center Road in accordance with regulatory storm discharge requirements[8]. Final development, testing, and clean artesian flow would be directed to the storm drain inlet nearest to the well locations in accordance with regulatory storm discharge requirements.[9]

Pipelines

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

Site preparation for the pipelines would be completed during the site preparation activities described above for the wells. No vegetation clearing or tree removal would be required for the pipelines. Construction of the pipelines would involve removing existing pavement, excavating trenches for the pipelines, placing the pipelines, backfilling the trenches, and restoring the asphalt surface. All pipelines would be constructed using open trench (i.e., cut and cover) techniques. Open trench construction involves saw cutting the pavement, excavating a trench, removing the soil, installing the pipeline, backfilling the trench, and installing asphalt over the backfilled trench. The approximate maximum depth of trench for the proposed pipeline will be based from City Standard Details[10] as well as the diameter of the pipe. The pipeline would have a minimum cover of 48-inches from finish grade to the top of the pipe and the maximum excavation for pipeline six feet below ground surface (bgs). The width of pipeline trenches would vary based upon pipeline diameter. Approximately 12 feet on either side of the pipeline trenches would be required for equipment use and pipeline storage during construction. Approximately 90 cubic yards of spoils would be generated from construction of the conveyance piping system at the Trimble site. Approximately 2,055 cubic yards of spoils would be generated from construction of the conveyance piping system at the Agnews site. Pipelines would be installed at a rate of approximately 100 feet per day. Isolation or gate valves would be installed at intersections and/or every 300 to 500 feet, and at the tie-ins or point of connection to the existing main.

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

3.6.4 Construction Equipment and Workforce

Most Project components would be constructed individually with a crew of up to six workers at any one time, with a maximum of 12 workers a day depending on the work activities. The size of the construction workforce would include a maximum of 24 vehicle trips per day (i.e., 12 workers). **Table 3-4** depicts truck trips required for construction:

8 Ibid.

9 Ibid.

10 https://www.sanjoseca.gov/home/showpublisheddocument?id=36466

TABLE 3-4
TOTAL CONSTRUCTION TRUCK TRIPS

Description	Trimble Site Well NSJ #5			Agnews Site Wells NSJ #6, NSJ #7, NSJ #8		
	Worker Trips/day	Material Delivery Trips/day	Hauling Trips/day	Worker Trips/day	Material Delivery Trips/day	Hauling Trips/day
Well Construction						
Site Preparation	8	2	8	8	2	8
Drilling/Installation	8	8	14	8	8	14
Development	8	0	8	8	0	8
Testing, Startup	8	0	8	8	0	8
Connections to Existing System						
Site Preparation	8	2	4	12	0	0
Construction of Appurtenant Facilities	8	2	2	12	0	0
Trenching/Installing Pipelines	8	2	4	12	2	12
Testing, Startup	4	2	2	12	0	0

Equipment to be used during construction includes:

- Reverse-circulation mud-rotary drilling rig
- Drilling fluid circulation tank ("mud tank")
- Flatbed trailer with drilling pipe
- Truck-mounted well development rig
- Concrete mixer
- Asphalt paver
- Plate Compactor
- Rollers
- Concrete/Industrial Saws
- Skid-steer loaders
- Tractor
- Backhoe
- Hydraulic crane
- Pick-up trucks
- Haul trucks
- Air Compressor
- Diesel generators

3.7 Operations and Maintenance

Groundwater would be drawn from the Santa Clara Subbasin, which is part of the Santa Clara Valley Groundwater Basin. It is anticipated that groundwater production from the new wells would supplement supply based on water demands and operational objectives. The main purpose of the wells would be for water deliveries during any short term interruptions, for periodic maintenance purposes, and/or to meet demand beyond the available supply from SFPUC. When operational, each well would be able to extract approximately 1,800 to 2,000 gpm.

Table 3-5 shows the projected potable water demands above the current SFPUC contract delivery amount, which would be expected to be met by the Project production wells. The actual annual production rate from the wells would depend on factors including the timing of demands and other operational constraints but would not conflict with the 2015 UWMP.

TABLE 3-5
PROJECTED ADDITIONAL POTABLE WATER DEMAND MET BY PROJECT (ACRE-FEET PER YEAR)

Use Type	2015	2020	2025	2030	2035	2040
NSJ/Alviso Service Area Demand	4,962	5,848	6,784	7,769	8,803	9,887
SFPUC Contract Amount	5,041	5,041	5,041	5,041	5,041	5,041
Remaining Demand Above Contract Amount	n/a	807	1,743	2,728	3,762	4,846

SOURCE: City of San José, 2016

Operation of the Trimble and Agnews wells would require routine weekly visits by facility operators to check pumps and treatment equipment and monitor performance.

Routine maintenance for the wells is anticipated to include manual measurement of groundwater levels. These regular maintenance activities would be performed by one existing City staff once a week and would not require any new additional staff for operations and maintenance. Periodic maintenance would require that the wells be taken offline to allow for removal of the pump and/or motor for service and physical or chemical well screen rehabilitation. These infrequent maintenance activities would be performed as needed by a professional well and pump service contractor. It is assumed that the well would not be operated for approximately 10 percent of the year to accommodate such maintenance.

Once constructed, a large volume of water is expected to periodically be needed to flush out of the well from the groundwater basin as part of the City's process when taking samples or when staff perform routine maintenance. Flushing could take place quarterly for sampling or as needed to comply with Division of Drinking Water requirements. This water would then be discharged to the existing storm drain system in accordance with regulatory storm discharge requirements.[11]

At the maximum pump rate of approximately 2,000 gpm and maximum annual groundwater production of approximately 4,846 AFY by 2040, the total estimated annual power requirements under the maximum production scenario are approximately 70,000 kilowatt hours per year for well NSJ #5 and 220,000 kilowatt hours per year for wells NSJ #6, NSJ #7, and NSJ #8. The well facilities would receive power from the nearby PG&E distribution system, with the addition of an electrical transformer.

[11] California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, November 19, 2015. This document is available online at https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/R2-2015-0049.pdf

References – Project Description

City of San José, 1992. *Standard Details, City of San José Department of Public Works*. July 1922.

City of San José, 2014. *Agnews East Parklands Project.* Addendum to the Final Program Environmental Impact Report for the North San José Development Policies Update (SCH# 2004102067). File No. PP14-033.

City of San José, 2016. *2015 Urban Water Management Plan San Jose Municipal Water System*. Prepared for the San Jose Municipal Water System. Prepared by Ch2M.

City of San José, 2020. *Envision San José 2040 General Plan*. Adopted November 1, 2011. Amended on March 16, 2020.

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CHAPTER 4
Evaluation of Environmental Impacts

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

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

The discussion for each environmental subject includes the following subsections:

- **Environmental Checklist –** The environmental checklist, as recommended by California Environmental Quality Act (CEQA), identifies environmental impacts that could occur if the Proposed Project is implemented. The right-hand column of the checklist lists the source(s) for the answer to each question. The sources are identified at the end of this section. The environmental checklist is included in the discussion of **Sections 4.1** to **4.10** listed above.

- **Impact Discussion** – This subsection discusses the project's impact as it relates to the environmental checklist questions. Mitigation measures are identified for all significant project impacts. Mitigation Measures are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guideline 15370).

- **Other Environmental Topics** – This subsection discusses the project's impacts on the environment for the following topics: aesthetics, agricultural and forestry resources, energy, land uses and planning, mineral resources, population and housing, public services, recreation, transportation, and wildfire.

Important Note to the Reader

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

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

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

4.1 Biological Resources

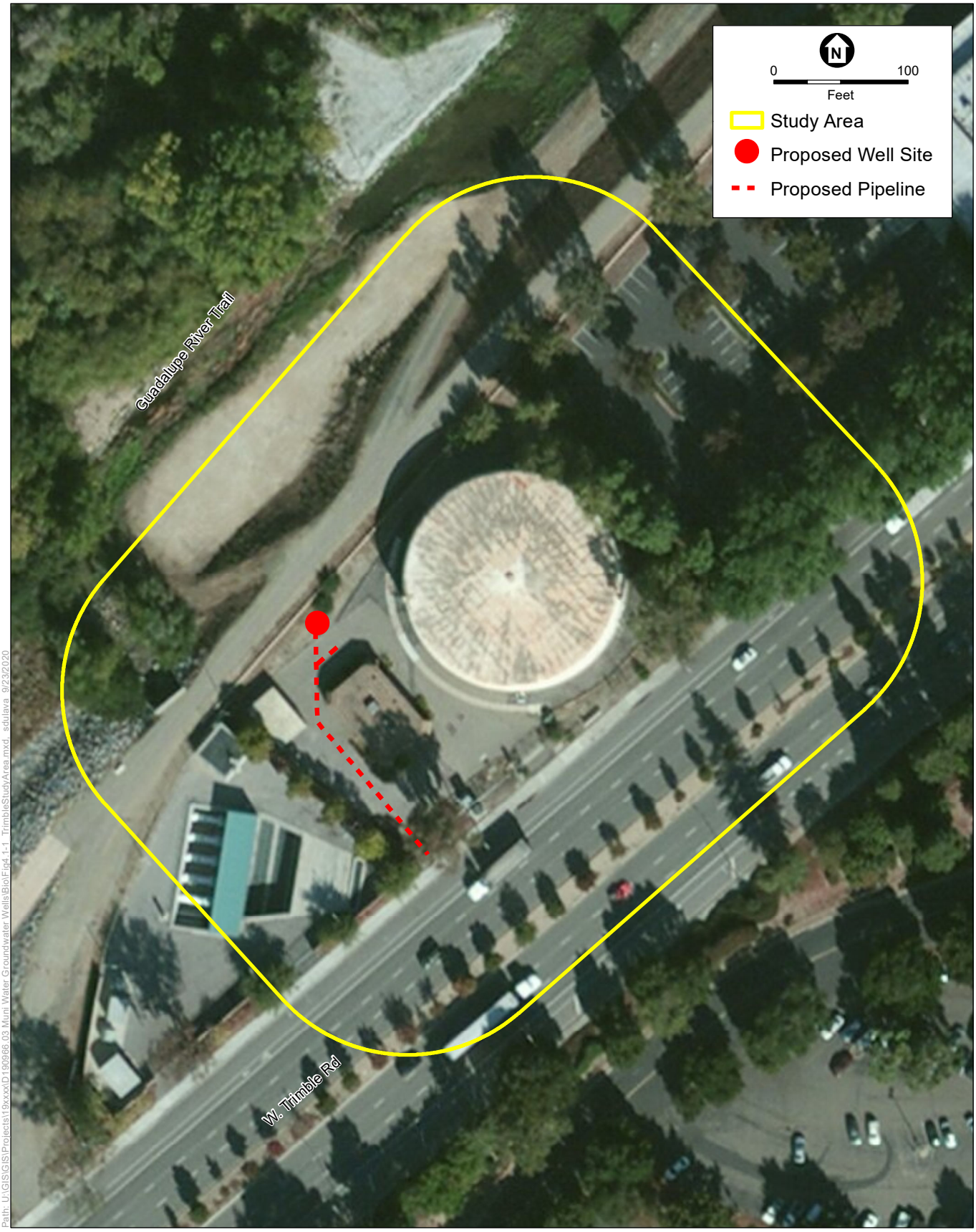
4.1.1 Environmental Setting

This section describes the existing conditions for biological resources present within the Trimble site, Agnews site, and surrounding areas. The term "study area" is used to refer to each of the Project sites and areas adjacent to the Project sites that could be indirectly impacted by Project activities. The study areas for both Trimble and Agnews include the Project sites, plus a 100-foot buffer (**Figures 4.1-1 and 4.1-2**).

The information on biological resources is based on a review of pertinent literature and database queries as well as a site visit conducted by ESA staff on February 19, 2020. The sources of reference data reviewed for this evaluation included the following:

- U.S. Fish and Wildlife Service (USFWS) list of Federal Endangered and Threatened Species that may occur in the proposed project area, and/or may be affected by the proposed project (USFWS 2020a);
- USFWS Critical Habitat for Threatened and Endangered Species (USFWS 2020b);
- The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) list of special-status species occurrences within the proposed project areas and within the Milpitas USGS 7.5-minute topographic quadrangle (CDFW 2020a);
- Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2020b); and
- Special Animals List (CDFW 2019).
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (v8-03) known to occur within the Milpitas USGS 7.5-minute topographic quadrangle (CNPS 2020);

The Trimble site is located within a mostly paved and developed area. Well NSJ #5 would be located adjacent to an existing pump station and 3-million-gallon above ground storage tank on a strip of bare ground containing sparse ruderal vegetation such as wild oats (*Avena fatua*) and cheeseweed (*Malva parviflora*) (refer to **Figure 4.1-1**). This location is within the fenced area between the storage tank and the adjacent Guadalupe River trail. The Trimble site is bordered by the Guadalupe River Trail to the north and west, commercial development to the east, and Trimble Road and commercial development to the south. Planted trees, including several mature eucalyptus trees (*Eucalyptus* sp.), are located on the east and west borders of the Trimble site. Riparian trees and vegetation are located north of the Trimble site and Guadalupe River Trail. The Trimble site is separated from the Guadalupe River, riparian vegetation, and the Guadalupe River Trail by a low retaining wall and chain-link fence.



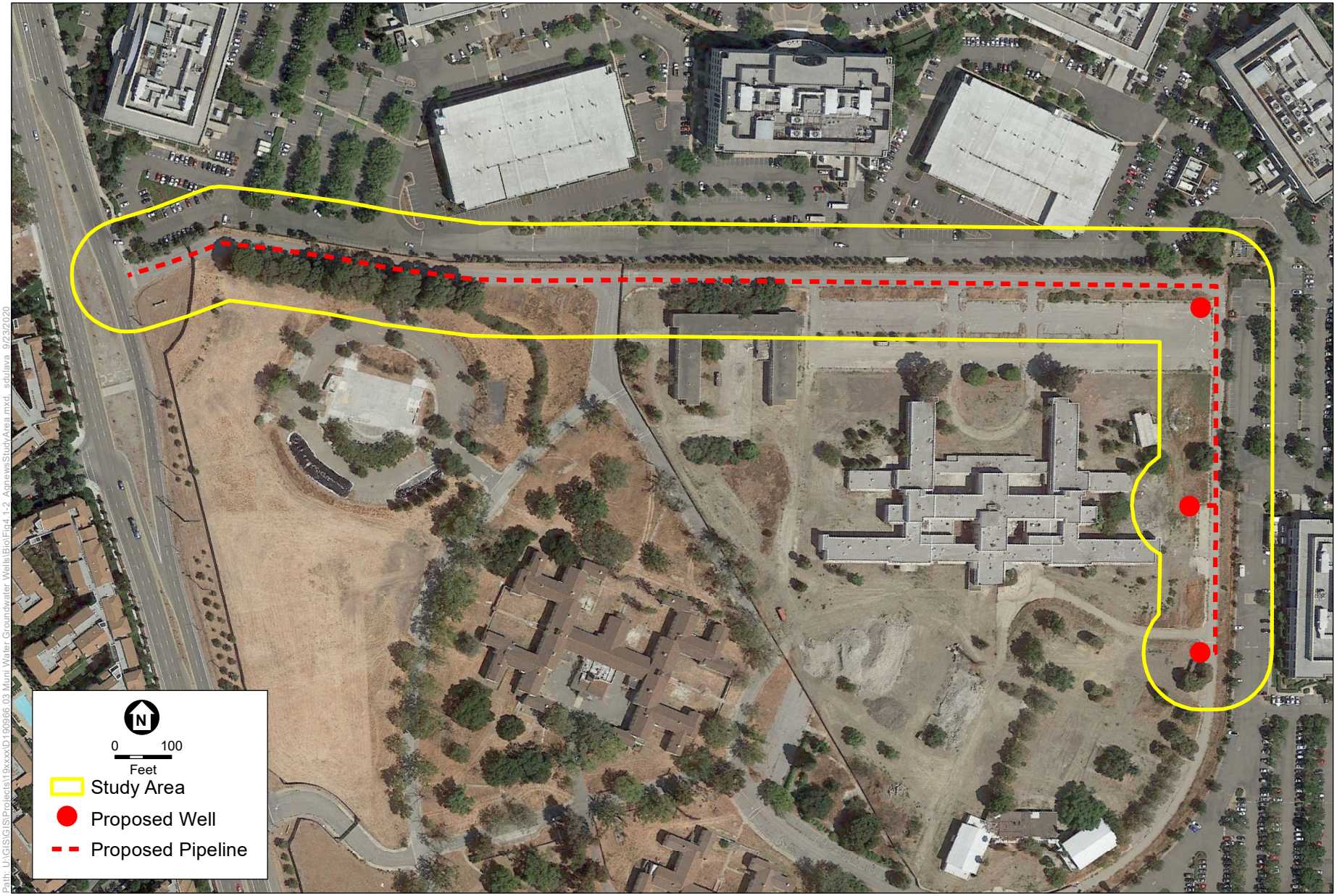
Path: U:\GIS\GIS\Projects\19xxxx\D190966.03 Muni Water Groundwater Wells\Bio\Fig4.1-1_TrimbleStudyArea.mxd sdulava 9/23/2020

SOURCE: City of San José, Proposed Trimble Road NSJ-5 Well Site, July 2020

Trimble and Agnews Municipal Groundwater Wells

Figure 4.1-1
Trimble Biological Resources Study Area

ESA



SOURCE: City of San Jose, Proposed Agnews Well Sites, July 2020; Google Earth, 2020

Trimble and Agnews Municipal Groundwater Wells

Figure 4.1-2
Agnews Biological Resources Study Area

ESA

The Agnews site lies parallel to Cabrillo Road and consists of a combination of paved areas and areas containing either bare ground or ruderal vegetation such as ripgut brome (*Bromus diandrus*), cheeseweed (*Malva parviflora*), and short podded mustard (*Hirschfeldia incana*) (refer to **Figure 4.1-2**). Trees in the study area include coast live oak (*Quercus agrifolia*), privet (*Ligustrum* sp.), and coast redwood (*Sequoia sempervirens*). The Agnews site is bordered by commercial development to the north and east, and the on-going construction of the Santa Clara Unified School District campus to the west and south. The majority of the area surrounding the Agnews site is either developed or has been recently disturbed (Google Earth, 2020).

Special-Status Species

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

1. Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) (Code of Federal regulations Title 50, Section 17.12 [listed plants], Section 17.11 [listed animals] and various notices in the Federal Register [FR] [proposed species]);
2. Species that are candidates for possible future listing as threatened or endangered under FESA (61 FR 40, February 28, 1996);
3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (California Code of Regulations Title 14, Section 670.5);
4. Plants listed as rare or endangered under the California Native Plant Protection Act (NPPA) (California Fish and Game Code [CFGC], Section 1900 et seq.);
5. Animal species of special concern to CDFW;
6. Species designated by CDFW as "special animals",[12]
7. Animals fully protected under the CFGC (Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);
8. Species that meet the definitions of rare and endangered under CEQA. CEQA Guidelines Section 15380 provides that a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists; and
9. Raptors (birds of prey), which are specifically protected by CFGC Section 3503.5, thus prohibiting the take, possession, or killing of raptors, including owls, their nests, and their eggs;[13]

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

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

10. Plants considered under the CDFW and CNPS to be "rare, threatened or endangered in California" (California Rare Plant Rank [CRPR] 1A, 1B, and 2) as well as CRPR Rank 3 and 4 plant species.[14]

11. Anadromous[15] species managed and regulated under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

Conclusions regarding habitat suitability and species occurrence are based on the analysis of existing literature and databases described above and on known habitats occurring within the Project study areas and regionally. The results of database searches from USFWS, CNDDB, and CNPS (**Appendix A**), combined with knowledge of the habitat present in the study areas and the habitat requirements of special-status species, was used to analyze the potential for special-status species to occur in the study areas. The complete list of special-status species with the potential to occur in the Trimble and Agnews study areas is included in **Appendix A** (Special-Status Species with Potential to Occur [PTO] Table). Due to a lack of suitable habitat in either of the study areas, no special-status plant species were determined to have a potential to occur. Wildlife species with a moderate or high potential to occur in the study areas are summarized in **Table 4-1** and discussed further below.

TABLE 4-1
SPECIAL-STATUS PLANTS AND ANIMALS WITH MODERATE OR HIGH POTENTIAL TO OCCUR IN THE STUDY AREA

Scientific and Common Name	Status Federal/State	Potential Occurrence in Study Area
Birds		
Accipiter cooperii Cooper's hawk	--/WL	**High**; Trees in both Trimble and Agnews study areas provide suitable nesting habitat.
Agelaius tricolor Tricolored blackbird	--/SSC	**Moderate**; may occur near Trimble site in riparian areas around the Guadalupe River. There is no suitable nesting habitat in the Agnews study area.
Elanus leucurus White-tailed kite	--/CFP	**Moderate**; white-tailed kite may forage within and adjacent to the study areas. Suitable nesting habitat is present in the mature trees within the study areas.
Setophaga petechia Yellow Warbler	--/SSC	**Moderate**; riparian area provides suitable breeding habitat within Trimble study area. Agnews study area lacks suitable habitat.

NOTES:

Potential Occurrence in the Study area:
High = Species is expected to occur and habitat meets species requirements.
Moderate = Habitat is only marginally suitable or is suitable but not within species geographic range.
Low = Habitat does not meet species requirements as currently understood in the scientific community.

Status Codes:

Federal
E = listed as endangered under the ESA

State
E = listed as endangered under CESA
T = listed as threatened under CESA
SSC = California Department of Fish and Wildlife designated "species of special concern"
CFP = California Department of Fish and Wildlife designated "fully protected"

SOURCE: USFWS, 2020; CDFW, 2020.

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

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

Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is on the CDFW Watch List. This species nests in riparian areas and oak woodlands, and hunts songbirds at woodland edges. Cooper's hawks are also increasingly found nesting and foraging in suburban and even urban areas. Suitable nesting habitat is present for this species in trees within the Trimble and Agnews study areas.

Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is listed as endangered under the CESA. It is a permanent resident of the Central Valley but breeds in scattered coastal locations from Marin County to San Diego. This species nests colonially, with a typical minimum colony size of 50 pairs, in wetland vegetation such as cattails (*Typha* spp.), bulrush (*Scirpus* spp.), and willows (*Salix* spp.). Tricolored blackbird colonies are now more commonly found nesting in agricultural fields growing crops such as triticale (× *Triticosecale*). The nearest record of this species is located approximately 1.5 miles to the northeast of the Trimble site and 0.5 mile east of the Agnews site in Coyote Creek, and was recorded in 1985 (CDFW, 2020). Tricolored blackbird has potential to nest within riparian areas in the Trimble study area. No suitable nesting habitat is present within the Agnews study area.

White-tailed Kite

White-tailed kite (*Elanus leucurus*) is a California fully protected species. White-tailed kites are found throughout California in a range of habitats including marshes, grassland, and oak woodlands, and commonly perches on treetops, wires and fence posts. When foraging, the white-tailed kite frequently flies fairly slowly in arcs and circles, then hovers distinctively before dropping onto small mammal prey. Its diet consists almost entirely of mice and voles. Trees within the Trimble and Agnews study areas provide potential nesting habitat for white-tailed kite. Suitable foraging habitat exists within 1 mile of the Trimble and Agnews sites.

Yellow Warbler

Yellow warbler (*Setophaga petechia*) is a California species of special concern. Yellow warblers are long distance migrants that breed across central and northern North America and winter in Central America and northern South America. Within the central and southern coast of California, yellow warblers breed in small numbers in Sonoma, Marin, Alameda, San Mateo, Santa Clara, Santa Cruz, Monterey, and San Luis Obispo counties (Shuford and gardali, 2008). This species is often associated with riparian habitats and can be found in willows (*Salix* spp.) and cottonwoods (*Populus* spp.), amongst other riparian species. Suitable nesting habitat is available within riparian areas in the Trimble study area. Yellow warbler is unlikely to nest within the Agnews study area due to a lack of preferred nesting habitat.

Other Breeding and Migratory Birds

Trees within both the Trimble and Agnews study areas offer foraging and nesting opportunity for a variety of resident and migratory birds. Species that could nest in the area include, but are not limited to, Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhynchos*), among many others.

The federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code protect raptors, most native migratory birds, and breeding birds that could occur within the Trimble and Agnews study areas and surrounding vicinity.

Santa Clara Valley Habitat Plan

Both the Trimble and Agnews sites are located within the boundaries of the Santa Clara Valley Habitat Plan (Habitat Plan). The Habitat Plan is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in approximately 519,000 acres of Santa Clara County. Rather than separately permitting and mitigating individual projects, the Habitat Plan evaluates natural-resource impacts and mitigation requirements comprehensively in a way that is more efficient and effective for at-risk species and their essential habitats. Both the Trimble and Agnews sites are located on land designated as Urban – Suburban and are currently in Urban Area Land Cover Fee Zones which require no land cover fees.

The Habitat Plan includes Conditions on Covered Activities, including conservation measures to avoid and minimize take of covered species, and avoidance and minimization measures to protect biological resources, such as riparian and aquatic habitat. It also includes Habitat Plan Development Fees used to fund mitigation that will offset losses of land cover types, covered species habitat, and other biological values. This includes the Nitrogen Deposition Fee, which addresses indirect impacts of covered activities and is based on the Habitat Plan costs related to mitigating the impacts of airborne nitrogen deposition. Conditions relevant to the Trimble site include Condition 11, *Stream and Riparian Setbacks*, and Condition 17, *Tricolored Blackbird*. These Conditions, along with the Nitrogen Deposition Fee, are described in Section 4.1.3, Impact Discussion, below.

City of San José Tree Ordinance

The City of San José maintains the urban landscape partly by promoting the health, safety, and welfare of the City by controlling the removal of ordinance trees (San José Municipal Code Section 13.32). Ordinance trees are defined as trees over 38 inches in circumference (diameter of about 12 inches) at a height of 54 inches (approximately 4½ feet) above natural grade. Removal of ordinance-size trees located on City-owned property requires the posting of a courtesy notice to the public and review by the City Arborist's Office (City of San José, 2013). No trees are proposed for removal at the Trimble site. One tree is proposed for removal at the Agnews site.

The Agnews site is located within lands maintained by the City of San José Parks, Recreation and Neighborhood Services (PRNS). The Park Tree Removal Policy (City of San José, 2019) establishes a framework for administering tree removal in City parks. This policy recognizes the value of healthy, strong trees in keeping City parks beautiful and the public safe. This policy provides direction to staff for determining appropriate and necessary tree removals and establishes procedures to ensure that trees requiring removal in our parks are removed in a safe and timely manner. The decision to remove a tree is ultimately made by PRNS utilizing any and all resources and recommendations.

In addition, any tree found by the City Council to have special significance based on factors including, but not limited to, its history, girth, height, species, or unique quality, can be

designated as a "Heritage tree" (San José Municipal Code Section 13.32). It is unlawful to vandalize, mutilate, remove, or destroy such heritage trees. There are no heritage trees on the Trimble site or Agnews site.

City of San José Riparian Corridor Policy

In 1994, the City of San José commissioned a Riparian Corridor Policy Study to "explore in detail issues related to General Plan policies which promote the preservation of riparian corridors, the areas along natural streams, and how these corridors should be treated for consistency with the General Plan." The City Council approved the Riparian Corridor Policy Study, which was subsequently amended in 1999. The Policy Study defines a *riparian corridor* as any stream channel, including the area up to the bank full-flow line, as well as all riparian (streamside) vegetation in contiguous adjacent uplands. It also states that riparian setbacks should be measured from the outside edges of riparian habitat or the top of bank, whichever is greater (City of San José, 1999).

The City of San José adopted the Riparian Corridor Protection and Bird Safe Design Policy (Council Policy 6-34) in 2016 (City of San José, 2016). The riparian protection policy provides guidance for how Riparian Projects should be designed to protect and preserve the City of San José's riparian corridors. "Riparian Project" is defined in the policy as any development or activity that is located within 300 feet of a Riparian Corridor's top of bank or vegetative edge, whichever is greater, and that requires approval of a Development Permit as defined in Chapter 20.200 of Title 20 of the San José Municipal Code (the Zoning Code). The riparian protection policy includes general guidelines for setbacks[16] between various categories of construction projects and riparian corridors. Reduced setbacks may be considered under limited circumstances, including: urban fill locations where most properties are developed and are located on parcels less than or equal to 1 acre; sites that are being redeveloped with uses that are similar to the existing uses or are more compatible with the riparian corridor than the existing use; and utility or equipment installations or replacements that involve no significant disturbance to the Riparian Corridor during construction and operation, and generate only incidental human activity. The policy also recommends using materials and lighting that are designed to reduce light and glare impacts on riparian corridors, and including restoration and rehabilitation of riparian corridors in project designs, including erosion-control measures to avoid soil erosion and runoff.

Both the Trimble and Agnews sites are located in an urban and commercial setting with minimal native habitats. Neither site is located within designated critical habitat. There are no riparian habitats or other sensitive natural communities on or adjacent to the Agnews site. Riparian woodland is located along the Guadalupe River, approximately 35 feet from the Trimble site, but is outside of the Project limits. Within the Trimble study area, riparian vegetation is dominated by willows (*Salix* spp.). The riparian community provides escape cover, foraging, and nesting opportunities for common and special-status wildlife. Construction activities at the Trimble site would remain within the existing developed area.

16 Setback is measured from the outside dripline of the riparian corridor vegetation or top of bank, whichever is greater.

4.1.2 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Checklist Source(s)*
BIOLOGICAL RESOURCES — Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐	

4.1.3 Impact Discussion

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

(Less Than Significant Impact with Mitigation) Trees located in the study areas could provide nesting habitat for special status and other native migratory birds and raptors. In addition, the Trimble site is located within Tricolored Blackbird Survey Area, as defined by the Habitat Plan. Removal of a single tree at the Agnews site could directly impact any birds nesting in this tree. Other construction related activities for the well and pipeline installations, including temporary lighting associated with 24-hour construction, could indirectly impact these species during nesting by creating enough disturbance to result in the loss of nests, eggs, or nestlings, or by causing nest abandonment. These impacts would be considered significant.

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

Implementation of **BIO-1: Avoidance and Minimization Measures for Nesting Birds**, and **BIO-2: Avoidance and Minimization Measures for Tricolored Blackbirds** would reduce impacts to less than significant by conducting work during the non-nesting season as feasible. If work is implemented during the nesting season, then pre-construction surveys would be implemented and no-work buffers would be placed around any active nests that are identified. Measure BIO-1 applies to all nesting birds protected by the federal MBTA and Section 3503 of the California Fish and Game Code.

Operations of the Project's proposed facilities as discussed in Section 3.7 Operations and Maintenance are not expected to result in impacts to special status wildlife species. Both the Trimble and Agnews sites are located in developed, urbanized areas that experience regular foot and vehicle traffic. Routine maintenance activities associated with operations of the Project, including weekly site visits and periodic maintenance, are not expected to significantly increase the current level of disturbance experienced at both sites. No nighttime work is proposed for operations and maintenance of the site. .

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

(Less Than Significant Impact) As discussed in the Setting section, there are no riparian habitats or other sensitive natural communities on or adjacent to the Agnews site.

Riparian woodland is located within the Trimble study area along the Guadalupe River, approximately 35 feet from the Trimble site, but is outside of the Project limits. The Riparian Corridor Policy requires that setbacks from riparian corridors be included in Riparian Projects. Reduced setbacks may be considered under limited circumstances such as utility or equipment installations or replacements that involve no significant disturbance to the Riparian Corridor during construction and operation, and generate only incidental human activity. The Project would comply with all pertinent requirements of the Riparian Corridor Policy for the Trimble site. [17]

[17] Applicants requesting reduction in setbacks may be required to submit a report by a qualified biologist, stream hydrologist and/or other appropriate qualified professional certifying the existence of some or all of the following conditions: (a) There is no reasonable alternative for the proposed Riparian Project that avoids or reduces the encroachment into the Setback Area. (b) The reduced setback will not significantly reduce or adversely impact the Riparian Corridor. (c) The proposed uses are not fundamentally incompatible with riparian habitats (see Chapter 3, Section IB Incompatible Land Uses of the Policy Study). (d) There is no evidence of stream bank erosion or previous attempts to stabilize the stream banks that could be negatively affected by the proposed development within the Setback Area. (e) The granting of the exception will not be detrimental or injurious to adjacent and/or downstream properties.

Well NSJ #5 and associated connections to the existing potable water distribution system would be located within developed and disturbed areas, separated from the Guadalupe River, riparian vegetation, and the Guadalupe River Trail by the existing retaining wall and chain-link fence. All construction activities would remain within the existing fenced area. Therefore, no direct impacts to riparian vegetation are anticipated.

The Project would implement standard best management practices (BMPs) in compliance with local regulations and the requirements of the City of San José Riparian Corridor Policy, which includes guidance for how a Riparian Project should be designed to protect and preserve the City's Riparian Corridors. The implementation of BMPs (refer to 4.9 Hydrology and Water Quality) would reduce construction related runoff and reduce the discharge of polluted stormwater from the Project area.

Water used for flushing new water mains would be discharged to the existing storm drain system in accordance with regulatory storm discharge requirements. As such, potential construction related runoff as a result of the Project would not constitute a threat to the health and function of the riparian corridor.

Visual or noise disturbance originating from Project construction activities could potentially impact wildlife within the riparian community. This indirect impact would be temporary, and would affect a small portion of the riparian corridor relative to the adjacent and similar quality habitat. Operations and maintenance would not significantly increase human activity at the site, as activities already occur at the existing site, and the area between the Trimble site and riparian corridor is subject to regular human activity along the Guadalupe River Trail. Therefore, these impacts are considered less than significant.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

(No Impact) The Trimble site is located within 300 feet of the Guadalupe River and is approximately 35 feet from riparian woodland surrounding the Guadalupe River. As stated above, all construction activities would remain within the existing fenced area that separates the Trimble site from the Guadalupe river and associated riparian zone. The Agnews site is located within 0.5 mile of Coyote Creek. Both well sites are outside of areas of known or suspected surface water/groundwater interaction (refer to 4.9 Hydrology and Water Quality). As such, no impacts to these waters, riparian areas, or any other federal protected wetland are anticipated.

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

(Less Than Significant Impact) The Trimble and Agnews sites are located in urban areas and do not provide corridors for movement of wildlife species. While the Guadalupe River and surrounding riparian area, which are located just north of the Trimble site, provide a migratory corridor for many wildlife species such as raccoon (*Procyon lotor*), striped skunk (*Mephitis*

mephitis), river otter (*Lontra canadensis*), and other fish and amphibian species, all construction activities would be restricted to the existing developed work site, which is separated from the Guadalupe River by a low retaining wall, chain-link fence, and the Guadalupe River Trail. Operational activities would include routine maintenance performed by City staff once a week and are not expected to result in impacts to wildlife species. Both the Trimble and Agnews sites are located in developed, urbanized areas that experience regular foot and vehicle traffic. Routine maintenance activities associated with operations of the Project, including weekly site visits and periodic maintenance, are not expected to significantly increase the current level of disturbance experienced at both sites. Therefore, the Project would not impede wildlife movement in wildlife corridors. Trees within the study areas, including riparian woodland located within the Trimble study area, provide stopover and nesting habitat for migratory birds. Implementation of **Mitigation Measures BIO-1** and **BIO-2** described below, would address potential impacts to nesting birds and reduce impacts to less than significant.

Construction and operation of the Trimble and Agnews wells and associated connections would, therefore, not impact the movement of native or migratory wildlife through the Project area nor impede the use of a native wildlife nursery site.

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

(Less Than Significant Impact with Mitigation) Within the City of San José, the urban forest as a whole (including on-site trees) is considered an important biological resource because most mature trees provide nesting, cover, and foraging habitat for a variety of species that are tolerant of humans. While the urban forest is not as favorable an environment for native wildlife as native habitats, trees in the urban forest are often the only or best habitat commonly or locally available within urban areas.

No trees would be removed at the Trimble site. Development at the Agnews site would result in the removal of one ordinance-size privet tree.

The City of San José Parks, Recreation, and Neighborhood Services Park Tree Removal Policy requires that a tree that has a trunk greater than 18 inches in diameter (56 inches in circumference measured at 2 feet from the ground) should be replaced at a 4:1 ratio, pending a site evaluation and resource review. Below that measurement, tree replacement at a 1:1 ratio should be done. The Project would implement **Mitigation Measure BIO-3: Avoid or Compensate for Removal of Protected Trees** and, **Mitigation Measure BIO-4: Minimize Construction Effects on Protected Trees to be Retained**. With the implementation of mitigation measures to compensate for tree removal and minimize effects of construction activities on trees to remain, impacts would be less-than-significant.

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

(Less Than Significant Impact with Mitigation) The Project sites are located within the Habitat Plan study area and has a designation of Urban - Suburban. The Habitat Plan includes Conditions on Covered Activities, including conservation measures to avoid and minimize take[18] of covered species, and avoidance and minimization measures to protect biological resources, such as riparian and aquatic habitat.

Condition 11, *Stream and Riparian Setbacks*, sets minimum setbacks for streams on project sites. The Trimble site is located within 300 feet of the Guadalupe River and is approximately 35 feet from the nearest riparian vegetation. The Habitat Plan generally requires at least a 100-foot riparian setback for projects covered by the Habitat Plan. However, under the Habitat Plan, a reduced setback may be allowed for small parcels, or on sites near unmapped streams, and a greater setback may be required for development on steeply sloping sites. In addition, if a covered activity qualifies for an exemption (e.g., development on parcels less than 0.5 acre), a stream setback is not applied and the project is not required to comply with this condition. The Trimble construction would be less than 0.5 acre within a developed site that is separated from the Guadalupe River and associated riparian habitat by a low retaining wall and chain-link fence. As such, the Trimble site is exempt from riparian setbacks described in the Habitat Plan.

Condition 17, *Tricolored Blackbird*, provides measures to avoid direct impacts of covered activities on nesting tricolored blackbird colonies. The Trimble site is located within the Habitat Plan Tricolored Blackbird Survey Area. Riparian areas within the Trimble study area provide potential nesting habitat for tricolored blackbird. Implementation of **Mitigation Measure BIO-2**, described below, would address potential impacts to nesting tricolored blackbird colonies and reduce impacts to less than significant.

The Project is subject to applicable Habitat Plan conditions and fees. The Habitat Plan analyzed impacts to bay checkerspot butterfly (*Euphydryas editha bayensis*) and found that increased emissions of nitrogen from vehicles trips associated with new development in the Santa Clara Valley pose a threat to bay checkerspot butterfly habitat. The Habitat Plan identifies a one-time mitigation payment of $5.31 for each new vehicle trip generated by new development to mitigate for indirect impacts resulting in increases in airborne nitrogen deposition. While the Project is not expected generate new vehicle trips, implementation of **BIO-5: Santa Clara Valley Habitat Plan** would ensure any impacts, including those resulting from an increase in vehicle trips, would be reduced to less than significant by payment of Habitat Plan fees.

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

4.1.4 Mitigation Measures

Mitigation Measure BIO-1: Avoidance and Minimization Measures for Nesting Birds.

The Project proponent shall implement the following measures to reduce or avoid construction-related impacts to nesting raptors, other migratory birds, and their nests:

- ***Avoidance*:** Construction activities shall be scheduled to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st (inclusive). If possible, the necessary tree and any vegetation removal shall be conducted before the start of breeding bird season to minimize the opportunity for birds to nest at the Project sites and conflict with Project construction activities.

  If construction cannot be scheduled to occur between September 1st and January 31st (inclusive) to avoid the nesting season, Municipal Water or its contractor shall retain a qualified wildlife biologist to conduct a survey for nesting raptors and migratory birds no more than 14 days prior to the initiation of demolition/construction activities during the breeding season (February 1st through August 31th, inclusive) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May 1st through August 31st, inclusive). The retained qualified wildlife biologist would also conduct a survey for nesting raptors and migratory birds after any construction breaks of 14 days or more, within 7 days prior to the resumption of construction. Pre-construction surveys for nesting raptors and other migratory nesting birds shall be conducted for the Project area and for suitable habitat within 300 feet of the site. Construction activities that are scheduled to begin outside the breeding season (September 1st through January 31st, inclusive) can proceed without surveys.

- ***Buffer Zone*:** If an active nest is found in or close enough to the Project area to be disturbed by construction activities, a construction free buffer zone shall be established around the nest. Buffer zones are typically 300 feet (radius) for raptors and 100 feet (radius) for other birds; however, the buffer zone widths may be adjusted if an obstruction, such as a building, is within line-of-sight between the nest and construction. The construction free buffer zone shall be marked with flagging or fencing that is easily identified and avoided by the construction crew, and shall not affect the nesting birds. Buffer zone widths and other avoidance measures may be modified based on consultation with California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS). The construction-free buffer zones shall be maintained until after the nesting season has ended, or as long as the nest is active or young remain in the area and are dependent on the nest.

- ***Environmental Awareness Program*:** Prior to construction during the nesting bird season, all workers shall take part in an environmental awareness program conducted by an agency-approved biologist. The biologist shall train work crews in standard procedures for identifying and avoiding impacts to all special-status species with the potential to occur in the work area. The awareness program shall be conducted at the start of construction and thereafter as required for new construction personnel. A sign-in sheet for crew receiving the training shall be maintained on file by the Project proponent.

- ***Reporting*:** Municipal Water shall notify the Director of Planning Building and Code Enforcement or Director's Designee when the mitigation actions will occur for approval prior to the start of construction.

With implementation of the identified mitigation measure, the Project's impact to nesting birds and raptors or their habitats would be less than significant.

Mitigation Measure BIO-2: Avoidance and Minimization Measures for Tricolored Blackbirds.

To avoid or minimize direct impacts of Project activities on Tricolored blackbirds, the Project proponent shall ensure the following procedures are implemented consistent with the Habitat Plan. This survey methodology is consistent with accepted survey protocols for this species under Habitat Plan.

***Preconstruction Survey*:** If the Project cannot avoid potential nesting habitat and establish a 250-foot buffer, a nesting survey shall be conducted. Prior to any construction activities, a qualified biologist shall:

1. Determine if there has been nesting at the site in the past 5 years. This includes checking the CNDDB, contacting local experts, and looking for evidence of historical nesting (i.e., old nests).
2. If no nesting in the past 5 years is evident, a qualified biologist shall conduct a preconstruction survey in areas identified in the habitat survey as supporting potential tricolored blackbird nesting habitat. Surveys shall be made at the appropriate times of year when nesting use is expected to occur. The nesting season for most birds in the San Francisco Bay area extends from February 1st through August 31st (inclusive). The surveys shall document the presence or absence of nesting colonies of tricolored blackbird. Surveys shall conclude no more than two calendar days prior to construction.

If a tricolored blackbird nesting colony is present (through step 1 or 2 above), a 250-foot buffer shall be applied from the outer edge of all riparian vegetation associated with the Project site; the site plus the buffer shall be avoided (see below for additional avoidance and minimization details). CDFW shall be notified immediately of nest locations. Municipal Water shall also notify the Director of Planning Building and Code Enforcement or Director's Designee when the mitigation actions will occur for approval prior to the start of construction.

***Avoidance and Minimization*:** The Project proponent shall avoid tricolored blackbird nesting habitat that is currently occupied or has been used in the past 5 years. If tricolored blackbird colonies are identified during the breeding season, the Project proponent shall be prohibited within a 250-foot no-activity buffer zone around the outer edge of all hydric vegetation associated with the colony. This buffer may be reduced in areas with dense forest, buildings, or other habitat features between the construction activities and the active nest colony, or where there is sufficient topographic relief to protect the colony from excessive noise or visual disturbance.

Depending on site characteristics, the sensitivity of the colony, and surrounding land uses, the buffer zone may be increased. Construction activities potentially affecting a colony shall be observed by a qualified biologist to verify that the activity is not disrupting the colony. If it is, the buffer shall be increased. The qualified biologist shall coordinate with CDFW and evaluate exceptions to the minimum no-activity buffer distance on a case-by-case basis.

***Construction Monitoring*:** If construction takes place during the breeding/nesting season (February 1st through August 31st, inclusive) when an active colony is present, a qualified biologist shall monitor construction to ensure that the 250-foot buffer zone is enforced. If monitoring indicates that construction outside of the buffer is affecting a breeding colony, the buffer shall be increased if space allows (e.g., move staging areas farther away). If space does not allow, construction shall cease until the colony abandons the site or until the end of the breeding/nesting season, whichever occurs first. The qualified biologist shall also conduct training of construction personnel on the avoidance procedures, buffer zones, and protocols in the event that tricolored blackbirds fly into an active construction zone (i.e., outside the buffer zone).

Mitigation Measure BIO-3: Avoid or Compensate for Removal of Protected Trees.

Protected trees to be removed at the Agnews site shall be replaced in accordance with the City of San José Parks, Recreation, and Neighborhood Services Park Tree Removal Policy. The Project proponent shall retain a certified arborist to survey trees proposed for removal and trees potentially exposed to construction disturbance in the Project site and identify and evaluate protected trees that will be removed. A tree that has a trunk greater than 18 inches in diameter (56 inches in circumference measured at 2 feet from the ground) should be replaced at a 4:1 ratio, pending a site evaluation and resource review. Below that measurement, tree replacement at a 1:1 ratio should be done. The certified arborist may be consulted to assist with selecting an appropriate replacement species for the site.

Mitigation Measure BIO-4: Minimize Construction Effects on Protected Trees to be Retained.

The Project proponent shall implement the following tree-protection measures prior to and during Project construction.

- Retain a certified arborist to oversee protection of native trees to be retained on the Project site.
- Require that any tree or root pruning occurring for construction is first approved by the certified arborist.
- Require that the certified arborist evaluate injuries to retained trees as soon as possible for appropriate treatment.

Mitigation Measure BIO-5: Santa Clara Valley Habitat Plan

The project is subject to applicable Habitat Plan conditions and fees (including the nitrogen deposition fee) prior to the start of construction. The Project proponent would be required to submit the Santa Clara Valley Habitat Plan Coverage Screening Form to the Director of Planning, Building and Code Enforcement (PBCE) or the Director's designee for approval and payment of the nitrogen deposition fee prior to the start of construction.

4.1.5 References

California Department of Fish and Wildlife (CDFW), 2019. California Natural Diversity Database. Special Animals List. Periodic publication. 67 pp. Data dated August 2019.

———, 2020a. California Natural Diversity Database Occurrences for Milpitas 7.5-minute USGS topographic quadrangle. Accessed September 1, 2020.

———, 2020b. California Natural Diversity Database. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. 140 pp. Data dated October 2019.

California Native Plant Society (CNPS), Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Available at: http://www.rareplants.cnps.org Accessed August 27, 2020.

City of San José, 1999. Riparian Corridor Policy Study. Approved by City Council May 17, 1994; revised March 1999. Available at https://www.sanjoseca.gov/home/showdocument?id=15579. Accessed August 24, 2020.

———, 2006. Guidelines for Inventorying, Evaluating, and Mitigating Impacts to Landscaping Trees in the City of San Jose. May 31, 2006. Available online at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjM1NvKuq3YAhVIjFQKHd5EBvQQFggnMAA&url=https%3A%2F%2Fwww.sanjoseca.gov%2FDocumentCenter%2FView%2F1652&usg=AOvVaw3V9cduThFfVI_66dDUdNgR. Accessed September 1, 2020.

———, 2013. San José/Santa Clara Water Pollution Control Master Plan Environmental Impact Report; State Clearinghouse No. 2011052074; City of San José File Number PP11-403. November 19, 2013. available at http://www.sanjoseca.gov/index.aspx?NID=4968

———, 2016. Council Policy: Riparian Corridor Protection and Bird-Safe Design. August 26, 2016. Available at https://www.sanjoseca.gov/DocumentCenter/View/60393

———, 2019. Park Tree Removal Policy. City of San Jose Parks, Recreation and Neighborhood Services. November 21, 2019.

Google Earth, 2020. Historical Imagery of the Agnews site. Accessed September 2, 2020. Available at https://www.google.com/earth/.

Santa Clara Valley Habitat Agency (SCVHA), 2012. Santa Clara Valley Habitat Plan. Prepared for City of Gilroy, City of Morgan Hill, City of San José, County of Santa Clara, Santa Clara Valley Transportation Authority, and Santa Clara Valley Water District. Prepared by ICF International. August 2012. Available at https://scv-habitatagency.org/178/Santa-Clara-Valley-Habitat-Plan.

Santa Clara Valley Water District (Valley Water), 2016. Groundwater Management Plan, Santa Clara and Llagas Subbasins.

Shuford, W.D. and Gardali, T., 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California (No. 1). Western Field Ornithologists.

U.S. Fish and Wildlife Service (USFWS), 2020a. List of Threatened and Endangered Species that May Occur in the Proposed Project Location, and/or May be Affected by the Proposed Project. Consultation Code 08ESMF00-2020-SLI-2786. Available: https://ecos.fws.gov/ipac/. Accessed September 1, 2020.

———, 2020b. Critical Habitat for Threatened & Endangered Species [USFWS]. Web Map. Available: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Last modified August 10, 2020.

4.2 Cultural Resources

4.2.1 Environmental Setting

The setting discussion and analysis is based on a cultural resources study completed for the Project, included as **Appendix B** to this document.

Natural Environment

The Project is in the Santa Clara Valley (Valley), on the southern end of the San Francisco Bay. The hills surrounding the Valley are the source of many perennial streams, which run from the hills to the San Francisco Bay. A major perennial stream is the Guadalupe River, which flows out of the Santa Cruz Mountains along a course that passes adjacent to the Trimble site. Another major stream in the area is Coyote Creek, which drains from the Diablo Range on the east side of the Santa Clara Valley and flows approximately 1/3-mile from the Agnews site. The Project sites are within the flood plains of these waterways. The area is very prone to flooding in its natural state, with engineered levees providing flood protection for vulnerable facilities.

The San Francisco Bay Area has undergone dramatic landscape changes since humans began to inhabit the region more than 13,000 years ago. Sea levels began rising about 15,000 years ago, at which time the coastline was located west of the Farallon Islands, and reached the present level of the bay about 5,000 years ago (Helley et al. 1979). This dramatic change in stream base-level has resulted in increased deposition of sediment along the lower reaches of Bay Area streams, including the Coyote and Guadalupe rivers (Helley et al. 1979:18). Active alluvial fan[19] deposits are generally less than 5,000 years old and overlie older land surfaces (including stabilized/abandoned Pleistocene-age alluvial fans). In many places, the interface between older land surfaces and active alluvial fans is marked by a well-developed buried soil profile, or a paleosol[20]. Paleosols preserve the composition and character of the earth's surface prior to subsequent sediment deposition; thus, paleosols have the potential to preserve archaeological resources, if the area was occupied or settled by humans (Meyer and Rosenthal, 2007). Because human populations have grown since the arrival of the area's first inhabitants, younger paleosols (late Holocene) are more likely to yield archaeological resources than older paleosols (early Holocene or Pleistocene).

The Project sites are in areas of Holocene-age alluvium, which has a high potential to contain buried paleosols. Numerous deeply buried sites have been uncovered in the Valley, at depths varying between 1 foot and more than 10 feet below the ground surface. In fact, more than 60 percent of recorded archaeological sites in this region have been found in a buried context (Meyer and Rosenthal, 2007). Boring logs from the Trimble site indicate that soils consist of interbedded sequences of coarse sand and gravels with silts and clays to a depth of 850 feet below ground surface (Bonkowski, 2019a). Soils beneath the Agnews site consist of similar deposits to a

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

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

depth of 790 feet below ground surface (Bonkowski, 2019b). The boring logs do not have any indication of a buried paleosol or other evidence of stable land surfaces; however, the logs lack detail for the upper strata immediately below the existing ground surface.

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

Cultural Background

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

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

During the Spanish and Mexican periods, lands in the Project vicinity were used for cattle pasturage as part of the Rancho Rincon de los Esteros. After California became part of United States in 1848, San José was initially (and temporarily) named the State's capital. The Rancho Rincon de los Esteros was subdivided into increasingly smaller parcels and fruit orchards, grain, berry, and vegetable crops were planted.

Records Search and Survey

ESA completed a records search for the Project sites at the Northwest Information Center (NWIC) of the California Historical Resources Information System on September 3, 2020 (File No. 20-0262). Results of the records search indicate that there are no previously recorded cultural resources within the Trimble site or the Agnews site. One cultural resource (the Coyote Creek prehistoric site [CA-SCL-675]) has been previously recorded within a ½-mile radius of the Agnews site. Two cultural resources (historic-era Mission Road [CA-SCL-311H] and a prehistoric shell midden [CA-SCL-762]) have been previously recorded within a ½-mile radius of the Trimble site. None of these resources would be impacted by the Project.

Aerial photographs of the Trimble site show the area as an orchard from at least 1938 to 1968. By the 1982 photo, the Trimble site had been developed with a large round tank and a few small structures. Aerial photographs of the Agnews site show the area used for agricultural from at least the 1930s to the 1950s. From at least the 1960s the Agnews site was adjacent to structures and roadways associated with Agnews Hospital, which remains relatively unchanged up to 2016.

A Secretary of the Interior-qualified archaeologist completed a surface survey of the Trimble and Agnews sites on September 18, 2020. All areas of proposed ground disturbance were inspected closely for cultural materials, including shell, lithics, bone, and midden soil. The proposed well NSJ #5 location at the Trimble site exhibited medium grayish brown silty clay. Visibility of the ground surface was approximately 90 percent. The area had been previously disturbed from construction of the adjacent levee and the construction of the existing facilities. The proposed well NSJ #7 and well NSJ #8 locations at the Agnews site exhibited medium grayish brown soil with small angular gravels. The areas were covered in relatively dense vegetation, although visibility of the ground surface was approximately 50 percent. The proposed well NSJ #6 location at the Agnews site is a paved area; the adjacent unpaved area exhibited the same soil and visibility as the other two well sites. The pipeline alignments at both the Project sites would be located in paved areas.

No cultural materials or other evidence of past human use or occupation was identified during the surface survey at the Project sites. Both locations have been previously disturbed from both early agricultural activities and modern development. The Agnews site has been graded for the construction of the buildings, roads, and infrastructure of the East Campus of the Agnews Developmental Center. The Trimble site has been graded for installation of the existing San José Municipal Water System tank and facilities, as well as the adjacent Guadalupe River levee.

4.2.2 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Checklist Source(s)*
CULTURAL RESOURCES — Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐	

4.2.3 Impact Discussion

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

(No Impact) This section discusses historical resources according to CEQA Guidelines Section 15064.5. A significant impact would occur if the Project would cause a substantial adverse change to a historical resource, herein referring to historic-age architectural resources or the built environment, including buildings, structures, and objects. A substantial adverse change includes the physical demolition, destruction, relocation, or alteration of the resource.

There are no historic-age buildings or structures on the Project sites, and therefore there is no potential that the Project could directly affect historic architectural resources. The Agnews site is adjacent to the 1960 addition to the East Campus of the Agnew Developmental Center. This building is not a contributing feature to the California Register of Historical Resources-eligible and National Register of Historic Places-eligible historic district.

The Project would not cause a substantial adverse change in the significance of a historical resource. No impact would occur and no mitigation is necessary.

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

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

The cultural resources assessment completed for the Project indicates there are no known archaeological resources in the Project sites. The Project sites are highly disturbed; however, given

the environmental context, the proximity to nearby perineal water sources, and distance to previously recorded prehistoric archaeological resources, the Project sites have sensitivity for buried prehistoric archaeological resources. Both Project sites are located in areas identified as having archaeological sensitivity.[21] However, given the minimal ground disturbance associated with the Project, there is a lessened potential for encountering cultural materials during construction activities.

Although unlikely, the inadvertent discovery of archaeological resources cannot be entirely discounted. Inadvertent damage to archaeological resources during construction would be a potentially significant impact. Implementation of **Mitigation Measure CUL-1: Inadvertent Discovery of Archaeological Resources** would reduce the impact to a less than significant level. There would be no ground disturbance associated with operation of the Project, and therefore, no potential impact to archaeological resources during operation of the Project.

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

(Less Than Significant Impact with Mitigation) Based on the records search and survey results, no human remains are known to exist within the Project sites. The Project would involve ground-disturbing activities; therefore, it is possible that such actions could inadvertently unearth, expose, or disturb buried human remains, which would be a potentially significant impact. Implementation of **Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains** would reduce this impact to a less than significant level. There would be no ground disturbance associated with operation of the Project, and therefore, no potential impact to human remains during operation of the Project.

4.2.4 Mitigation Measures

Mitigation Measure CUL-1: Inadvertent Discovery of Archaeological Resources.

If archaeological resources, including resources determined to be tribal cultural resources, are encountered by construction personnel during Project implementation, all construction activities within 100 feet shall halt and the contractor shall notify the Municipal Water personnel and the Director of Planning, Building and Code Enforcement or Director's Designee. The work shall not commence again until a qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualification Standards for archaeology, can assess the significance of the find. Municipal Water or its contractor shall retain a Secretary of the Interior-qualified archaeologist to inspect the findings within 24 hours of discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, hand stones, or milling slabs); battered stone tools, such as hammer stones and pitted stones. Historic-era materials might include stone,

[21] City of San José Public GIS Viewer, Archaeological Sensitivity Area. https://www.arcgis.com/apps/webappviewer/index.html?id=3c5516412b594e79bd25c49f10fc672f

concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

If the City determines, based on recommendations from a qualified archaeologist and a Native American representative (if the resource is Native American-related), that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in PRC Section 21080.3), the resource shall be avoided if feasible. If avoidance is not feasible, the City shall consult with appropriate Native American tribes (if the resource is Native American-related), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3). The documentation shall be submitted the Director of Director of Planning, Building and Code Enforcement or Director's Designee.

Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains.

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

1. The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 48 hours after being given access to the site.
2. The MLD identified fails to make a recommendation; or
3. The landowner or his authorized representative rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner.

4.2.5 References

Bonkowski & Associates, 2016. *Technical Memorandum Hydrogeologic and Infrastruction Feasibility Evaluation*, October 25, 2016

Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson. Punctuated Culture Change in the San Francisco Bay Area, In *Prehistoric California: Colonization, Culture, and Complexity.* Edited by T.L. Jones and K.A. Klar, pp. 99–124*,* AltaMira Press. 2007.

Moratto, Michael J., *California Archaeology,* Academic Press, New York. 1984.

Northwest Information Center (NWIC) of the California Historical Resources Information System, Records Search File No. 20-0262, September 3, 2020.

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4.3 Tribal Cultural Resources

4.3.1 Environmental Setting

ESA contacted the California Native American Heritage Commission (NAHC) on August 11, 2020 to request a search of the NAHC's Sacred Lands File and a list of Native American representatives who may have knowledge of tribal cultural resources in the Project sites or vicinity. The NAHC replied to ESA by email on August 13, 2020, with the statement that the Sacred Lands File has no record of any sacred sites within the Project sites. The NAHC response included a list of Native American representatives who may have knowledge of tribal cultural resources in the Project sites or vicinity.

On August 31, 2020, the City of San José sent a certified letter to one Native American tribal representative who requested to be informed of projects within the City boundaries, according to the requirements of PRC Section 21080.3(b). The tribal representative has not responded to the request. No tribal cultural resources have been identified in the Project sites as part of the identification process.

4.3.2 Environmental Checklist and Discussion of Impacts

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

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

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

Based on the NWIC records search (described in Section 4.2 Cultural Resources; NWIC, 2020) and the NAHC negative search results, there are no known tribal cultural resources listed or determined eligible for listing in the California Register of Historical Resources, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), that would be affected by the Project. To date, no new tribal cultural resources have been identified by Native American representatives, and surface survey of the Project sites identified no potential tribal cultural resources. In addition, the City of San José did not determine any resource that could potentially be affected by the Project to be a significant tribal cultural resource pursuant to criteria set forth in PRC Section 5024.1(c).

If any previously unrecorded archaeological resource were identified during Project construction and were found to qualify as a tribal cultural resource pursuant to PRC Section 21074(a)(2) (determined by the lead agency to be significant pursuant to criteria set forth in PRC Section 5024.1[c]), any impacts to the resource resulting from the Project could be potentially significant. Any such potential significant impacts would be reduced to a less than significant level by implementing Mitigation Measures CUL-1: Inadvertent Discovery of Archaeological Resources and CUL-2: Inadvertent Discovery of Human Remains, described above in Section 4.2, *Cultural Resources*.

4.3.4 Mitigation Measures

- **Mitigation Measure CUL-1:** Inadvertent Discovery of Archaeological Resources (refer to Section 4.2, *Cultural Resources*)

- **Mitigation Measure CUL-2:** Inadvertent Discovery of Human Remains (refer to Section 4.2, *Cultural Resources*)

4.3.5 References

Northwest Information Center (NWIC) of the California Historical Resources Information System, Records Search File No. 20-0262, September 3, 2020.

4.4 Noise

4.4.1 Environmental Setting

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

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

Noise Exposure and Ambient Noise

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

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

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

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

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

Effects of Noise on People

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

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

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

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

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

Noise Attenuation

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

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

Trees and vegetation, buildings, and barriers reduce the noise level that would otherwise occur at a given receptor distance. Vegetation strips, noise barriers, which include natural topography and soundwalls, reduce noise by blocking the line of sight between the source and receiver. Generally, a

simple noise barrier that breaks the line of sight between source and receiver will provide at least a 5-dBA reduction in noise.

Vibration

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

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

Sensitive Receptors

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

The Trimble site is bordered by the Guadalupe River Trail to the north and west, commercial development to the east, and Trimble Road and commercial development to the south. The nearest sensitive receptors to this site are the users of the Guadalupe Trail which is located approximately 20 feet from the proposed well location. The nearest residential receptors are located approximately 2,900 feet north of the proposed well at the Trimble site.

The Agnews site is bordered by commercial development to the north and east, and the on-going construction of Santa Clara Unified School District campus to the south. The wells would be located within the boundary of the proposed Agnews East Parklands Project area, which extends west of the proposed well sites. The nearest residences are located approximately 1,820 feet west of the proposed well sites, but approximately 170 feet from residences where pipeline construction on Center Road would connect to the water main along Zanker Road.

Santa Clara Unified School District is constructing a 600-student elementary school, 1,000-student middle school, and 1,600-student high school on the 55-acre site to the south of the Agnews site. Construction commenced in 2018 and is expected to be completed by August 2021. Therefore, the future occupants of this school campus would also be exposed to Project construction noise. Based on plans for the proposed school campus, the nearest school buildings would be located 640 feet from the proposed wells locations at the Agnews site. These future receptors have also been considered in the analysis below.

Existing Conditions

Due to the absence of sensitive receptors in the vicinity of the proposed well sites (i.e., within 1,000 feet) and as the Project would not introduce sensitive receptors at both well sites, noise monitoring was not conducted at or in the vicinity of either well sites. Due to the linear nature of pipeline construction, sensitive receptors in the vicinity of the pipeline alignments would be subject to elevated noise levels from construction for a very short period, at most a week. Hence, ambient noise measurements at these residences were not found to be necessary and the analysis focused on consistency with the City's General Plan policies. The ambient noise environment in the vicinity of the Trimble site is likely to be influenced by traffic on Trimble Road, activity at the existing pump station, and users of the Guadalupe Trial. The existing ambient noise environment at the Agnews site is likely to be dominated by traffic on nearby streets, including Cabrillo Road and Center Road and construction activities associated with the school campus to the south. Short-term measurements conducted in 2018 and included in the Draft Supplemental Environmental Impact Report for the Agnews East School Campus Facilities Expansion (Santa Clara Unified School District, 2019) indicate that pre-construction noise levels within the school campus area ranged from low- to mid-50's dBA, L_{eq}. 2018 weekday hourly average noise levels at the nearest residential receptors to the south ranged from 50 to 55 dBA L_{eq} during the day and from 45 to 55 dBA L_{eq} at night, with the primary source of noise being distant traffic on Zanker Road. Noise at the residential receptors along Zanker Road was measured to be higher at 69 dBA, L_{eq}.

Regulatory Setting

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

City of San José

The Envision San José 2040 General Plan (General Plan) includes policies applicable to all development projects in San José (City of San José, 2020). The General Plan's Noise Element includes land use compatibility guidelines which state that the City's normally acceptable exterior noise level is 60 dBA, DNL or less for residential and most institutional land uses. The City's standard for interior noise levels for residences, hotels, motels, and residential care facilities is 45 dBA, DNL. The exterior noise standard for outdoor recreation areas is 65 dBA, DNL (City of San José, 2020).

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

1. *Policy EC-1.2:* Minimize the noise impacts of new development on land uses sensitive to increased noise levels [Categories 1, 2, 3 and 6] by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:

    a. Cause the DNL at noise sensitive receptors to increase by 5 dBA DNL or more where the noise levels would remain "Normally Acceptable"; or

    b. Cause the DNL at noise sensitive receptors to increase by 3 dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.

2. *Policy EC-1.3:* Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.

3. *Policy EC-1.7*: Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:

    - Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

4. *Policy EC-2.3:* Require new development to minimize vibration impacts to adjacent uses during demolition and construction. A vibration limit of 0.20 in/sec PPV would be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

In addition to the above General Plan policies, the Project would be subject to the following sections of the San José Municipal Code:

- *Section 20.100.450*: Limits construction hours within 500 feet of residences to 7 AM - 7 PM weekdays, with no construction on weekends or holidays.

- *Sections 20.20.300, 20.30.700, 20.40,600, and 20.50.300:* These sections of the City's Municipal Code establish performance standards for noise exposure associated with stationary/non-transportation sources at the property line of noise-sensitive uses. Specifically, noise exposure is limited to 55 dB, 60 dB, and 70 dB at the property line of residential, commercial, and industrial receivers. Although the Code is not explicit with respect to the acoustical descriptor assigned to these noise levels, it is a reasonable interpretation that these levels may be applied to an hourly average noise level (Hourly L_{eq}). This assumption is consistent with other jurisdictions in the Bay Area and northern California.

4.4.2 Environmental Checklist and Discussion of Impacts

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

4.4.3 Impact Discussion

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

Construction

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

Construction work for both the Trimble and Agnews sites will be completed between 7:00am and 7:00pm Monday through Friday, except during well drilling and well installation, which would each require 24-hour construction (including weekends) over an approximately 3-week period. Impact activities such as pile driving would not be required as part of Project construction. **Table 4.4-1** shows maximum noise levels at a reference distance of 50 feet generated by construction equipment likely to be used as part of the Project. The table also includes the estimated hourly L_{eq} for each equipment based on the usage factor which accounts for the fraction of time in an hour the equipment is actually used. Use of the metric L_{eq} to assess construction noise is appropriate because L_{eq} can be used to describe: noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating

during a given period; noise level during an entire phase; and average noise level over all phases of the construction.

Consistent with the methodology recommended by the FTA (FTA, 2018), the analysis below considers simultaneous operation of the two noisiest construction equipment at the border of the Project site closest to sensitive receptors. Based on noise levels shown in Table 4.4-1 for construction equipment likely to be used for the Project, operation of the drill rig and the concrete saw would generate the highest L_{eq} levels. However, based on equipment data provided for the Project, these two pieces of equipment would not be used during the same phase of construction and hence their simultaneous operation is unlikely. Therefore, the drill rig and dump truck are the two noisiest equipment considered in this analysis.

TABLE 4.4-1
NOISE FROM CONSTRUCTION EQUIPMENT

Construction Equipment	L_{max} at 50 feet (dBA)	Usage Factor (%)	L_{eq} at 50 feet (dBA)
Air Compressor	80	40	76
Auger Drill Rig	**85**	**100**	**85**
Backhoe	80	40	76
Compactor	80	20	73
Concrete Saw	90	20	83
Crane	85	16	77
Drum Mixer	80	50	77
Dump Truck	**84**	**40**	**80**
Front End Loader	80	40	76
Generator	82	50	79
Paver	85	50	82
Pump	77	100	77
Roller	85	20	78

NOTE: Equipment shown in **bold** are the two highest noise generating equipment likely to be used simultaneously.

SOURCE: FHWA, 2017.

Drill rigs can generate maximum noise levels noise levels of up to 85 dBA at 50 feet and would be operated 24 hours a day during the drilling phase of the Project, which is expected to last about 3 weeks at each well. When operated simultaneously with dump trucks, using the Roadway Construction Noise Model (RCNM), the combined noise level would be 53.6 and 48.9 dBA, L_{eq} at the residential receptors nearest to the Trimble and Agnews sites, respectively. Noise at the Guadalupe Trail adjacent to the Trimble site would be approximately 92.1 dBA, L_{eq} and the future school receptors south of the Agnews site would be exposed to noise levels up to 62 dBA, L_{eq}.

Neither the General Plan nor the Municipal Code provide quantitative limits for construction noise, but construction operations are required to use best available noise suppression devices and techniques and limit construction hours near residential uses. Under Policy EC-1.7 the City considers significant construction noise impacts to occur if a Project located within 500 feet of

residential uses or 200 feet of commercial or office uses would involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

Project construction for the well would take place over a period of nine months per year between April and December from 2021 and 2024. Recreational users of the Guadalupe Trail are located as close as 20 feet from the Trimble site and residences are located as close as 170 feet from the pipeline alignment connecting the Agnews site to the main pipeline along Zanker Road. Therefore, these receptors to be exposed to elevated noise levels which would be considered significant per Policy EC-1.7. Most construction activities, including truck trips, would be restricted to daytime hours when ambient noise levels at the receptors are at their highest and potential for impact is lower. However, well drilling would require round-the-clock operation of the drill rig for a period of 3 weeks at each well. Only residential uses would be affected by nighttime noise from drilling, but the nearest residences are located beyond 500 feet and far enough from the two sites to not experience significant impacts. As construction activities would take place within 200 feet of residential and recreational uses, this impact would be considered significant. With implementation of **Mitigation Measures NOI-4.4-1a**: **Noise Reduction** and **NOI-4.4-1b: Notification Requirements**, this impact would be reduced to a less than significant level, consistent with the General Plan and Municipal Code standards.

Trucks transporting construction materials and equipment to and from the Project sites would also generate noise as they travel along construction traffic routes. The well construction phase is expected to generate 8 to 14 one-way truck trips per day to each site during the various sub-phases. During construction of above-ground connections to the existing water system at the Trimble site, approximately 4 to 6 one-way trips per day would be generated. At the Agnews site, 14 one-way truck trips per day would generated during pipeline installation. These trips would be distributed over the 12-hour construction period. Generally, it takes a doubling of traffic to increase associated traffic noise by 3 dBA. Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response; a change in level of at least 5 dBA is required before any noticeable change in human response would be expected. Therefore, the addition of Project construction traffic of less than 2 trips per hour would not result in perceivable noise impacts. Noise impacts from Project construction truck trips would be less than significant.

Operation

(Less Than Significant Impact) For the operational phase of the Project, each well would include one pump system (one for the Trimble well and one each for the three Agnews wells) that would not exceed 300 horsepower (hp). A new standby emergency generator is proposed at Agnews site, which will serve all three wells during a power outage, while the Trimble well would use the existing standby emergency generator at the site. There are no other noise-generating operational equipment proposed at either site.

The pumps at each site would be submersible (belowground), which would reduce the noise generated. Based on measurements collected at the Norwood Pump Station (ESA, 2019) which includes similar submersible pumps located approximately 20 to 30 feet below grade, the one-

minute average noise level over the measurement period with two pumps operating was 51 dBA at 30 feet from the pump house. Long term measurements indicated that hourly exterior noise levels at 30 feet were 42 to 48 dBA, which would also be below the residential performance standard of 55 dBA established by the City of San José Municipal Code. Conservatively applying the residential standard to recreational uses, the hourly L_{eq} at the nearest point of the Guadalupe Trail, 20 feet from the Trimble pump station would be 51.5 dBA, L_{eq}, which would be below the City's 55 dBA standard in the Municipal Code. Attenuated noise levels at commercial uses closest to the Agnews pumps would be 32 dBA, L_{eq}, well below the commercial performance standard of 60 dBA established by the City of San José Municipal Code. Noise from the pumps would not be audible at the residential receptors located 2,900 feet and 1,820 feet from the Trimble and Agnews pump stations, respectively.

Standard new generators of 300 hp size generate noise level of 68 dBA at 21 feet (Kohler co., 2010). Testing of the emergency generator at the Agnews site would occur for approximately one hour a week during daytime hours, and is typically limited in non-emergency operations to 50 hours or less per year as a condition of the required air quality permit. Assuming continuous operation of the generator over the one-hour testing period, the generator would result in a noise level of 49 and 29 dBA, L_{eq} at the nearest commercial and residential uses to the Agnews site, respectively. These noise levels would be less than the commercial performance standard of 60 dBA and residential performance standard of 55 dBA established by the City of San José Municipal Code. The generator would be enclosed which would further reduce the noise carried over to the nearest receptors. Therefore, the Project would not cause a substantial permanent noise level increase at the nearby noise-sensitive receptors and Project operations would have a less than significant impact with respect to exposure of persons to, or generation of, noise levels in excess of standards established in the applicable noise ordinance.

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

Construction

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

Policy EC-2.3 of the General Plan requires new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures that are documented to be structurally weakened, the policy specifies that a vibration limit of 0.08 in/sec PPV be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 in/sec PPV is used to evaluate the potential for cosmetic damage of normal conventional construction at historical structures. Equipment or activities typical of generating vibration include but are not limited to: excavation equipment, static compaction equipment, vibratory pile

drivers, pile-extraction equipment, and vibratory compaction equipment. The policy discourages use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition unless a project-specific technical study is conducted by a qualified professional.

There are no historic buildings in the vicinity of both sites (refer to Section 2.2, *Cultural Resources* for additional discussion on historic resources). Project construction would not involve the use of impact pile drivers. However, construction would involve excavation as well as the operation of a drill rig which would generate vibration. Drill rigs would need to be operated 24 hours a day for a period of 3 weeks for each well. The boreholes would be drilled using truck-mounted reverse-circulation mud-rotary drilling rigs. According to the FTA, drill rigs can result in vibration levels of 0.089 in/sec PPV at a distance of 25 feet (FTA, 2018). This is less than the vibration limit of 0.20 in/sec PPV established by the General Plan. There are no structures located within 25 feet from both sites. Therefore, all off-site receptors at both sites would experience construction vibration levels less than the limit of 0.2 in/sec PPV.

The receptors using the Guadalupe Trail would experience annoyance impacts from well drilling at the Trimble site. However, these receptors would be considered transient receptors[22] who would not spend extended periods of the time at any point on the Guadalupe Trail. Nevertheless, construction activities would disrupt use of the trail for recreational purposes and this impact would be considered significant. Implementation of Mitigation Measures 4.4-1a and 4.4-1b would reduce this impact to a less than significant level.

Operation

(Less Than Significant Impact) Operation of the pumps and generator would not generate significant vibration. The pumps would be located underground and would be operated as needed, for water deliveries during any short term interruptions, for periodic maintenance purposes, and/or to meet demand beyond the available supply. Any vibration generated would attenuate below the 0.2 in/sec PPV limit at structures near the well sites. Vibration generated would also not affect the transient users of the Guadalupe Trail. The proposed emergency generator at the Agnews site would also not be a significant source of vibration. Operation of the generator would be limited to an hour a day for a maximum of 50 hours per year for testing purposes. This level of operation would not result in any vibration impacts at the nearest structures 180 feet away. Therefore, the impact from Project operation would be less than significant.

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

(Less Than Significant Impact) The Project would not introduce any sensitive receptors to the two sites, but construction workers at the sites could be temporarily exposed to noise from aircraft

[22] Transient receptors refer to receptors who do not spend extended period of time at one location and would therefore experience short durations of exposure to noise. Recreational uses are typically considered transient receptors.

operations from the Norman Y Mineta San José International Airport (Airport). Policy EC-1.11 of the General Plan requires safe and compatible land uses within the Airport noise zone (defined by the 65 CNEL contour as set forth in State law) and encourages aircraft operating procedures that minimize noise. Based on the Santa Clara County Comprehensive Land Use Plan for the Airport (Santa Clara County, 2016), the Trimble site is located approximately 2,200 feet from the northern boundary of the Airport and is not located within the Airport's 65 dBA CNEL contours. The Agnews site is located farther away, approximately 2.3 miles from the northern boundary of the Airport and is also not located with the Airport's 65 dBA CNEL contours. Therefore, the Project would not expose workers at the Project sites to excessive noise levels from aircraft operations. This impact would be less than significant.

4.4.4 Mitigation Measures

Mitigation Measure NOI-4.4-1a: Noise Reduction.

The following noise reduction measures shall be implemented by the project proponent to reduce the impact of temporary construction-related noise on nearby receptors:

1. Limit construction hours to between 7:00 a.m. and 7:00 p.m., Monday through Friday, unless permission is granted with a development permit or other planning approval. No construction activities shall be permitted on the weekends at sites within 500 feet of a residence.

2. Require construction equipment and trucks used for project construction to utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) that are maintained in good condition and appropriate for the equipment.

3. Prohibit unnecessary idling of internal combustion engines. Turn off construction equipment when not in use, where applicable.

4. Locate stationary equipment such as air compressors and portable power generators, construction staging areas, and construction material areas as far from offsite receptors as possible. Construct temporary noise barriers to screen stationary noise-generating equipment when located near adjoining sensitive land uses to minimize noise exposure to receptors.

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

6. Utilize "quiet" equipment for air compressors and other stationary noise sources where technology exists. Require any impact equipment used for project construction to be hydraulically or electrical powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, the use of an exhaust muffler on the compressed air exhaust is recommended to lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment should also be incorporated to achieve a further reduction of 5 dBA. In the event that external jackets on impact equipment are not feasible, other BMP techniques shall be employed to reduce noise by 5 dBA. Whenever feasible, require the use of quieter procedures.

7. When construction takes place within 100 feet of sensitive receptors, use specific techniques such as, but not limited to, use of sound blankets on construction equipment, and the use of temporary plywood walls and noise barriers to block and deflect noise.

Mitigation Measure NOI-4.4-1b: Notification Requirements.

1. Notify neighbors within 300 feet of the project site of the construction schedule in writing, at least 10-days prior to start of construction. The notification shall provide the start date of construction, construction activities, the duration of construction activity, and construction hours for the project. The same information shall also be conspicuously posted at each project site.

2. Designate a "disturbance coordinator" who will be responsible for responding within 24-hours to any complaints regarding construction noise. The coordinator will determine the cause of the complaint and will require that reasonable measures to correct the problem, be implemented.

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

4. A daytime and nighttime telephone number for the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site.

4.4.5 References

California Department of Transportation (Caltrans), 2013. Transportation and Construction Vibration Guidance Manual, September 2013.

City of San José, 2020. *Envision San José 2040.* Adopted November 2011, amended March 2020. Available at: https://www.sanjoseca.gov/home/showdocument?id=22359.Environmental Science Associates, 2019. Assessment of Potential Noise Impacts from the Proposed Fowler Pump Station Upgrade in San José, California. March 21, 2019.

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

Federal Transit Administration (FTA), 2006. *Transit Noise and Vibration Impact Assessment*, May 2006.

Federal Transit Administration (FTA), 2018. Transit Noise and Vibration Impact Assessment Manual, September 2018. Available: https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/noise-and-vibration.

Kohler Co., 2010. Kohler Rentals – Generators, Specification Sheet, 2010. Available: http://www.kohlerpower.com/common/pdfs/68855_Gen_SellSheet08.pdf.

Santa Clara County, 2016. *Comprehensive Land Use Plan for the Norman Y Mineta San José International Airport*, Adopted May 25, 2011, amended November 16, 2016.

Santa Clara Unified School District, 2019. Agnews East School Campus Facilities Expansion – Draft Supplemental Environmental Impact Report, January 2019. Available: https://drive.google.com/file/d/13RRtyHKQgeQgoyWeE13pQY-JjGwd_SZ6/view.

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4.5 Air Quality

4.5.1 Environmental Setting

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

The Federal Clean Air Act and the California Clean Air Act both require the establishment of standards for ambient concentrations for criteria air pollutants, called Ambient Air Quality Standards (AAQS). National AAQS have been established for seven criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns and 2.5 microns (PM_{10} and $PM_{2.5}$), and lead. In addition, California has established state standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The SFBAAB experiences occasional violations of ozone and particulate matter (PM_{10} and $PM_{2.5}$) standards. Therefore, the Project area currently is designated as a non-attainment area for violation of the state 1-hour and 8-hour ozone standards, the federal ozone 8-hour standard, the state respirable particulate matter (PM_{10}) 24-hour and annual average standards, the state fine particulate matter ($PM_{2.5}$) annual average standard, and the federal $PM_{2.5}$ 24-hour standard. The Project area is designated as attainment for all other state and federal standards (BAAQMD, 2017a).

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects, even when present in relatively low concentrations. The potential human health effects of TACs include birth defects, neurological damage, cancer, and death. TACs include both organic and inorganic chemical substances. They may be emitted by common sources such as gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. California's current list of TACs includes approximately 200 compounds, including diesel particulate matter (DPM) emissions from diesel-fueled engines, which the California Air Resources Board (CARB) identified as a TAC in 1998 (CARB, 2020). Under the California EPA guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mix of chemicals that make up diesel exhaust as a whole.

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

Sensitive Receptors

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

The nearest sensitive receptors to the Trimble site are the users of the Guadalupe Trail which is located approximately 20 feet from the proposed well location. The nearest residential receptors are located approximately 2,900 feet north of the Trimble site. The nearest residences to the Agnews site are located approximately 1,820 feet to the west. In addition, future occupants of the Santa Clara Unified School District school campus currently under construction would be located approximately 640 feet south of the proposed wells at the Agnews site.

Odors

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

Regulatory Setting

BAAQMD CEQA Guidelines

The BAAQMD CEQA Air Quality Guidelines (BAAQMD CEQA Guidelines; BAAQMD, 2017b) is an advisory document that provides lead agencies, consultants, and project proponents with procedures for assessing air quality impacts and preparing environmental review documents. The document describes the criteria that BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methods for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

BAAQMD most recently updated its CEQA Air Quality Guidelines in May 2017. BAAQMD states that the quantitative significance thresholds are “advisory and should be followed by local governments at their own discretion,” and that lead agencies are fully within their authority to develop their own thresholds of significance. However, BAAQMD offers these thresholds for lead agencies to use in order to inform environmental review for development projects in the SFBAAB.

According to the 2017 BAAQMD CEQA Guidelines, a project would be considered to have a significant impact to existing air quality conditions within the SFBAAB if construction and operation of a project were to exceed the significance thresholds shown in **Table 4.5-1**.

To determine the significance of fugitive dust emissions, the BAAQMD recommends taking a qualitative approach. According to the BAAQMD CEQA Guidelines, a project would have a less than significant impact with regards to emissions of fugitive dust if it were to implement the BAAQMD Basic Construction Mitigation Measures Recommended for All Proposed Projects (Best Management Practices).

TABLE 4.5-1
BAAQMD THRESHOLDS OF SIGNIFICANCE

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

NOTES:
ppd = pounds per day; tpy = tons per year; ROG = reactive organic gases; NO_x = oxides of nitrogen, PM = particulate matter

SOURCE: BAAQMD, 2017b.

BAAQMD 2017 Clean Air Plan

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

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

BAAQMD Rules and Regulations

In addition to the BAAQMD CEQA Guidelines, the BAAQMD regulates air quality within the region through various district rules and regulations. BAAQMD rules that would apply to the Project include Regulation 6-6 (Prohibition of Trackout), Regulation 2-1 (Permits), Regulation 2-5 (New Source Review of Toxic Air Contaminants) and Regulation 8-5 (Storage of Organic Liquids).

Regulation 6-6 aims to reduce the quantity of particulate matter in the atmosphere through control of trackout of solid materials onto paved public roads outside the boundaries of large bulk material sites, large construction sites greater than one acre (such as the Project) and large disturbed surface sites, such as landfills. Regulation 2-1 requires a review of new or modification of existing sources of air pollution and associated air pollution control devices, through the issuance of authorities to construct and permits to operate. Regulation 2-5 requires a review of new and modified sources of TACs in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. Regulations 2-1 and 2-5 would apply to the proposed emergency generator at the

Agnews site. Regulation 8-5 aims to limit emissions of organic compounds from storage tanks and would apply to the 500-gallon fuel tank proposed at the Agnews site.

Envision San José 2040 General Plan

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

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

4.5.2 Environmental Checklist and Discussion of Impacts

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

4.5.3 Impact Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

(Less Than Significant Impact with Mitigation) The 2017 CAP is the applicable air quality plan for the Project area. The BAAQMD CEQA Guidelines recommend that a project's consistency with the current air quality plan be evaluated using the following three criteria:

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

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

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

If it can be concluded with substantial evidence that a project would be consistent with the above three criteria, then the BAAQMD considers it to be consistent with air quality plans prepared for the Bay Area (BAAQMD, 2017b).

The primary goals of the 2017 CAP are to attain air quality standards, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate. The BAAQMD-recommended guidance for determining if a project supports the goals in the current air quality plan is to compare estimated project emissions with BAAQMD thresholds of significance. If project emissions would not exceed the thresholds of significance after the application of all feasible mitigation measures, the project would be consistent with the goals of the 2017 CAP. As indicated in the following discussion with regard to air quality item b), the Project would result in a less-than-significant impact related to construction emissions with the implementation of **Mitigation Measure AQ-4.5-1: Implement BAAQMD Basic Control Mitigation Measures**, which requires the Project to implement the BAAQMD's recommended fugitive dust control measures. As detailed under air quality item b), the Project would also result in a less than significant impact with respect to operational emissions as emissions associated with the operation and maintenance truck trips to the sites and testing of the emergency generator would not generate emissions that exceed the BAAQMD's operational significance thresholds. Therefore, the Project would be considered to support the primary goals of the 2017 CAP.

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

In summary, the Project would be consistent with all three criteria listed above to evaluate consistency with the 2017 CAP and, therefore, would not conflict with or obstruct implementation of the 2017 CAP. This impact would be less than significant.

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

(Less Than Significant Impact with Mitigation) According to the BAAQMD, no single project will, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In addition, according to the BAAQMD *CEQA Air Quality Guidelines*, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD, 2017b). Alternatively, if a project does not exceed the identified significance thresholds, then the project would not be considered cumulatively considerable and would result in less-than-significant air quality impacts.

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

Construction

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

Criteria pollutant emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that would be generated by off-road construction equipment (e.g., excavators, graders, loaders) and on-road construction vehicles (worker commute trips, equipment and material transport trucks) were estimated using the most recent version of CalEEMod (version 2016.3.2) along with the Project-specific construction schedule and equipment needs. All assumptions and calculations used to estimate the Project-related construction emissions are provided in **Appendix C**.

According to the Project construction schedule, construction of the Trimble well would take place between the months of April and December during 2021 and 2022. The three wells at the Agnews site would be constructed between April and December during calendar years 2021 through 2024. Average daily construction emissions were estimated by dividing the total emissions generated over the construction period by the number of workdays. Estimated average daily emissions are shown in **Table 4.5-2** and are compared to the BAAQMD thresholds.

TABLE 4.5-2
AVERAGE DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (POUNDS/DAY)

Emissions	ROG	NOx	Exhaust PM_{10}[a]	Exhaust $PM_{2.5}$[a]
2021	2.6	45.5	0.9	0.8
2022	1.2	10.1	0.3	0.3
2023	1.8	24.4	0.5	0.4
2024	1.8	24.0	0.4	0.4
Project Total	1.9	25.7	0.5	0.5
BAAQMD Construction Thresholds	54	54	82	54
Significant?	NO	No	No	No

NOTE:
a BAAQMD's construction-related significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust.

SOURCE: Appendix C.

As indicated in Table 4.5-2, the average daily construction exhaust emissions would not exceed the BAAQMD's significance thresholds. Therefore, impacts associated with the potential for construction related exhaust emissions to result in or contribute to a violation of an air quality standard would be less than significant.

In addition to exhaust emissions, emissions of fugitive dust would also be generated by construction activities associated with grading and earth disturbance, travel on paved and unpaved roads, etc. Such emissions could result in a potential significant impact. With regard to fugitive dust emissions, the BAAQMD Guidelines focus on implementation of recommended dust control measures rather than a quantitative comparison of estimated emissions to a significance threshold. For all projects, the BAAQMD recommends the implementation of its *Basic Control Mitigation Measures* (BAAQMD, 2017b). Without implementation of these measures, the impact from fugitive dust emissions during construction would be considered significant. The Project would implement these measures as part of **Mitigation Measure AQ-4.5-1: Implement BAAQMD Basic Control Mitigation Measures** and therefore would not lead to violations of the air quality standards due to construction fugitive dust. With mitigation, the impact from construction fugitive dust emissions would also be less than significant.

Operation

(Less Than Significant Impact) Once operation, the Trimble and Agnews wells would require routine weekly visits by facility operators to check pumps and treatment equipment and monitor performance. These regular maintenance activities would be performed by City staff, and would not require any new additional staff. These trips would generate very minimal criteria pollutant emissions and have therefore not been quantified. A 500 kilowatt emergency standby generator is proposed at the Agnews site to serve the three wells in the event of power outage. Routine testing and maintenance of this generator would also generate minimal emissions. Testing would be limited to one hour per day and 50 hours per year by the BAAQMD's permit requirements for the generator.

Average daily emissions associated with Project operation are expected to be well below the BAAQMD's operational significance thresholds. Therefore, the Project's contribution to the cumulative air quality impact in the area during operations would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Construction

(Less Than Significant Impact) Construction activities associated with the Project would result in the generation of exhaust emissions that contain air pollutants, including particulate matter (PM_{10} and $PM_{2.5}$), the majority of which would be diesel particulate matter (DPM); a known TAC. Exposure of sensitive receptors to DPM emissions could result in an elevated health risk.

The BAAQMD has identified a distance of 1,000 feet from the source to the closest sensitive receptor locations within which community health risk impacts are likely (BAAQMD, 2017b). Construction sources at the Trimble site would be separated from the nearby receptors by a distance of at least 2,900 feet, which would help reduce exposure. Though the users of the Guadalupe Trail would also be exposed to these emissions, these receptors would be considered transient users and therefore the duration of exposure would be short, in the order of an hour compared to 30 years of exposure used in health risk assessments. The nearest residential and school receptors to the Agnews site would be separated by approximately 1,820 and 640 feet, respectively. The school campuses are currently under construction, so there are no existing sensitive receptors at the site. Based on the latest schedule on the school's website, the earliest occupancy date for the school is estimated to be August 2021. Therefore, construction of the wells at the Agnews site would expose future occupants of the school to DPM emissions over the 9-month construction period each year between 2021 and 2024. However, though receptors of the school would be located within 1,000 feet of construction activities, PM_{10} and $PM_{2.5}$ emission levels of half a pound per day associated with construction of the Project (as shown in Table 4.5-2) lasting over a period of 9 months, equivalent to 2.5 percent of the 30 year exposure period used in health risk assessments, would not be expected to lead to health risks exceeding the BAAQMD's significance thresholds. Construction activities associated with the pipeline that connects the Agnews site to the main pipeline along Zanker Road would take place 170 feet from residences. However, as pipeline construction is linear and typically progresses at a rate of 100 feet per day, these residences would be exposed to emissions from pipeline construction for a very short period, at most a week. This level of exposure would not result in significant health risks that exceed the BAAQMD thresholds. Therefore, the impact of exposure of sensitive receptors to TACs from Project construction would be less than significant.

Operation

(Less Than Significant Impact) The only source of TACs during operation would be DPM from the routine testing and maintenance of the proposed emergency backup generator at the Agnews site. However, as part of the BAAQMD's permit requirements, the generator would be required to demonstrate that emissions from testing and maintenance would not lead to health risk impacts in excess of the BAAQMD's health risk thresholds. In addition, testing would be limited to one hour per day and a maximum of 50 hours per year per BAAQMD permitting requirements. Given

that there are no sensitive receptors located in the immediate vicinity of the Agnews site, the minimal DPM emissions generated during testing is not expected to lead to significant risks at the nearest receptors. This impact would be less than significant.

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

(Less Than Significant Impact)

Construction

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

Operation

Once operational, the Project would not include any sources of odor. The wells would be operated by pumps, located underground and powered by electricity and would not generate odors. Testing of the generator at the Agnews site could generate diesel combustion odors at the site. However, given the short duration of operation and the large distance separating it from the nearest receptors, the odors would not carry over to the receptors and would not be noticeable beyond the Project boundary. Therefore, the Project's odor impact during operations would be less than significant.

4.5.4 Mitigation Measures

Mitigation Measure AQ-4.5-1: Implement BAAQMD Basic Control Mitigation Measures.

The Project proponent shall implement the following measures during construction.

- 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 offsite 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 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 visible emissions evaluator.
- Post a publicly visible sign with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours.

4.5.5 References

Bay Area Air Quality Management District (BAAQMD), 2017a. Air Quality Standards and Attainment Status, last updated January 5, 2017. Available at: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status.

BAAQMD, 2017b. *California Environmental Quality Act Air Quality Guidelines*, 2017. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

BAAQMD, 2017c. *Clean Air Plan, Spare the Air, Cool the Climate*. April 19, 2017. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en.

California Air Resources Board (CARB), 2020. *CARB Identified Toxic Air Contaminants*. Available at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants. Accessed on September 29, 2020.

City of San José, 2011. *Envision San José 2040.* Adopted November 2011, amended March 2020. Available at: https://www.sanjoseca.gov/home/showdocument?id=22359.

4.6 Greenhouse Gas Emissions

4.6.1 Environmental Setting

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

Carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are the principal GHGs. When concentrations of these gases exceed historical concentrations of GHGs in the atmosphere, the greenhouse effect is intensified. CO_2, CH_4, and N_2O occur naturally but are also generated through human activity. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 primarily results from off-gassing, natural gas leaks from pipelines and industrial processes, and incomplete combustion; it is associated with agricultural practices, landfills, energy providers, and other industrial facilities.[23] HFCs, PFCs, and SF_6 are specialty industrial gases that have been emitted only very recently in human history.

CO_2 is the reference gas for climate change because it is the predominant GHG emitted. The effect that each of the aforementioned gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates, on a volume basis, how much a gas contributes to global warming relative to how much warming would be predicted to be caused by the same mass of CO_2. CH_4 and N_2O are substantially more potent GHGs than CO_2, with 100-year GWPs of 25 and 298 times that of CO_2, respectively (CARB, 2020).

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

Regulatory Setting

State

Executive Order S-3-05

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

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

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

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

Executive Order B-55-18

In September 2018, Governor Brown signed Executive Order B-55-18, committing California to total, economy-wide carbon neutrality[24] by 2045. Executive Order B-55-18 directs CARB to work with relevant state agencies to develop a framework to implement accounting to track progress toward this goal. The goal will be incorporated into future Scoping Plans, as policies and actions which affect major sectors of California's economy, including transportation, agriculture, development, industrial, and others. This executive order does not contain any requirements that would need to be implemented at the Project level. The carbon neutrality requirements would be implemented on a regional and local level through regional electricity providers and vehicle and equipment standards.

Assembly Bill 32

California Assembly Bill (AB) 32, *the Global Warming Solutions Act of 2006*, required the CARB to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB also was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. CARB established this limit in December 2007 at 427 million $MTCO_2e$. This is approximately 30 percent below forecasted "business-as-usual" emissions of 596 million metric tons of CO2e in 2020, and about 10 percent below average annual GHG emissions during the period of 2002 through 2004 (CARB, 2009). In the interest of achieving the maximum technologically feasible and cost-effective GHG emission reductions, AB 32 permits the use of market-based compliance mechanisms and requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts.

Climate Change Scoping Plan (AB 32 Scoping Plan)

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan (AB 32 Scoping Plan) for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial AB 32 Scoping Plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives (CARB,

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

2009). The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial AB 32 Scoping Plan with new strategies and recommendations (CARB, 2014).

Executive Order B-30-15 and SB 32

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

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

CARB adopted the 2017 Scoping Plan for achieving this goal, which takes into account the key programs associated with implementation of the AB 32 Scoping Plan - such as GHG reduction programs for cars, trucks, fuels, industry, and electrical generation - and builds upon, in particular, existing programs related to the Cap-and-Trade Regulation; the Low Carbon Fuel Standard; much cleaner cars, trucks, and freight movement; power generation for the State using cleaner renewable energy; and strategies to reduce methane emissions from agricultural and other wastes by using it to meet the State's energy needs. The 2017 Scoping Plan also addresses, for the first time, GHG emissions from natural and working lands, including the agriculture and forestry sectors (CARB, 2017). The cornerstone of the 2017 Scoping Plan Update is an expansion of the cap-and-trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2030 limit set forth by Executive Order B-30-15. CARB designed and adopted the California Cap-and-Trade Program to reduce GHG emissions from large industrial facilities that emit more than 25,000 $MTCO_2e$ per year such as electricity generation, petroleum refining, cement production, and would therefore not apply to the Project.

Regional

BAAQMD CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed in the Bay Area. The guidelines also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the BAAQMD CEQA Guidelines, which included significance thresholds for GHG emissions based on the emission reduction goals for 2020 articulated in AB 32. The first threshold, 1,100 $MTCO_2e$ per year, is a numeric emissions level below which a project's contribution to global climate change would be less than cumulatively considerable. For larger and mixed-use projects, the guidelines state that emissions would be less than cumulatively significant if the project as a whole would result in an efficiency of 4.6 $MTCO_2e$ per service population or better (BAAQMD, 2017).

The BAAQMD has not updated its significance thresholds based on SB 32 GHG reduction goals. Under the current BAAQMD CEQA Guidelines, a local government may prepare a qualified GHG reduction strategy that is consistent with SB 32 goals. If a project is consistent with an adopted qualified GHG reduction strategy and general plan that addresses the project's GHG emissions, it can be presumed that the project will not conflict with the State's GHG reduction goals and will have a less than significant GHG impact under CEQA (BAAQMD, 2017).

Local

Envision San José 2040 General Plan and Greenhouse Gas Reduction Strategy

In 2011, the City adopted the Envision San José 2040 General Plan (General Plan; City of San José, 2020a). The General Plan identifies policies and measures to reduce GHG generation within the City. Policies relevant to the Project include:

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

As part of the General Plan update, the City adopted a Greenhouse Gas Reduction Strategy for the City of San José (GHGRS; City of San José, 2015a) in accordance with the BAAQMD CEQA Guidelines and CEQA Guidelines Section 15183.5. The City's GHG Reduction Strategy was approved as part of the City's 2040 General Plan and analyzed in the 2040 General Plan Integrated Final Program Environmental Impact Report (2040 General Plan PEIR) (certified in November 2011) and updated in the Supplemental PEIR (certified in December 2015). The City of San José prepared a Supplemental PEIR to supplement the information included in the 2040 General Plan PEIR regarding GHG emissions and global climate change. The Supplemental PEIR reevaluated the significance of projected GHG emissions associated with existing and planned land uses in San José and the consistency of the General Plan and GHG Reduction Strategy with the California Climate Change Scoping Plan and other plans (City of San José, 2015b).

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

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

4.6.2 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Checklist Source(s)*
GREENHOUSE GAS EMISSIONS — Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	

4.6.3 Impact Discussion

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

(Less Than Significant Impact) GHG emissions worldwide cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate sufficient GHG emissions on its own to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects in San José, the entire state of California, across the nation, and around the world contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

Construction

The combustion of diesel fuel to provide power for the operation of various construction equipment results in the generation of GHGs. Construction emissions associated with the Project were estimated using Project-specific information such as the types, number, and horsepower rating of construction equipment used, their daily usage in terms of hours per day, and the number of days each piece of equipment is used over the construction period. **Appendix C** contains the data and assumptions used to estimate the construction-phase GHG emissions that would be associated with the Project.

CO_2, CH_4 and N_2O emissions from off-road construction equipment and construction vehicle trips (worker commute trips, equipment and material transfer truck trips) were derived from the CalEEMod run to estimate criteria air pollutant emissions. N_2O and CH_4 emissions were multiplied by their respective GWPs (25 and 298) and added to the CO_2 emissions to obtain CO_2e emissions.

Table 4.6-1 shows the GHG emissions estimated to be generated by construction activities associated with the Project. As shown in the table, Project construction would generate a total of approximately 2,114 $MTCO_2e$ over the 4-year construction period. The BAAQMD has neither adopted nor recommended GHG thresholds for construction emissions in their CEQA Air Quality Guidelines. Instead it recommends that a determination of the significance of a project's construction emission impacts be made in relation to meeting the State's GHG reduction goals, as described further below. Appendix C contains details on the calculations and assumptions used to estimate construction GHG emissions.

TABLE 4.6-1
TOTAL ESTIMATED GHG EMISSIONS FROM CONSTRUCTION

Emissions	GHG Emissions ($MTCO_2e$)
2021	773.7
2022	232.5
2023	554.8
2024	552.9
Project Total	2,114

SOURCE: Appendix C.

Operations

Operation of the Trimble and Agnews wells would require routine weekly visits by facility operators to check pumps and treatment equipment and monitor performance. These regular maintenance activities would be performed by City staff, and would not require any new additional staff for operations and maintenance. These trips would generate very minimal GHG emissions and have not been quantified. A 500 kilowatt emergency standby generator is proposed at the Agnews site to serve the three wells in the event of power outage. Routine testing and maintenance of this generator would also generate GHG emissions. Testing would be limited to one hour per day and 50 hours per year by the BAAQMD's permit requirements for the generator. Emissions from generator testing was estimated using U.S. EPA's AP-42 emissions factors for CO_2.

In addition, GHG emissions would be generated indirectly from the use of electricity to pump water from the wells. The total estimated annual power requirements under the maximum production scenario are approximately 220,000 kilowatt hours per year for wells at the Agnews site and 70,000 kilowatt hours per year for well at the Trimble site. Indirect GHG emissions generated by the Project's use of electricity from Pacific Gas & Electricity's (PG&E) electrical grid were estimated using an emission factor of 210 pounds of CO_2 per MWh of delivered electricity based on data for 2017 (PG&E, 2019). N_2O and CH_4 emission factors for electricity were obtained from the U.S. Environmental Protection Agency (U.S. EPA, 2020). GHG emissions in the form of CO_2e were calculated by multiplying the N_2O and CH_4 emissions by their respective global warming potential, and then adding the CO_2, N_2O, and CH_4 emissions.

Project operational emissions are shown in **Table 4.6-2** below.

TABLE 4.6-2
GHG EMISSIONS FROM PROJECT OPERATIONS

Emissions	Annual GHG Emissions ($MTCO_2e$ per year)
Emergency Generator Testing	17.8
Indirect Electrical Grid Emissions	27.9
Total Project Operational Emissions	45.7
BAAQMD Operational GHG Threshold	1,100
Significant?	No

SOURCE: Appendix C.

For all projects that are not stationary sources, the BAAQMD recommends a GHG significance threshold of 1,100 $MTCO_2e$ per year. As shown in the table above, the Project's operational GHG emissions from electricity use and operation of the emergency generator, would not exceed the BAAQMD significance threshold for operation. Therefore, the Project would not generate GHG emissions, either directly or indirectly, during construction or operation that may have a significant impact on the environment. This would be a less than significant impact.

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

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

The 2030 GHGRS presents the City's comprehensive path to reduce GHG emissions to achieve the California's 2030 reduction target, based on SB 32 and serves as the City's qualified climate action plan in compliance with CEQA. The 2030 GHGRS leverages other important City plans and policies; including the General Plan, Climate Smart San José, and the City Municipal Code in identifying reductions strategies that achieve the City's target. As described in the 2030 GHGRS, these GHG reductions will occur through a combination of City initiatives in various plans and policies and will provide reductions from both existing and new developments. The City has developed a Compliance Checklist (checklist) specifically applicable to proposed discretionary projects that require environmental review pursuant to CEQA. The checklist forms a critical implementation tool in the City's overall strategy to reduce GHG emissions. Implementation of applicable reduction actions in new development projects will help the City achieve incremental reductions toward its target. Per the 2030 GHGRS, the City will monitor strategy implementation and make updates, as necessary, to maintain an appropriate trajectory to the 2030 GHG target. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the GHGRS.

As part of the checklist, projects are required to establish consistency with the City's General Plan policies and GHG reduction strategies. Relevant policies from the General Plan included in the checklist relate to land use & design, transportation, green building, and water conservation. The Project would be consistent with the Land Use/Transportation assumptions in the General Plan and would not require a change in land use designation. Other policies in the checklist that relate to transportation, green building and water conservation in buildings. These would not apply to the Project as it would not generate any operational traffic nor would it construct buildings or structures that would consume energy or water. Therefore, the Project would be consistent with the City's General Plan. Of the GHG reduction strategies in the checklist, only the measure to exceed the City's construction & demolition waste diversion requirement would apply to the project in support of GHG reduction strategy 5. As required by the City's Construction and Demolition Waste Diversion Program (further described in Section 4.10, *Utilities*), consistent with General Plan Policy MS-5.6, the Project would transport all construction and demolition debris to a City-certified waste diversion facility to reduce construction and demolition debris. All processing facilities are mandated to divert 75 percent of incoming materials, consistent with the City's requirement and exceeding CalGreen's diversion requirement. Therefore, the Project would support the City's GHG reduction strategy 5 to achieve its zero waste goal. As the Project would be consistent with both the General Plan policies and GHG reduction strategies, it would not be considered to conflict with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of GHG emissions. This would be a less than significant impact.

4.6.4 Mitigation Measures

None required.

4.6.5 References

BAAQMD, 2017. *California Environmental Quality Act Air Quality Guidelines*, 2017. Available at: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en.

CARB (California Air Resources Board), 2017. *First Update to the Climate Change Scoping Plan. May 2014. Available at:* https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

CARB, 2017. *California's 2017 Climate Change Scoping Plan - The strategy for achieving California's 2030 Greenhouse Gas Target*, November 2017. Available at: https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf.

CARB, 2020. *GHG Global Warming Potential*s, accessed July 2020. Available at: https://ww2.arb.ca.gov/ghg-gwps.

City of San José, 2015. *Greenhouse Gas Reduction Strategy for the City of San José*, June 2011. Updated December 2015. Available at: https://www.sanjoseca.gov/home/showdocument?id=28213.

City of San José, 2020a. *Envision San José 2040.* Adopted November 2011, amended March 2020. Available at: https://www.sanjoseca.gov/home/showdocument?id=22359.

City of San José, 2020b. *2030 Greenhouse Gas Reduction Strategy*, August 2020. Available at: https://www.sanjoseca.gov/Home/ShowDocument?id=63605.

PG&E (Pacific Gas & Electricity), 2019. Corporate Responsibility and Sustainability Report, 2019. Available at: https://www.pgecorp.com/corp_responsibility/reports/2019/assets/PGE_CRSR_2019.pdf.

USEPA, 2020. Emissions and Generation Resource Integrated Database (eGRID) Summary Tables 2018 - Subregion Output Emission Rates. March 9, 2020. Available at:: https://www.epa.gov/sites/production/files/2020-01/documents/egrid2018_summary_tables.pdf.

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4.7 Geology and Soils

4.7.1 Environmental Setting

The Project lies within a region of California that is known as the Coast Ranges Geomorphic Province, characterized by a series of northwest trending mountain ranges and faults. The San Francisco Bay represents a structural trough created from an east-west expansion between the San Andreas and the Hayward fault systems. The San Andreas and Hayward fault systems are a surface expression of the plate boundary between the Pacific Ocean and North American tectonic plates. According to modeling compiled by the Working Group on Earthquake Probabilities, it is estimated that the Bay Area as a whole has a 72 percent chance of experiencing an earthquake of magnitude 6.7 or higher before 2045 (USGS 2015). According to a recent forecast published by the U.S. Geological Survey, the individual faults posing the greatest threat to the Bay Area are the Hayward-Rodger's Creek fault and the San Andreas fault but other regional faults including Calaveras, Concord–Green Valley, Marsh Creek–Greenville, and the San Gregorio faults, are also capable of experiencing a significant earthquake (USGS 2015). Both the Trimble and Agnews sites are located approximately 4 miles southwest of the Hayward fault and not within any identified Alquist Priolo Earthquake Fault Zone. The Agnews site is also located just east of the Silver Creek fault (less than 1,000 feet (Bonkowski, 2019b)); however, this fault is not considered active, meaning there is no indication of displacement within the last 11,600 years (Hart, 2018).

The Project sites are located in the San José Alluvial Plain, which is located on the flat lying floor of the Santa Clara Valley (Valley). The Valley sediments were deposited as a series of overlapping alluvial fans[25], by streams that drain the adjacent mountains. These alluvial sediments make up the groundwater aquifers of the area. Soils in the Valley include clay in the low-lying central areas, loam[26] and gravelly loam in the upper portions of the Valley, and eroded rocky clay loam in the foothills. According to statewide mapping, the Project is located within an area considered to be susceptible to liquefaction according to the California Seismic Hazards Zonation Program (CalEMA, 2020).

Boring logs from the Trimble site indicate that soils beneath the site consist of interbedded sequences of coarse sand and gravels with silts and clays to a depth of 850 feet below ground surface (Bonkowski, 2019a). Soils beneath the Agnews site consist of similar deposits to a depth of 790 feet below ground surface (Bonkowski, 2019b).

According to the Landside Inventory Map of the Milpitas Quadrangle (Weigers, 2011), the Project sites are not in an area that is mapped as a having historic landslide movement, or where conditions indicate the potential for landslides. According to available data from the Natural Resources Conservation Service (NRCS) Web Soil Survey, the soil expansion potential is considered moderate for both sites (NRCS, 2020).

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

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

4.7.2 Environmental Checklist and Discussion of Impacts

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

4.7.3 Impact Discussion

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

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

(Less Than Significant Impact) The Project sites are within a seismically active region of California that will likely experience an earthquake of magnitude 6.7 or higher before 2045 (USGS 2015). Faults capable of producing significant earthquakes and potentially experiencing

fault rupture in the Bay Area include the San Andreas, Hayward-Rodgers Creek, Calaveras, Concord–Green Valley, Marsh Creek–Greenville, and the San Gregorio faults. The Project sites are not located on or immediately adjacent to any active faults. The Silver Creek fault is located relatively close (less than 1,000 feet to the east) to the Agnews site; however, this fault is not considered active and therefore, is not likely to experience surface displacement. The nearest active fault to the Project sites is the Hayward fault which is located approximately 4 miles northeast of the sites.

The Project sites are not located on or immediately adjacent to an active fault zone and while it is possible that surface rupture could occur outside of an active fault zone, the risk of occurrence is considered very low and the Project would not exacerbate the potential to occur. Therefore, the extent to which the Project would cause the exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, is less than significant.

a.ii) Strong seismic ground shaking? and;

a.iii) Seismic-related ground failure, including liquefaction?

(Less Than Significant Impact with Mitigation) As noted above, the Project area is located within a seismically active region. As a result, the proposed facilities could be subject to strong seismic ground shaking, seismic failure, or adverse effects from liquefaction during an earthquake. Strong seismic shaking could occur as a result of seismic activity along any of the active faults in the region and potentially trigger liquefaction where unconsolidated loose saturated soils begin to behave more like a liquid than a solid. As required for any structures located within a seismic hazard zone, geotechnical investigations would be required for each site for the above ground improvements associated with the Project. The final design level geotechnical investigations would include recommendations to address liquefaction in accordance with California Geological Survey's Special Publication 117A, which includes guidelines for evaluating and mitigating seismic hazards in California (CGS, 2008). Proposed structures would be designed to avoid, or reduce to acceptable levels, damage to structures and all associated appurtenances in accordance with applicable requirements of the California Building Code and Special Publication 117A. In addition, the Project would implement **Mitigation Measure GEO-1: Seismic Safety Design**. Adherence to these measures, recommendations and requirements would reduce the potential for the Project to cause substantial adverse effects, including the risk of loss, injury, or death from strong seismic ground shaking, seismic-related ground failure, and liquefaction on each site to a less than significant level.

a.iv) Landslides?

(No Impact) Topography at the Project sites is relatively flat to gently sloping with limited topographic relief. The Project sites are also not located in an area with the potential for landslides. Because the Project would not alter the topography, the potential for the Project to cause landslides on the sites, including seismically induced landslides, is considered remote, and there would be no impacts.

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

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

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

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

(Less Than Significant Impact) The potential for seismic-related ground failure, including liquefaction, and landslides at the Project sites are discussed above under a.iii) and a.iv). Soils at the sites are not considered collapsible due to the depositional environment of the sediments (collapsible soils are usually deposited in arid climates). Ground subsidence in response to groundwater withdrawal has occurred in the Valley historically; however, the Santa Clara Valley Water District (Valley Water) now actively manages groundwater levels in the area such that subsidence can be prevented (Valley Water, 2016). As discussed more fully in Section 4.8, *Hydrology and Water Quality*, the Project, even at its highest extraction rate projected in 2040, would represent a relatively small volume of groundwater storage and would not contribute to subsidence. Lateral spreading could occur during excavation if a liquefiable layer is present in the subsurface; however, lateral spreading is more commonly experience at areas of an exposed slope, and the Project sites are relatively flat. In addition, graded areas would be required to comply with California Occupational Safety and Health (Cal/OSHA) Excavation and Trenching standards regulations, which would limit the potential for lateral spreading by sloping and shoring excavated areas. While there is a potential for liquefaction in the vicinity of the sites based on Seismic Hazards Zonation mapping, the Project would not exacerbate any liquefaction or lateral spreading that could occur in the area of the sites which is dependent on subsurface conditions that would not be altered by the Project. Compliance with local building standards, in addition to measures identified in the California Building Code and the geotechnical investigation required by the Special Publication 117A, would reduce the potential hazard from unstable soils, including lateral spreading, subsidence, or liquefaction which would reduce impacts to less than significant.

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

(Less Than Significant Impact) Expansive soils can damage overlying structures over time through cycling of different periods of wetting and drying. As noted above, the soils at both sites may have moderate potential for expansive soils. However, all proposed improvements would be subject to state and local building codes which include building requirements that mitigate the hazard posed by expansive soils. As a result of compliance with applicable construction requirements in the California Building Code, this impact would be less than significant.

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

(No Impact) The Project would not utilize septic systems or other alternative disposal systems for the disposal of wastewater. Therefore, no impact would occur.

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

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

The Project area overlies young Holocene-age geologic units. The Project sites are underlain by deposits that are associated with alluvial fan deposits. Young Holocene-age geologic units do not have the potential to contain paleontological resources (SVP, 2010). Although unlikely, the inadvertent discovery of paleontological resources cannot be entirely discounted. Inadvertent damage to paleontological resources during construction would be a potentially significant impact. Implementation of **Mitigation Measure GEO-2: Inadvertent Discovery of Paleontological Resources** would reduce the impact to a less than significant level.

4.7.4 Mitigation Measures

Mitigation Measure GEO-1: Seismic Safety Design.

a. To avoid or minimize potential damage from seismic shaking, the project shall be constructed using standard engineering and seismic safety design techniques. The design and construction of facilities at the site shall be completed in conformance with the recommendations of an approved geotechnical investigation. The report shall be reviewed and approved by the City of San José Department of Public Works as part of the project review process. The facilities shall meet the requirements of applicable Building and Fire Codes as adopted or updated by

the City, as applicable. The project facilities shall be designed to withstand soil hazards identified on the site and the project shall be designed to reduce the risk to life or property on site and off site to the extent feasible and in compliance with the Building Code.

b. All excavation and grading work shall be scheduled in dry weather months or construction sites shall be weatherized.

c. Stockpiles and excavated soils shall be covered with secured tarps or plastic sheeting.

d. Ditches shall be installed to divert runoff around excavations and graded areas if necessary.

e. The project shall be constructed in accordance with the standard engineering practices in the California Building Code, as adopted by the City of San José. A grading permit from the San José Department of Public Works shall be obtained prior to the issuance of a Public Works clearance. These standard practices would ensure that the future facilities on the site are designed to properly account for soils-related hazards on the site.

Mitigation Measure GEO-2: Inadvertent Discovery of Paleontological Resources.

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

4.7.5 References

Bonkowski & Associates, 2016. *Technical Memorandum Hydrogeologic and Infrastruction Feasibility Evaluation*, October 25, 2016

California Emergency Management Agency (CalEMA), 2020. *My Hazards Database Search*. https://myhazards.caloes.ca.gov/, accessed June 25, 2020.

California Geologic Survey (CGS), 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, 2008.

Hart, E. W., 2018. Earthquake Fault Zones in California: Alquist-Priolo Special Studies Zones Act of 1972, Special Publication 42, 1990. Revised and updated 2018.

Natural Resources Conservation Service, 2020. Web Soil Survey Santa Clara County, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed September 24, 2020.United States Geologic Survey (USGS), UCERF3: A New Earthquake Forecast for California's Complex Fault System, Fact Sheet 2015–3009, March 2015.

Santa Clara Valley Water District (Valley Water), 2016. *Groundwater Management Plan, Santa Clara and Llagas Subbasins*, November 2016.

Society for Vertebrate Paleontology (SVP), 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources, 2010.

Wiegers, Mark O., (Wiegers), 2011. Landslide Inventory Map of the Milpitas Quadrangle, Alameda and Santa Clara Counties, California. California Geological Survey. Map. Scale 1:24,000. Available at: https://maps.conservation.ca.gov/cgs/lsi/app/ Accessed September 24, 2020.

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4.8 Hazards and Hazardous Materials

4.8.1 Environmental Setting

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

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

Potential Receptors/Exposure

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

Schools

There are no schools located within a quarter mile of the Project sites. The nearest school to the Trimble site is the Montague Elementary School which is located approximately 0.6 miles to the northwest. The nearest school to the Agnews site is the Don Callejon School, located approximately 0.75 miles to the southwest. Construction of the Santa Clara Unified School District campus is expected to be completed by August 2021.[27] Based on plans for the proposed school campus, the nearest school buildings would be located approximately 640 feet (0.1 miles) from the proposed wells locations at the Agnews site.

[27] https://www.santaclarausd.org/Page/2299

Airports

Based on the Santa Clara County Comprehensive Land Use Plan for the Airport (Santa Clara County, 2016), the Agnews site is located approximately 2 miles north of the San Jose International Airport. Federal Aviation Regulations, Part 77, requires that the Federal Aviation Administration (FAA) be notified of certain proposed structures located within an extended zone defined by an imaginary slope radiating outward from an airport's runways, or which would otherwise stand at least 200 feet above ground. If such notification is required, the FAA would conduct an airspace safety review and issue a determination as to whether the proposed project would constitute an airspace hazard.

Hazardous Materials Sites List

A separate Phase I Environmental Site Assessment was performed for both well site locations by the City (San Jose, 2020a, and 2020b). These investigations included reviewing environmental databases, and a site reconnaissance to determine the potential for subsurface contaminants to be present at the Project sites. The following represents a summary of the findings of these investigations. The Phase I Environmental Site Assessments are included as **Appendix D**:

Agnews Site

The Agnews site is located within an area that was once part of the Agnews Hospital grounds. Several environmental investigations have been performed in the past 15 years on the entire 81-acre former Agnews Hospital grounds and the 22-acre eastern portion, on which the Project site is located. Environmental investigations in 2011 and 2013 included testing for pesticides and metals at locations on or close to the Agnews site. Both investigations did not show pesticide or metal concentrations above regulatory environmental screening levels indicating that there was no apparent threat to human health or the environment (San Jose, 2020a). Soil and groundwater contamination has been found on the former Agnews Hospital property; however, it is mostly associated with former buildings and operations such as former underground tanks, boilers and pesticides sprayed around the perimeter of buildings for insecticide control, all of which are located well away from the Project site (San Jose, 2020a).

Trimble

The Trimble site is located in an area with a history of agriculture land use pesticides or herbicides may have been applied to surface soils. There is the potential for the soil in the first few feet below ground surface to contain residual pesticides and pesticide-based metals (primarily arsenic, and lead) from over 40 years of history as an orchard. However, the Phase I report concluded that no recognized environmental conditions were found at the site (San Jose, 2020b).

Emergency Plans

Santa Clara County has developed an Operational Area Emergency Operations Plan that establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of response in the event of an emergency (Santa Clara County 2020).

Wildfire

According to fire hazard mapping by the CAL FIRE Forest Resource Assessment Program and the Santa Clara County Wildland Urban Fire Interface Map, the Project sites are not located within an area identified as a high fire hazard area (CalFire, 2008).

4.8.2 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Checklist Source(s)*
HAZARDS AND HAZARDOUS MATERIALS — Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐	

4.8.3 Impact Discussion

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

(Less Than Significant Impact) Project construction could involve the routine use of small quantities of hazardous materials commonly used during drilling and construction activities such as fuels, lubricants, paints, and degreasers. Storage and use of hazardous materials at the

construction site could result in exposure risks to workers, the public, and the environment. However, the quantities involved would likely represent low exposure risks. All hazardous materials would be stored in consumer packaging and handled in accordance with manufacturer's recommendations, and disposed of in accordance with existing regulatory requirements. Therefore, considering the limited amount of hazardous material that would be used during construction activities, and practices and procedures that require adherence to existing regulatory requirements for hazardous materials, the potential for the Project to create a significant hazard to the public or the environment from the routine use, transport, and disposal of hazardous materials during construction would be less than significant.

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

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

(Less Than Significant Impact) As noted above, the Project would use only small quantities of hazardous materials during construction and no hazardous materials would be stored onsite during operation. The types of hazardous materials required during construction would primarily be in consumer quantities that would not have the potential for substantial exposure risks. Therefore, considering the limited amount of hazardous material used during construction and existing regulatory requirements for the safe handling and disposal, the potential for adverse effects related to accidental release during construction would be less than significant.

There would be no hazardous materials stored at the well sites during operation and therefore there would be no impact.

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

(Less Than Significant Impact) There are no existing schools within 0.25-miles of the Project sites. Once constructed, the nearest school buildings associated with the Santa Clara Unified School District campus would be located approximately 640 feet (0.1 miles) from the proposed wells locations at the Agnews site. As discussed in criteria a) and b) above, the Project would use only small quantities of hazardous materials during construction and no hazardous materials would be stored onsite during operation. The types of hazardous materials required during construction would primarily be in consumer quantities that would not have the potential for substantial exposure risks. Therefore, the potential for adverse effects related to accidental release during construction would be less than significant.

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

(Less Than Significant Impact with Mitigation) As discussed above, a Phase I Environmental Site Assessment was completed for each of the well sites which included a review of regulatory databases. The Trimble site, while not included on an environmental database list, is located in an area formerly used as an orchard where pesticides and/or herbicides could potentially be present in surface soils. If not handled appropriately during construction, these soils could represent potential exposure risks. However, implementation of **Mitigation Measure HAZ-1: Soil Sampling,** consistent with the conclusions in the Phase 1 Environmental Site Assessment, would be required to reduce or eliminate exposure risk to human health and the environment, specifically, potential risks associated with the presence of contaminated soils and construction worker health.

The Phase I Environmental Site Assessment determined that areas where soil and groundwater contamination had been found on the former Agnews Hospital property are located well away from the Agnews site and are not expected to impact the well sites (City of San Jose, 2020a). The Phase 1 Environmental Site Assessment did not reveal any recognized environmental conditions (RECs[28]), or any controlled recognized environmental conditions (CRECs[29]), or any historical recognized environmental conditions (HRECs[30]) associated with the subject property. The impact would be less than significant.

With implementation of **Mitigation Measure HAZ-1: Soil Sampling**, the potential impact from construction and operation at the Trimble site would be reduced to less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

(No Impact) The nearest airport to the Project sites is the Norman Y. Mineta San José International Airport. Due to the distance from the Airport and the above-ground heights of the proposed improvements, the Project does not require notification to the FAA for airspace safety review, and the Trimble well would not conflict with any height or safety policies of the Santa Clara County ALUC. Therefore, potential safety hazard impacts related to proximity of a public airport, would have no impact.

[28] RECs are defined as the presence or likely presence of any hazardous substances or petroleum products.

[29] CRECs are defined as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

[30] HRECs are defined as a past release or any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

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

(No Impact) Santa Clara County does not have an adopted emergency response plan or emergency evacuation plan that designates specific emergency response or evacuation routes within the Project area; therefore, no impact would occur.

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

(Less Than Significant Impact) The Project sites are not within a high fire hazard area and, in the unlikely event of a fire, the potential to expose people or structures to a significant risk involving fires is low. The use of construction equipment and the possible temporary on site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction. However, contractors would be required to comply with hazardous materials storage and fire protection regulations, which would reduce the potential for fire creation, and ensure that the risk of hazards related to fires during construction would be less than significant.

Compliance with existing safety regulations and widely-accepted industry standards would reduce the hazard to the public and the environment. The local fire agency would be responsible for enforcing the provisions of the fire code. Therefore, this impact would be less than significant.

4.8.4 Mitigation Measures

Mitigation Measure HAZ-1: Soil Sampling.

Prior to issuance of a grading permit, the City shall contract with a qualified environmental contractor to obtain and analyze representative surface soil samples for the proposed areas of soil disturbance located at the Trimble site in accordance with the findings of the Phase I Environmental Site Assessment, dated May 20, 2020. The soil sample collection, analysis of results, and recommendations for development of a health and safety plan, soil and groundwater management plan, or further characterization or remediation, if any, shall be provided to the Director of Planning, Building, and Code Enforcement or the Director's Designee, and the Environmental Compliance Officer in the City of San José's Environmental Services Department, and implemented accordingly.

4.8.5 References

California Department of Forestry and Fire Protection (CalFire), 2008. Fire and Resource Assessment Program, Fire Hazard Severity Zones in State Responsibility Areas, Santa Clara County, California. November 7, 2007.; California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, Very Fire Hazard Severity Zones in Local Responsibility Areas, Santa Clara County, California. May 2008.

City of San Jose (San Jose), 2020a. Phase I Environmental Site Assessment, Agnews Municipal Water Groundwater Well Project, May 20, 2020a.

City of San Jose (San Jose), 2020b. Phase I Environmental Site Assessment, Trimble Municipal Water Groundwater Well Project. May 20, 2020b.

Santa Clara County Planning Office, 2009. Santa Clara County Wildland Urban Interface Fire Area, Adopted February 24, 2009.

Santa Clara County, 2020, Santa Clara County Operational Area Emergency Operations Plan, March 18, 2008, available online at https://www.sanjoseca.gov/DocumentCenter/View/47601 Accessed August 21, 2020.

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4.9 Hydrology and Water Quality

4.9.1 Environmental Setting

The Project area is located in the southern San Francisco Bay Area, which experiences a Mediterranean climate characterized by mild, wet winters and dry, warm summers. Precipitation averages approximately 15 inches per year and falls mostly between October and April (US Climate, 2020). Both sites are currently served by existing stormwater drainage infrastructure.

The nearest surface waters to the Project area include the Guadalupe River to the west and coyote Creek to the east, with the Agnews site located approximately equidistant (approximately ½ mile) from both drainages and the Trimble site approximately 200 feet east of Guadalupe River. Both of these surface waters flow northerly and drain into the San Francisco Bay. According to the Groundwater Management Plan for the area, both well sites are outside of areas of known or suspected surface water/groundwater interaction (Valley Water, 2016).

The proposed well sites are both located in the North San Jose/Alviso area, which is within the Santa Clara Groundwater Subbasin (DWR Basin 2-9.02), which includes two groundwater management areas: Santa Clara Plain and Coyote Valley. The Subbasin underlies a relatively flat valley and consists of unconsolidated alluvial sediments. The proposed well sites are located in the Santa Clara Plain management area. Groundwater in this area is characterized as confined, meaning there is an overlying layer of relatively impermeable deposits that make vertical movement of water across the confining layer negligible.

The Project overlies the Santa Clara Valley (Valley) Groundwater Subbasin and specifically within the Santa Clara Plain groundwater management area. The Valley is generally divided into two major deposits: Holocene (younger than 11,000 years old) and Pleistocene deposits (from 1.8 Million to 11,000 years old). The Holocene deposits consist of the most recent sediments deposited along major stream courses and bay mud deposits along the San Francisco Bay. The Holocene alluvial sediment consists mainly of clay, silt and sand occurring in discontinuous lenses. The majority of the subbasin alluvium is older, Pleistocene deposits of unconsolidated and interfingered lenses of clay silt, sand and gravel. The base of the Pleistocene deposits overlies the Santa Clara Formation. Groundwater in the subbasin is generally recharged in upland areas and flows toward the Bay. Water supplies in the basin is provided by a combination of groundwater, treated water, imported water from San Francisco Public Utilities Commission, (SFPUC) surface water supplies, and recycled water (Valley Water, 2016).

Groundwater is reportedly first encountered at a depth of 9 to 14 feet below ground surface in the vicinity of the Agnews site (Kleinfelder, 2013) and 9 to 17 feet at the Trimble site (City of San Jose, 2020). However, the wells would be designed to target drawing water from lenses of coarser materials in the deeper confined aquifer at depths of greater than 300 feet below ground surface.

The Santa Clara Valley Water District (Valley Water) is the Groundwater Sustainability Agency[31] for the entire Santa Clara Groundwater Subbasin and has prepared the 2016 Groundwater Management Plan (GMP) that describes basin conditions, sustainability goals, strategies, programs, and outcome measures for the entire Santa Clara Groundwater Subbasin. The GMP was adopted by the District's Board of Directors in November 2016. Briefly, the GMP recognizes the District's extensive water management infrastructure, including groundwater pumping and recharge facilities, reviews historic groundwater levels and land subsidence, identifies subbasins, and outlines a series of sustainability goals and strategies, basin management programs and activities, and targeted outcome measures relevant to groundwater management as a resource in the District's service area. One of the targeted outcome measures of the GMP is to ensure that on an annual basis, projected end of year total groundwater storage is greater than 278,000 AF for the Santa Clara Plain (Valley Water, 2016). This outcome measure was met for 2019 with an end of year groundwater storage of 315,700 AF (Valley Water, 2020).

From 2003 to 2013, the overall groundwater budget (difference between water coming into the subbasin and the amount going out) averaged a positive 2,000 AFY indicating a net increase in stored groundwater (Valley Water, 2016). However, subsequent prolonged drought resulted in lower groundwater levels and storage in the Santa Clara subbasin, prompting Valley Water to call for short-term water use reduction in 2014, 2015, and 2016 in accordance with Valley Water's Water Shortage Contingency Plan. Significant recovery of groundwater levels and storage was observed in 2015 and 2016 due to community water use reduction, retailer shifts to treated surface water, and increased managed recharge (Valley Water, 2016). The most recent annual groundwater report shows continued recovery of groundwater levels and storage with the end of year storage for 2019 of 315,700 AF, a 6,300 AF increase compared with end of year 2018 (Valley Water, 2020).

Demand for water in the North San Jose/Alviso area is currently met by water deliveries from SFPUC and is supplemented by groundwater; however, the current wells are used relatively sparingly and for reliability purposes. Water demand for 2015, as was considered current in the 2015 Urban Water Management Plan, was 4,962 AFY which is projected to increase to 9,887 AFY by the year 2040. The Santa Clara Plain for the year ending 2019, had total inflows exceeding outflows by a total of 6,300 AF for a total storage of 315,700 AF (Valley Water, 2020).

The Trimble well site is located outside both the 100-year and the 500-year flood zone area, defined by the Federal Emergency Management Agency (FEMA) (Bonkowski, 2016b). The Agnews well sites, however, would be located outside of the 100-year flood zone but within the 500 –year flood zone, which is defined as an area having a 0.2 percent annual chance of occurrence for flooding (Bonkowski, 2016b).

The Regional Water Quality Control Board (RWQCB)'s Basin Plan establishes regulatory standards and objectives for water quality in the San Francisco Bay region. The Basin Plan identifies existing and potential beneficial uses for surface water and groundwater and provides

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

numerical and narrative water quality objectives designed to protect those uses. Applicable water quality objectives for a specific water body are determined on the basis of the beneficial use(s) of the water. The Basin Plan also specifies that beneficial use designations for any given water body do not rule out the possibility that other beneficial uses exist or have the potential to exist. The Basin Plan contains narrative and numeric water quality objectives that apply to most waters in the region and are intended, in part, to ensure that beneficial uses are protected.

4.9.2 Regulatory Setting

Clean Water Act

Under the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), the U.S. Environmental Protection Agency seeks to restore and maintain the chemical, physical, and biological integrity of the nation's waters by implementing water quality regulations.

The federal Anti-degradation Policy, established in 1968 under CWA Section 303, is designed to protect existing uses, water quality, and national water resources. The states implement a set of anti-degradation measures when evaluating activities that may affect the quality of waters of the United States. Implementing anti-degradation measures is integral to the comprehensive protection and enhancement of surface water and groundwater quality.

CWA Section 303(d) requires states to identify water bodies or segments of water bodies that are "impaired." (Impaired water bodies do not meet one or more of the water quality standards established by the state, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology.) A point source is any discernible, confined, and discrete conveyance (e.g., a pipe discharge) of pollutants to a water body from sources such as industrial facilities or wastewater treatment plants. Including a water body on the Section 303(d) List of Impaired Water Bodies triggers development of a total maximum daily load (TMDL) for that water body and a plan to control the associated pollutant or stressor on the list. The TMDL is the maximum amount of a pollutant/stressor that a water body can assimilate and still meet the water quality standards. Typically, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point and non-point sources. Non-point pollutant sources are those that do not have a single, identifiable discharge point but are rather a combination of many sources.

Porter Cologne Act

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

The Porter-Cologne Act allows the California SWRCB to adopt statewide Water Quality Control Plans and basin-specific water quality control plans, which serve as the legal, technical, and

programmatic basis of water quality regulation statewide or for a particular region. The water quality control plans limit impacts on water quality from a variety of sources.

National Pollution Discharge Elimination System

Construction General Permit

Construction activities disturbing 1 acre or more of land are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (Construction General Permit, Order 2009-0009-DWQ, NPDES No. CAS000002, as amended by Orders 2010-0014-DWQ and 2012-006-DWQ; SWRCB, 2014) and must apply for Construction General Permit coverage. The permit regulates stormwater discharges from construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including the installation of utility lines. This General Permit requires that stormwater discharges and authorized non-stormwater discharges must not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards (identified in the Basin Plan).

The Construction General Permit requires that construction sites be assigned a risk level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the risk to receiving waters during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could be discharged to receiving water bodies, and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving-waters risk level reflects the risk to receiving waters from the sediment discharge. Depending on the risk level, construction projects governed by the Construction General Permit could be subject to the following best management practice requirements (BMPs): Effluent standards; good site management "housekeeping;" non-stormwater management; erosion and sediment controls; run-on and runoff controls; inspection, maintenance, and repair; and monitoring and reporting requirements. Such BMPs are designed to protect surface water quality by preventing eroded soil and construction-related pollutants from migrating off-site from the construction area. Routine inspection of all BMPs is required under the Construction General Permit. The maximum ground disturbance for each Project site would be less than one acre and would therefore not be required to comply with the National Pollutant Discharge Elimination System General Construction Permit.

All development projects, whether subject to the CGP or not, shall comply with the City of San Jose's Grading Ordinance, which requires the use of erosion and sediment controls to protect water quality while the site is under construction. Prior to the issuance of a permit for grading activity occurring during the rainy season (October 1st to April 30), the project will submit to the Director of Public Works an Erosion Control Plan detailing BMPs that will prevent the discharge of stormwater pollutants.

Municipal Regional Permit

The City of San José is required to operate under a Municipal Stormwater NPDES Permit to discharge stormwater from the City's storm drain system to surface waters. On October 14, 2009,

the San Francisco Bay Regional Water Quality Control Board adopted the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) for 76 Bay Area municipalities, including the City of San José.

The Municipal Regional Permit (NPDES Permit No. CAS612008) mandates the City of San José use it's planning and development review authority to require that stormwater management measures such as Site Design, Pollutant Source Control and Treatment measures are included in new and redevelopment projects to minimize and properly treat stormwater runoff. Provision C.3 of the MRP regulates the following types of development projects:

- Regulated Projects that create or replace 10,000 square feet or more of impervious surface;
- Special Land Use Categories that create or replace 5,000 square feet or more of impervious surface.

The MRP requires regulated projects to include Low Impact Development (LID) practices, such as site design, pollutant source control and stormwater treatment control measures aimed to maintain or restore the site's natural hydrologic functions. The MRP also requires that stormwater treatment measures are properly installed, operated and maintained.

The Municipal Regional Permit also requires regulated projects to include measures to control hydromodification impacts where the project would otherwise cause increased erosion, silt pollutant generation, or other adverse impacts to local rivers and creeks. Development projects that create and/or replace 1 acre or more of impervious surface, create an increase in total impervious surface from pre-project conditions, and are located in a subwatershed or catchment that is less than 65% impervious, must manage increases in runoff flow and volume so that post-project runoff shall not exceed estimated pre-project rates and durations.

Based on its size and subwatershed or catchment location, the project will not be required to comply with the hydromodification requirements of Provision C.3 of the Municipal Regional Permit.

City Council Policy 6-29, Post Construction Urban Runoff Management.

The City has developed policies that implement Provision C.3, consistent with the Municipal Regional Permit. The City's Post-Construction Urban Runoff Management Policy (6-29) establishes specific requirements to minimize and treat stormwater runoff from new and redevelopment projects.

City Council Policy 8-14, Post Construction Hydromodification Management Policy and Map.

The City's Post-Construction Hydromodification Management Policy (8-14) establishes an implementation framework for incorporating measures to control hydromodification impacts from development projects. The maximum ground disturbance for each Project site would be less than one acre and would therefore not be required to comply with this policy.

4.9.3 Environmental Checklist and Discussion of Impacts

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Checklist Source(s)*
HYDROLOGY AND WATER QUALITY — Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐	
i) result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐	
iv) impede or redirect flood flows?	☐	☐	☒	☐	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐	

4.9.4 Impact Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

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

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

Project construction would also include production of drilling fluids and initial development water (water initially extracted from the wells to clear excess fine grained sediments) that would be disposed of to the sanitary sewer. Prior to discharging to the sanitary sewer, fluids would be directed through a series of two Baker storage tanks to allow solids to settle out. Upon completion of well construction and prior to finalizing connections to water distribution systems, the newly installed water mains would be flushed and disinfected. Final development, testing, and clean artesian flow would be directed to the nearest storm drain inlet in accordance with regulatory storm discharge requirements.

Drainage from the Project site eventually discharges into the San Francisco Bay. Therefore, discharges from construction activities could result in the degradation of water quality within the San Francisco Bay, as well as other tributaries that receive storm water from the Project sites – namely, Coyote Creek and Guadalupe River. Degradation of water quality along these waterways could in turn affect beneficial use, and could result in exceedance of San Francisco Regional Water Quality Control Board (RWQCB) standards.

The maximum ground disturbance for each Project site would be less than one acre and would therefore not be required to comply with the National Pollutant Discharge Elimination System General Construction Permit. Therefore, to ensure the implementation of construction period Best Management Practices (BMPs) designed to reduce construction related stormwater pollution, construction and operation period water quality monitoring for all discharges, and implementation of various industrial site controls designed to reduce the discharge of polluted stormwater from the Project area, construction activities would require implementation of **Mitigation Measure HYD-1**. The City would be bound to comply with applicable BMPs consistent with the MRP and the City's requirements including City Council Policy 6-29 and the grading ordinance for stormwater management.

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

With implementation of **Mitigation Measure HYD-1**, San José Municipal code requirements and grading ordinance requirements, which require implementation of construction BMPs, the Project's impacts related to the degradation of surface water quality during construction would be less than significant.

During operation of the Project there would be no substantive change to the water quality of stormwater runoff due to the relatively small size of the well sites, relatively small net increases to impervious surfaces (81 square feet at Trimble and 162 square feet at Agnews), and no substantive changes in land uses that could represent a source of stormwater pollutants. Therefore, the potential impact would be less than significant.

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

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

(Less Than Significant Impact) The proposed groundwater wells would be operated to extract groundwater from the subbasin on an as needed basis to meet future demand. Currently, SFPUC supplies are meeting demand; however, projected growth is expected to exceed the fixed 5,041 AFY of contracted SFPUC water supply. By 2040, the anticipated demand is estimated to be 9,887 AFY. Therefore, the Project would be expected to gradually step up production to meet demand in excess of the 5,041 AFY up to a projected maximum of 4,846 AFY by 2040. As noted above, the subbasin is currently showing a water budget that has recently had an increase in storage of 6,300 AF and at 315,700 AF is well above the targeted total storage of 278,000 AF. However, multi-year drought periods like that experienced in 2014-2016 can reduce groundwater storage volumes. The combined effects of reduced groundwater recharge with increased pumping due to the Project could potentially adversely affect groundwater supplies. However, as stated in the GMP, long-term water conservation is one of the key components of Valley Water's water supply management strategy. Conservation programs alone saved approximately 64,000 AF in 2015 and are on target to reduce annual demands for the subbasin by nearly 100,000 AF by 2030 (Valley Water, 2016). In addition, as a groundwater management agency in accordance with SGMA, Valley Water would use available oversight measures such as managed recharge and conservation to ensure the sustainable management of the subbasin. It should also be noted that currently, Valley Water does not manage to any particular value for sustainable yield, but instead manages groundwater to maintain sustainable conditions through annual operations and long-term water supply planning. Annual operations planning considers available water supplies and projected demands in determining the source and volume of water to be delivered for managed recharge, drinking water treatment, or other use. Each year, Valley Water evaluates the projected end of year groundwater storage to determine if short-term water use reduction is needed in accordance with the Water Shortage Contingency Plan. Valley Water's long-term water supply planning efforts account for maintaining adequate groundwater supplies and reserves in related water system modeling and analysis that considers projected growth such as what the Project is designed to serve.

The Santa Clara Subbasin is not in a condition of chronic overdraft, and is currently dynamically managed by Valley Water to ensure that the subbasin remains sustainable in accordance with long standing practices as well as SGMA requirements. Valley Water has regulatory authority to implement investments, programs, and other modifications to water supply operations as needed to maintain sustainable conditions as well as management measures that can accommodate future growth. The Project would eventually result in extracting as much as 4,846 AFY by 2040 which is relatively small compared to the 92,000 AFY that has been the average amount of pumping from the subbasin from the recent but pre drought period of 2003-2012 (Valley Water 2016). Therefore, considering the proposed volume by the Project and the regulatory oversight and management of the subbasin by Valley Water, the Project would have a less than significant impact related to groundwater supplies and sustainable management of the subbasin.

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

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

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

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

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

(Less Than Significant Impact with Mitigation) During the construction of the Project, drilling, grading, and excavation activities could result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment in the runoff. If exposed soils are not managed properly and protected against stormwater flows, high sediment loads in stormwater runoff could clog drainage pipes, cause water pumps to malfunction, or otherwise decrease the carrying capacity of existing stormwater facilities or drainage channels, potentially resulting in increases in localized ponding or flooding. However, as discussed above in item a), the City or its contractor would be required to comply with the with **Mitigation Measure HYD-1**, San José Municipal code requirements, and the grading ordinance which requires the use of erosion and sediment controls to protect water quality while the site is under construction. By implementing BMPs, erosion or siltation, and runoff on- or off-site during construction would be reduced and impacts would be less than significant.

The new well at the Trimble site would include approximately 81 square feet of new impervious surface. The rest of the existing Trimble site is almost entirely paved and developed. No new stormwater facilities would be needed for the Trimble site. Stormwater runoff is expected to drain to the existing onsite catch basin or to Trimble Road, where existing stormwater infrastructure exists. One of the well at the Agnews site (NSJ #6) would be constructed on a previously paved surface. The other two wells at the Agnews site (Wells NSJ #7 and NSJ #8) would be constructed on areas directly adjacent to paved road; however, increases to impervious surfaces in the area are expected to be minimal (i.e., approximately 81 square feet of new impervious surface for each site). Storm drainage utilities proposed for the Agnews site would connect to the existing 84-inch pipe on Zanker Road. Alternatively, future stormwater runoff may eventually be routed to a planned bioretention area in the proposed Agnews East Parklands Project area. The addition of these small areas of new impervious surfaces would not be expected to provide additional sources of runoff that could result in flooding or exceed the capacity of the existing stormwater system. Consequently, impacts associated Project operations would be less than significant.

c.iv) impede or redirect flood flows?

(Less Than Significant Impact) The Trimble well site would be located outside both the 100-year and the 500-year flood zone area, defined by the Federal Emergency Management Agency (FEMA). The Agnews well sites, however, would be located outside of the 100-year flood zone but within the 500 –year flood zone, which is defined as an area having a 0.2 percent annual chance of occurrence for flooding.

Construction activities would be temporary and would not be anticipated to impede or redirect flood flows. Once the Project is complete, most of the proposed improvements would be located at the subsurface level. The above ground facilities would be limited and consist of primarily pump housing that fits within a 81 square foot pad and would not be likely to impede or redirect flood flows during a 500-year flood event. Therefore, the potential impact related to flooding would be less than significant.

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

(Less Than Significant Impact) As noted above, both well sites are located outside of the 100-year flood zone. The Agnews site is within a 500-year flood zone, however, the Agnews site would not store any hazardous materials and therefore would not be at risk of releasing pollutants during a 500-year storm event. The Project sites are not located immediately adjacent to an enclosed water body, such that they could be affected by seiche. Additionally, the Project sites are also located well inland and would not be subject to tsunami related hazards. Therefore, the potential impact related to releasing pollutants from a flood, seiche or tsunami event would be less than significant.

4.9.4 Mitigation Measures

Mitigation Measure HYD-1: Implement BMPs.

Contract specifications for the construction contractor shall include requirements to implement the following best management practices, as applicable to site specific conditions, and without limitation:

i. Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.

ii. Earthmoving or other dust-producing activities shall be suspended during periods of high winds.

iii. All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.

iv. Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.

v. All trucks hauling soil, sand, and other loose materials shall be covered and all trucks shall maintain at least two feet of freeboard.

vi. All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites shall be swept daily (with water sweepers).

vii. Vegetation in disturbed areas shall be replanted as quickly as possible.

viii. All unpaved entrances to the site shall be filled with rock to remove mud from tires prior to entering City streets. A tire wash system shall be installed if requested by the City.

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

4.9.5 References

Bonkowski & Associates, 2016a. *Technical Memorandum Hydrogeologic and Infrastruction Feasibility Evaluation*, *Agnews Well Site,* October 25, 2016a.

Bonkowski & Associates, 2016b. *Technical Memorandum Hydrogeologic and Infrastruction Feasibility Evaluation*, *Trimble Well Site,* October 25, 2016b.

City of San Jose, 2020. *Phase I Environmental Site Assessment, Trimble Municipal Water Groundwater Well Site,* May 20, 2020.

Kleinfelder, 2013. Limited Phase II Environmental Site Assessment, December 20, 2013.

RWQCB, 2015. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. Approved March 20, 2015.

Santa Clara Valley Water District (Valley Water), 2016. *Groundwater Management Plan, Santa Clara and Llagas Subbasins*, November 2016.

Santa Clara Valley Water District (Valley Water), 2020. *Annual Groundwater Report 2019*, July 2020.

US Climate Data Center (US Climate), 2020. Climate Data for US, San Jose California, https://www.usclimatedata.com/climate/san-jose/california/united-states/usca0993, accessed October 2, 2020.

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4.10 Utilities and Service Systems

4.10.1 Environmental Setting

The San José Municipal Water System (SJMWS) supplies potable drinking water to the Project sites. Water service is provided to the Trimble site via a potable water distribution system transmission main in Trimble Road. Water service is provided to the Agnews site via a distribution main in Zanker Road. The Project sites are not located in the vicinity of recycled water pipelines.

Wastewater from the Project area is treated at the San José-Santa Clara Regional Wastewater Facility (RWF). The RWF treats domestic, industrial, and commercial wastewater from San José, Santa Clara, Campbell, Los Gatos, Monte Sereno, Cupertino, Milpitas, and Saratoga; and parts of unincorporated Santa Clara County. In total, the existing service area covers roughly 300 square miles and contains a service population of approximately 2 million people (1.4 million residents and 600,000 workers). The RWF provides a tertiary level of treatment, in accordance with state and local regulations. The RWF treats an average of 105 million gallons per day (mgd) of wastewater, with an existing maximum treatment capacity of 167 mgd (City of San José, 2020).

The City's sanitary sewer system includes approximately 2,200 miles of sewer pipelines ranging from six to 90 inches in diameter, which route to the RWF. Sanitary sewer lines in the Project area are inspected and maintained by the City of San José Department of Transportation, and rehabilitated and replaced as needed by the Department of Public Works. An existing 20-inch sewer line in Trimble Road serves the Trimble site. Existing 84-inch and 60-inch sanitary sewer lines in Zanker Road serve the Agnews site (City of San José, 2020a).

Stormwater runoff from the Project sites flows over land into the City-maintained storm drainage system. An existing 108-inch storm drain line in Trimble Road serves the Trimble site. Existing 24-inch and 12-inch storm drain lines in Zanker Road serve the Agnews site (City of San José, 2020).

Solid waste generated at the Project sites is collected by a private hauler and is disposed at any of four privately owned landfills in San José or at other landfills outside Santa Clara County. Landfills serving the City include Kirby Canyon, Newby Island, and Zanker Materials Processing Facility. Closure dates for these facilities range from 2025 to 2048 and these facilities have approximately 16,191,600 cubic yards to 21,200,000 cubic yards of remaining capacity (California Department of Resources Recycling and Recovery, 2019 a,b,c). The California Integrated Waste Management Act of 1989 (AB 939) requires municipalities to divert to recycling facilities at least 50 percent of all solid waste generated by the year 2000 and establishes the goal of diverting at least 75 percent of generated waste (based on per capita disposal rates) by 2020. Chapter 9.10 of the San José Municipal Code outlines solid waste management regulations in the City. Chapter 9.10, Part 15, establishes the City's Construction and Demolition Diversion Deposit Program, which uses financial incentives to encourage the recycling of construction material and requires projects to divert 50 percent of the total projected waste. In addition, San José's Zero Waste Resolution established an objective of zero waste by 2022, which entails diverting all wastes from landfills.

As of 2018, San José disposed of 727,915 tons of waste (or 3.5 pounds per person per day), well below the California Integrated Waste Management Act target rate for San José of 5.2 pounds per person per day (CalRecycle, 2018).

Pacific Gas and Electric (PG&E) provides electricity and natural gas to the Project sites.

4.10.2 Environmental Checklist and Discussion of Impacts

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

4.10.3 Impact Discussion

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

(Less Than Significant Impact) The Project would not include the expansion of wastewater treatment, natural gas, or telecommunications facilities, and would therefore, not require construction or relocation of such facilities.

The Project evaluated in this document includes the construction of four municipal groundwater supply wells (1 at the Trimble site and 3 at the Agnews site), along with associated connections to

the existing potable water distribution system, to provide supplemental supplies to the NSJ/Alviso service area. The Trimble site well would tie directly into the potable water distribution system transmission main in Trimble Road. Approximately 190 linear feet of 12-inch diameter ductile iron pipe would be installed within a 48-inch deep trench from the groundwater well to the distribution system (i.e., water main) in Trimble Road. The Agnews site wells would tie directly to the potable water distribution system transmission main in Zanker Road. New pipelines for the Agnews site would consist of 18-inch diameter ductile iron pipe and appurtenances installed with a 48-inch cover from the finish grade to the top of the pipe that would connect the wells to the distribution system in Zanker Road.

No new stormwater facilities would be needed for the Trimble site. Stormwater runoff is expected to drain to the existing onsite catch basin or to Trimble Road, where existing stormwater infrastructure exists. Storm drainage utilities proposed for the Agnews site would consist of a maximum 24-inch reinforced concrete pipe (RCP) that would connect to the existing 84-inch pipe on Zanker Road (refer to Figure 3-4). Alternatively, future stormwater runoff may eventually be routed to a planned bioretention area in the proposed Agnews East Parklands Project area.

Potential environmental impacts due to the excavation and trenching associated with construction is analyzed in Section 4.6, *Geology and Soils*, Section 4.7, *Hazards and Hazardous Materials*, and Section 4.7, *Hydrology and Water Quality,* which reference BMPs designed to reduce construction related stormwater pollution and discharge. These measures would generally consist of silt fences, fiber rolls, and gravel bags. In addition, the proposed structures would be designed in accordance with applicable requirements of the California Building Code. Compliance with these regulatory requirements would ensure construction-related effects associated with utility improvements would be reduced to less than significant.

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

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

(Less Than Significant Impact) Water would be required for both construction and operation of the Project.

During construction, non-potable water would be required for drilling the well, sourced from the closest fire hydrant to the Project sites. Approximate 30,000 gallons of water would be needed during the drilling of each well. The drilling process would occur over a 24-hour period for approximately 3 weeks, resulting in a water demand of approximately 1,429 gallons per day per well. Potable water for construction workers would be provided by the construction contractors. Upon completion of well construction and prior to finalizing connections to the water distribution

systems, the newly installed water mains would be flushed and disinfected. At the Trimble site, groundwater would be used for the flushing process. This water would then be discharged to the existing storm drain system in accordance with regulatory storm discharge requirements. At the Agnews site, the source of water for flushing the mains as part of the disinfection would be the fire hydrant located closest to the site or the existing distribution system main in Zanker Road. The small increase in potable water demand during construction would not be substantial, and this water use would be temporary, terminating with the completion of construction. Water supplies for the Project sites would be provided by SJMWS, and would be planned such that short-term spikes in water use can be accommodated. Therefore, water supply during construction would be sufficient and impacts would be less than significant.

The purpose of the Project is to secure additional sources of potable water supplies for the NSJ/Alviso Service Area. The main purpose of the wells would to allow for water deliveries during any short term interruptions of supply, for periodic maintenance purposes, and/or to meet demand beyond the available supply from SFPUC. When operational, each well would be able to extract an estimated 1,800 to 2,000 gpm. As described in Section 3.7 of the *Project Description*, the projected potable water demands above the current SFPUC contract delivery amount would be expected to be met by the proposed Agnews production wells. Therefore, the Proposed Project would allow SJMWS to produce sufficient water supplies to meet future development during normal, dry and multiple dry years, and impacts would be less than significant.

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

(No Impact) The Project would not include the construction of facilities that would generate wastewater; the Project would therefore, not require the use of wastewater treatment services. There would therefore, be no impact related to this criterion as a result of the Project.

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

(Less Than Significant Impact) Solid waste generated through implementation of the Project would be short-term construction-related solid waste. There would be waste management on-site where soil cuttings from well drilling would be temporarily stored in a 20-yard bin located adjacent to the drill rig system and subsequently hauled by truck to a Class II or Class III landfill, depending on the chemical composition of the soil. No excavated material will be re-used for backfill. This material would be managed in compliance with the City's mandatory Construction and Demolition Diversion Deposit Program and any applicable recommendations of the Zero Waste Strategic Plan's Construction and Demolition Program[32] in effect at the time of construction. Non-hazardous waste generated during Project construction could be off-hauled to either Kirby Canyon Landfill or Newby Island Landfill (both Class III, non-hazardous waste facilities). Hazardous waste generated during Project construction could be off-hauled to

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

Kettleman Hills Hazardous Waste Facility (a Class I - hazardous and nonhazardous and Class II – hazardous waste facility).[33] As indicated in **Table 4.10-1**, each of the landfills has sufficient capacity to accept the approximately 941 cubic yards of waste that the Project would generate.

TABLE 4.10-1
LANDFILL CLASSIFICATION AND CAPACITY

Landfill	Classification	Daily Capacity (tons/day)	Total Capacity (cubic yards)	Remaining Capacity (cubic yards)
Kirby Canyon Landfill[a]	III	2,600	36,400,000	16,191,600
Newby Island Landfill[a]	III	4,000	57,500,000	21,200,000
Kettleman Hills Hazardous Waste Facility[a]	I, II	9,000	15,600,000	10,700,000
	Totals	15,600	109,500,000	48,091,600

SOURCE:
a California Department of Resources and Recycling (CalRecycle), 2019a; CalRecycle, 2019b; CalRecycle, 2019c.

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

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

(Less Than Significant Impact) All disposal facilities identified by the City for disposal and recycling of construction and demolition debris are permitted for the types of waste generated by Project construction. The Project would comply with applicable federal, State, and local management and reduction statues and regulations related to solid waste, including AB 939, the California Universal Waste Law, San José's Zero Waste Resolution, and policies IN-5.1 and IN-5.3 of the Envision San José 2040 General Plan[34].

Specifications for construction of the Project would contain requirements for the handling, storage, cleanup, and disposal of hazardous materials; including petroleum-based products, cement, or other construction pollutants. Refer to Section 4.7, *Hazards and Hazardous Materials*, for additional information on hazardous materials associated with construction of the Project and

[33] If the excavated soil from construction is considered non-hazardous material, then it would be taken to the Newby Island C&D Recycling Facility as stated in the current agreement between City of San José and International Disposal Corporation.

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

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

how hazardous materials would be handled if encountered during construction. The Project would result in a less-than-significant impact regarding this criterion.

4.10.4 Mitigation Measures

None required.

4.10.5 References

City of San José, 2013. San José-Santa Clara Water Pollution Control Plant Master Plan, Environmental Impact Report, November, 2013.

City of San Jose, 2020. San José-Santa Clara Regional Wastewater Facility information page. Available at: https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility Accessed September 28, 2020.

City of San José, 2020a. Utility Viewer Map. Located at: https://gis.sanjoseca.gov/maps/utilityviewer/ Accessed September 16, 2020.

California Department of Resources Recycling and Recovery, Facility Detail. 2020. Available at https://www2.calrecycle.ca.gov/SolidWaste/Site/Search Accessed September 15, 2020.

CalRecycle (California Department of Resources and Recycling), 2018. Jurisdiction Diversion/Disposal Rate Detail for San José, Reporting year 2018. Available online at https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports. Accessed September 15, 2020.

CalRecycle, 2019a. SWIS Facility Detail, Kirby Canyon Recycl.&Disp. Facility (43-AN-0008). Available online at https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3393/. Accessed September 15, 2020.

CalRecycle, 2019b. SWIS Facility Detail, Newby Island Sanitary Landfill (43-AN-0003). Available online at https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/3388/. Accessed September 15, 2020.

CalRecycle, 2019c. SWIS Facility Detail, Kettleman Hills – B18 Nonhaz Codisposal (16-AA-0023). Available online at https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/914/. Accessed on September 15, 2020.

4.11 Other Environmental Topics

Other resource areas/topics are discussed below. These resource topics include aesthetics, agricultural and forestry resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, transportation, and wildfire.

4.11.1 Aesthetics

The predominant visual character of San José is that of a gently sloping to flat valley bounded by mountains and the Bay. The foothills of the Santa Cruz Mountains Are located to the to the west, the Santa Teresa Hills to the south and the Diablo Mountain Range to the east. Diked ponds, saltmarsh, the waters of San Francisco Bay and the adjacent cities of Milpitas and Santa Clara border the City to the north. The built environment dominates throughout San José with a mix of urban and suburban development. The City of San José 2020 General Plan identifies several scenic resources within the City, including broad views of Santa Clara Valley, the hills and mountains surrounding the valley, the urban skyline, and the baylands. A portion of SR 237 west of Interstate 880, and North 1st Street from Vista Montaña to Tony P. Santos Street are designated as Gateways in the Envision San José 2040 General Plan (City of San José, 2011). The nearest state-designated scenic highway is the State Route 9, located approximately 17 miles south of the Project sites. The nearest Santa Clara County-designated scenic road is Hicks Road, starting at Camden Avenue, located approximately 19 miles south of the Project sites.

The Trimble site is mostly paved and developed and includes an existing pump station and an above ground reservoir (storage tank). There is one tree located at the southwest corner of the Trimble site. The Trimble site is bordered by the Guadalupe River Trail to the north and west, commercial development to the east, and Trimble Road and commercial development to the south. The Trimble site is surrounded by security fencing and mature trees/landscaping. Therefore, views of the Trimble site are screened or blocked by vegetation for most motorists, bicyclists and pedestrians traveling along Trimble Road and the Guadalupe River Trail. However, direct views of the Trimble site are available for brief periods where there is a break in the landscaping. The site has low viewer exposure and would be seen only briefly as viewers pass by.

The Agnews Project site consists of a combination of paved areas and areas containing either bare ground or ruderal vegetation. There are two trees located at the Agnews site; one located between the proposed NSJ #6 and NSJ #7 wells sites, and one located just south of the proposed NSJ #8 well site. The Agnews site is bordered by commercial development to the north and east, and the on-going construction of Santa Clara Unified School District campus in the south. The Agnews site is not visible from Zanker Road or Cisco Way due to the roadway configuration (the roadways are not parallel or perpendicular to the Agnews site) and due to the existing vegetation and development that blocks views of the Agnews site. Construction of the Santa Clara Unified School District campus is expected to be completed by August 2021. Based on plans for the proposed school campus, the nearest school buildings would be located approximately 640 feet from the proposed wells locations at the Agnews site. Therefore, the Agnews site would be visible to future occupants of this school campus.

Aesthetic Impacts

a) Have a substantial adverse effect on a scenic vista?

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

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

(Less Than Significant Impact) The Project sites are not visible from any state scenic highways. Additionally, no rock outcroppings or historic buildings are located on the sites or in the immediate vicinity of the Project area, such that views of such resources could be affected. No scenic resources are located on the Project sites or in the immediate vicinity of the Project area. The Project sites are too distant to be seen from either the SR 237 Gateway or the North 1st Street Gateway, which are designated scenic resources. One tree may be removed for the NSJ #8 well site. This tree would be replaced in accordance with the City's tree replacement ratios. For these reasons, the Project would not have a substantial adverse effect on scenic resources.

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

(Less Than Significant Impact) The City of San José is considered an urbanized area, as defined in CEQA Guidelines Section 15387, and as mapped by the U.S. Census[35] thus, considering impacts associated with degradation of existing visual character or quality may be considered in the context of potential to conflict with applicable zoning and other regulations governing scenic quality. Both Project sites are located within an Industrial Park zoning district. Utility facilities are allowed uses in the industrial park zoning designation. Because the Project would continue to support water supply utilities, and it would be consistent with the zoning. The Envision San José 2040 General Plan (2011) contains general goals regarding visual resources; primarily concern access to scenic resources (Goal CD-9) and maintaining attractive gateways within the City (Goal CD-10), particularly along loosely-defined "Grand Boulevards" and "Rural Scenic Corridors". As discussed in criterion b) above, no scenic resources are located on the Project sites or in the immediate vicinity of the Project area, and the Project sites are too far away to be seen from the closest Gateways. Therefore, the Project would not conflict with the General Plan polices regarding scenic quality.

35 2010 Census – Urbanized Area Reference Map for San Jose, California: https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua79039_san_jose_ca/DC10UA79039.pdf

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

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

4.11.2 Agricultural and Forestry Resources

The Project sites are located upon land classified by the California Department of Conservation as Urban and Built-Up Land (CDC, 2016). Urban and Built-Up Land is defined as developed land with a density of at least 1 unit per 1.5-acre parcel or 6 structures to a 10-acre parcel, as well as land used for residential, industrial, and commercial purposes, golf courses, landfills, airports, sewage treatment, and water control structures. No Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance are in the vicinity of the Project sites. In addition, no lands in the vicinity of the Project sites are enrolled in the Williamson Act Program (County of Santa Clara, 2020). The Project sites are located within an urban area of San José and there is no property used for agricultural purposes adjacent to the Project sites. The Project sites do not contain any forest land and no forest or timberland is located in the vicinity of the Project sites.

Agricultural and Forestry Resource Impacts

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

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

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

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

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

(No Impact) The Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. The Project would not conflict with agricultural operations or a Williamson Act contract; nor would the Project result in a loss of forestland.

4.11.3 Energy

Electricity is provided to the Project sites by the Pacific Gas and Electric Company (PG&E). PG&E provides service to approximately 13 million people throughout a 70,000 square mile service area in Northern and Central California. PG&E produces and purchases energy from a mix of conventional and renewable generating sources, which travel through its electric transmission and distribution systems to reach customers.

At the federal level, energy standards apply to numerous products (e.g., the EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple areas. Title 24 standards were most recently updated in 2019. At the local level, the City of San José as part of its Envision San José 2040 General Plan, has goals (Goal MS-14) and policies in place to reduce per capita energy consumption and increase efficiency by at least 50 percent compared to 2008 levels by 2022 and maintain or reduce net aggregate energy consumption levels equivalent to the 2022 (Green Vision) level through 2040.

Energy Impacts

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

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

(Less Than Significant Impact) Construction energy use would include both direct and indirect uses of energy. Direct energy use would include the consumption of fuel (typically gasoline and diesel fuel) for operation of construction equipment and vehicles. Energy in the form of electricity may also be consumed by some pieces of construction equipment, such as power tools, and lighting; however, the amount of consumed electricity would be relatively minimal. Indirect energy use includes the energy required to make the materials and components used in construction. This includes energy used for extraction of raw materials, manufacturing, and transportation associated with manufacturing. Direct energy represents about one-quarter of total construction-related consumption while indirect energy use typically represents the remaining three-quarters (Hannon, 1978).

The CEQA checklist focuses on the efficient use of energy as opposed to a quantification of the actual amount of energy consumed to evaluate impacts. Construction associated with each well is expected to last approximately 197 working days. Construction associated with the pipelines is expected to last approximately 196 working days for the Agnews wells and 213 days for the Trimble well. Construction activities would include use of heavy-duty construction equipment including drilling rig, off-highway trucks, backhoes, and rollers. Heavy equipment typically consumes diesel fuel. Additionally, offsite vehicles would be required to transport equipment, materials, and workers to the Project site during construction. Construction activities would at the most generate 16 one-way worker commute trips (from a maximum of 6 workers) per day. In

addition, material delivery, infill and off-haul is expected to generate additional truck trips over the construction period. Haul trucks would be diesel-fueled, while the majority of worker trips are anticipated to utilize gasoline.

For a Project of this scope and size, consumption of fuel energy resulting from short-term construction activities would be temporary, localized, and would not represent a significant amount of fuel in comparison to the 685 million gallons of gasoline and 36 million gallons of diesel that were sold in Santa Clara County in 2017 (CEC, 2018). Construction equipment and vehicles used for Project construction would be required to comply with all federal and state efficiency standards. Additionally, there are no Project characteristics or features that would be inefficient or that would result in the use of equipment and vehicles in a manner that would be less energy efficient than similar projects.

Fuel use for the Project would be consistent with typical construction and manufacturing practices, and energy standards such as the Energy Policy Acts of 1975 and 2005, and Title 24, which promote strategic planning and building standards that reduce consumption of fossil fuels, increase use of renewable resources, and enhance energy efficiency. Project construction would comply with all applicable standards and would therefore not require excessive or wasteful use of energy. Further, the energy consumption during construction would not result in long-term depletion of non-renewable energy resources and would not permanently increase reliance on energy resources that are not renewable. Construction activities would not reduce or interrupt existing electrical or natural gas services due to insufficient supply and would therefore not be expected to have a material effect on energy resources. Project construction energy would not be considered wasteful, inefficient, and unnecessary as implementation of the Project would provide additional water supplies to the NSJ/Alviso area. In addition, implementation of the Bay Area Air Quality Management District's basic mitigation measure, as described in Section 4.5, *Air Quality*, would reduce the amount of fuel energy consumed during the construction phase of the Project by limiting unnecessary idling and through proper operation and maintenance of equipment. Therefore, energy use associated with Project construction activities would not be considered wasteful or unnecessary and would not conflict with any renewable energy or energy efficiency standards.

Once operational, the total estimated annual power requirements under the maximum production scenario would be approximately 220,000 kilowatt hours (220 megawatt-hours [MWh]) per year for the Agnews site wells, and 70,000 kilowatt hours (70 MWh) per year for the Trimble site well. The well facilities would receive power from the nearby PG&E distribution system, with the addition of an electrical transformer. Based on data collected by the CEC's California Energy Consumption Database, Santa Clara County's total electricity consumption for 2018 was 16,708,080 MWh (California Energy Commission, 2018). As such, the Project-related net increase in annual electricity consumption, 290 MWh, would represent approximately 0.002 percent of Countywide electricity. Operational equipment such as the pumps and the emergency generator proposed for the Agnews site would be of recent manufacture and would comply with all applicable energy efficiency standards. Therefore, operation of the Project would not result in the wasteful, inefficient, or unnecessary consumption of electricity, and the impact would be less than significant.

4.11.4 Land Use and Planning

The Project sites are located in industrial, commercial, and residential developed areas of San José. The Trimble site is bordered by the Guadalupe River Trail to the north and west, commercial development to the east, and Trimble Road and commercial development to the south. The Agnews site is bordered by commercial development to the north and east, residential development to the west and southwest, and the on-going construction of Santa Clara Unified School District campus in the south.

The Trimble site has an Envision San José 2040 General Plan (General Plan) land use designation of Industrial Park and the Agnews site has a General Plan land use designation of Public/Quasi-Public. These categories are typically used to designate lands in the provision of public services such as water. With respect to City zoning districts described in the Envision San José 2040 General Plan, the Project sites are located in the Industrial Park zoning district. Utility facilities are allowed uses in the industrial park zoning designation.

Land Use and Planning Impacts

a) Physically divide an established community?

(No Impact) There are no established communities within the Project sites. None of the proposed components or uses would physically intrude into or divide an established community.

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

(Less Than Significant Impact) Because the Project would continue to support water supply utilities, implementation would be consistent with the land use designations in the General Plan and the zoning districts.

4.11.5 Mineral Resources

The Project area is not within an aggregate resource area, and is mapped by the California Division of Mines and Geology as being within Mineral Resource Zone 1 (CGS, 1987). Mineral Resource Zone 1 identifies areas where adequate information exists to determine that significant aggregate resources are not present. Additionally, according to the United States Geological Survey (USGS) Mineral Resources Data System, there are no known mineral occurrences, prospects, or past or present mineral producers within or immediately adjacent to the Project area (MRDS, 2019).

Mineral Resource Impacts

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

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

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

4.11.6 Population and Housing

According to federal and state data, the population of the City of San José has increased over the last two decades by less than 1 percent per year, from 894,943 in 2000 to an estimated 1,043,058 in 2019 (U.S. Census Bureau, 2000; California Department of Finance, 2019). The General Plan predicts a total population of 1,313,811 by 2040 (City of San José, 2011). The SJMWS currently provides water service to approximately 26,000 metered connections with a population of over 100,000. Population growth in SJMWS service areas is expected to increase in the next 25 years by approximately 63 percent due to proposed development identified within the General Plan.

Between 2000 and 2019, the number of housing units in San José grew by 54,046, from 281,841 to 335,887 (U.S. Census Bureau, 2000; California Department of Finance, 2019). The General Plan plans for an additional 93,463 units over the 2019 level, for a total of 429,350 units by 2040 (City of San José, 2018).

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

Population and Housing Impacts

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

(Less Than Significant Impact) The Project would generate temporary employment opportunities during its construction phases. Construction jobs generated by the Project would likely be filled by employees in the construction industry in San José and greater Santa Clara County. Construction industry jobs generally have no regular place of business and many construction workers are highly specialized (e.g., crane operators, steel workers, masons). Thus, construction workers commute to job sites throughout the region that may change several times a

year, as dictated by demand for their specific skills. It is highly unlikely that construction workers would relocate to the vicinity for construction of the Project, and therefore, construction of the Project would not result in unplanned population growth.

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

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

(No Impact) The Project would not result in the demolition of existing housing, or otherwise cause a reduction in housing units on site or elsewhere.

4.11.7 Public Services

Fire protection services for the City are provided by the San José Fire Department (SJFD). The SJFD currently consists of 34 active stations.[36] The closest fire station to both Projects sites is Station 29, located at 199 Innovation Drive, approximately 0.6 miles southwest of the Agnews site and approximately 1.3 miles northeast of Trimble site. The SJFD responds to all fires, hazardous materials spills, and medical emergencies in the City, the Project area (City of San José, 2019). Police services for the City of San José are provided by the San José Police Department.

Santa Clara County has developed an Operational Area Emergency Operations Plan that establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of response in the event of an emergency (Santa Clara County, 2020).

The nearest school to the Trimble site is the Montague Elementary School which is located approximately 0.6 miles to the northwest. The nearest school to the Agnews East site is the Don Callejon School, located approximately 0.75 miles to the southwest. Construction of the Santa Clara Unified School District campus is expected to be completed by August 2021. Based on plans for the proposed school campus, the nearest school buildings would be located approximately 640 feet (approximately 0.1 miles) from the proposed wells locations at the Agnews site.

The Guadalupe River Trail borders the Trimble site to the north. The closest City park to both sites is Moitozo Park, located approximately 0.64 miles southwest of the Agnews site and 1.7 miles north of the Trimble site.

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

Public Services Impacts

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

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

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

4.11.8 Recreation

San José has over 200 parks and approximately 60 miles of scenic trails.[37] The Guadalupe River Trail borders the Trimble site to the north. There is no access between the Guadalupe River Trail and the Trimble site. In addition, the Trimble site is not publicly accessible and is limited to use by City staff. The closest City park to both sites is Moitozo Park, located approximately 0.64 miles southwest of the Agnews site and 1.7 miles north of the Trimble site.

[37] https://www.sanjoseca.gov/your-government/departments/parks-recreation-neighborhood-services/outdoor-activities

Recreation Impacts

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

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

(No Impact) The Project would involve temporary construction activities. The Project would not permanently affect any existing recreational uses of nearby features and would only temporarily and minimally be noticeable by recreational users of the Guadalupe River Trail adjacent to the Trimble site. The Project would not result in new housing development or other activities that would increase use, alter usage patterns, or increase demand for existing recreational facilities, thereby causing increased or accelerated physical deterioration of recreation related facilities. The Project does not propose to construct recreational facilities and would not result in the need for new or expanded recreational facilities. No impact would occur.

4.11.9 Transportation

Agnews Site

Regional access to the Agnews site is provided by State Route (SR) 237 and Interstate 880 (I-880). SR 237 is an east-west freeway extending between the City of Milpitas and the City of Mountain View. This freeway includes three travel lanes per direction including high-occupancy vehicle (HOV) lanes during peak periods. Traffic is evenly split between the eastbound and westbound commute directions during both the morning and evening. I-880 is a north-south freeway extending from the City of San José at the I-280/I- 880/SR 17 interchange to the City of Oakland. This facility includes three to four mixed-flow lanes per direction. Northbound I-880 is the peak commute direction during the morning, and southbound is the peak commute direction during the evening. I-880 has slightly more capacity to accommodate additional growth in traffic, though it does have constraints in the peak directions of travel. Data published by Caltrans indicate that the annual ADT on I-880 is about 180,000 vehicles south of SR 237 and 225,000 vehicles north of SR 237 (California Department of Transportation, 2018).[38]

Local access to the Agnews site is provided by Zanker Road, which is a major north-south arterial[39] (City of San José, 2011). It begins at the terminus of Old Bayshore Highway, north of US 101. It is a four- to six-lane undivided roadway that passes through North San José to Alviso, and then turns sharply west, where it becomes Los Esteros Road.

The most likely intersections that could be affected by an increase in traffic trips would be the Zanker Road/SR 237 Westbound Ramps and Zanker Road/SR 237 Eastbound Ramps

[38] Annual average daily traffic is the total volume of vehicle traffic of a road for a year, divided by 365 days.

[39] Arterial streets are designed mainly for the movement of through traffic; the provision of access to abutting properties is a secondary function. Major arterials have a right-of-way width between 115 and 130 feet.

intersections. Both of these intersections are part of the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP).[40] According to the VTA's 2016 Annual Monitoring and Conformance Report, these two intersections operate at level of service (LOS) B+ during the PM peak hours.[41] The acceptable service levels for these intersections is LOS E or better (Santa Clara Valley Transportation Authority, 2016). CMP guidelines require that freeway segments to which a proposed development is projected to add trips equal to or greater than one percent of the freeway segment's capacity must be evaluated.

The nearest transit facilities are located on East Tasman Drive, which includes VTA light rail (VTA, 2019). The nearest bicycle lanes are located along Zanker Road. Pedestrian facilities near the Agnews site include sidewalks along Zanker Road. Access to the Agnews site is provided by a driveway off of Zanker Road. The Agnews site is currently an active construction site and is not accessible to the public.

Trimble Site

Regional access to the Trimble site is provided by US 101, which is a north-south freeway in San José. This route is entirely a freeway through Santa Clara County. The freeway includes four travel lanes per direction including HOV lanes. Through the city, northbound US 101 is generally the peak morning commute direction on US 101, and southbound is the peak evening commute direction. US 101 extends through San José from the southern City limits near Morgan Hill to the city's boundary with Santa Clara, north of Trimble Road. Data published by Caltrans indicate that the annual ADT US 101 is about 200,000 vehicles south of I-880 and 250,000 vehicles north of I-880 (California Department of Transportation, 2018).

Local access to the Trimble site is provided by Trimble Road, which borders the site to the south. Trimble Road is a major north-south arterial (City of San José, 2011). It begins at Montague Expressway and terminates at US 101.

The most likely intersection that could be affected by an increase in traffic trips would be Trimble Road and 1st Street. This intersection is part of the Santa Clara VTA CMP. According to the VTA's 2016 Annual Monitoring and Conformance Report, this intersection operates at LOS D. The acceptable service levels for this intersection is LOS E or better (Santa Clara Valley Transportation Authority, 2016).

The nearest transit facilities are located on North 1st Street, which includes VTA light rail lines. The nearest bicycle lanes are located along North 1st Street. Pedestrian facilities near the Trimble

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

[41] The operation of a local roadway network is commonly measured and described using a grading system called Level of Service (LOS). The LOS grading system qualitatively characterizes traffic conditions associated with varying levels of vehicle traffic, ranging from LOS A (indicating free-flow traffic conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic flows exceed design capacity and result in long delays). This LOS grading system applies to both roadway segments and intersections.

site include sidewalks along Trimble Road. Access to the Trimble site is provided by a driveway off of Trimble Road. The Trimble site is not accessible to the public.

Regulatory Setting

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

Transportation Impacts

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

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

The Project would not change the existing or future roadways or other circulation system in any way. There would be a limited amount of construction equipment associated with Project implementation (e.g., excavator, compactor, drill rig, etc.) that would be delivered to the Project sites at the commencement of construction and removed at completion. There would be several haul trucks for material deliveries and off-haul of construction waste and excavation spoils. Construction activities would at the most generate 16 one-way worker commute trips. The Project would not require any road closures or lane closures. Anticipated construction related trips would thus be dispersed in time across the construction period. As noted above, the most likely intersections that could be affected by an increase in construction traffic trips at the Agnews site would be the Zanker Road / SR 237 Westbound Ramps and Zanker Road / SR 237 Eastbound Ramps intersections, which currently operate at LOS F and D, respectively during the AM peak hours and LOS E during the PM peak hours. The most likely intersection that could be affected by an increase in construction traffic trips at the Trimble site would be the Trimble Road and 1st Street intersection, which currently operates at LOS D.

The addition of vehicle trips associated with construction workers and a maximum of 14 truck trips per day for materials deliveries and off-haul of construction waste over the construction period would result in minor to negligible changes to existing traffic patterns along Project area access roads. While construction worker vehicle trips may coincide with peak morning and peak evening commute traffic, truck trips would occur over the course of the workday, thus lessening the effect of construction-related vehicle trips during the most congested times of the day. These additional trips are not anticipated to reduce level of service noticeably, and the intersections would continue to operate at acceptable service levels according to the VTA's designated LOS standard for these intersections (i.e., LOS E or better).

The Project sites are not directly served by transit, although a limited number of VTA light rail lines operate in the area. There is no transit connectivity between the Project sites and the light rail stations. Existing transit service does not serve the Project sites directly, and the Project would not conflict with any planned transit facilities nor would the Project prohibit access to such facilities.

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

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

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

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

> *"The requirements to prepare a detailed VMT analysis applies to all Projects except the following types of Projects because the City Council finds, as documented in the administrative record for this Policy that these Projects will further City goals and policies and will not result in significant transportation impacts:*
>
> 1. *Small Infill Projects;*
> 2. *Local-Serving Retail;*
> 3. *Local-Serving Public Facilities;*[42]

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

4. *Transit Supportive Projects in Planned Growth Areas with Low VMT and High Quality Transit;*

5. *Restricted Affordable, Transit Supportive Residential Projects in Planned Growth Areas with High Quality Transit;*

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

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

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

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

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

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

d) Result in inadequate emergency access?

(No Impact). Existing emergency access to the Agnews site is gained via Zanker Road, and to the Trimble site via Trimble Road. Project construction would not require any lane closures on any of these public roadways. Therefore, similar to existing conditions, access would be maintained to the Project site for emergency vehicles during Project construction. Based on these findings, there would be no impact to existing emergency access to the Project sites.

4.11.10 Wildfire

According to fire hazard mapping by the CAL FIRE Forest Resource Assessment Program and the Santa Clara County Wildland Urban Fire Interface Map, the Project sites are not located within an area identified as a high fire hazard area (CalFire, 2008).

Wildfire Impacts

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

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

(No Impact) Santa Clara County has developed an Operational Area Emergency Operations Plan that establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of response in the event of an emergency (Santa Clara County, 2020). This plan does not designate specific emergency response or evacuation routes within or surrounding the Project area; therefore, no impact would occur.

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

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

(Less Than Significant Impact) The Project sites are not within a high fire hazard area and, in the unlikely event of a fire, the potential to expose people or structures to a significant risk involving fires is low. The topography of the Project sites is generally flat. Prevailing winds are primarily from a northwest direction. Vegetation communities surrounding the Trimble site consist of disturbed/ruderal habitat, landscaped trees, and riparian trees and vegetation. Vegetation communities surrounding the Agnews site consists of disturbed/ruderal habitat and trees. No new roads would be installed as part of the Project. The use of construction equipment and the possible temporary on site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction. However, contractors would be required to comply with hazardous materials storage and fire protection regulations, which would reduce the potential for fire creation, and ensure that the risk of hazards related to fires during construction would be less than significant. Compliance with existing safety regulations and widely-accepted industry standards would reduce the hazard to the public and the environment. The local fire agency would be responsible for enforcing the provisions of the fire code. Therefore, this impact would be less than significant.

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

(Less Than Significant Impact) Due to the overall flat topography and low elevation of the Project sites, the Project would not expose people or structures to significant risks resulting from post-fire land changes.

4.11.11 Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

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

(Less Than Significant Impact with Mitigation) The Project has the potential to degrade the quality of the environment. As described in the sections 4.1 to 4.10 above, the Project has the potential to cause significant impacts related to Biological Resources and Cultural Resources. Mitigation measures have been identified to reduce these impacts to less than significant levels. No further mitigation would be required, and the Project would not degrade the quality of the environment (see sections 4.1 to 4.10 above, for detailed analysis).

The Project has the potential to impact biological resources. As discussed above in Section 4.1, Biological Resources, the Project could result in impacts to nesting birds, and existing trees at the Agnews site during construction. However, implementation of the mitigation measures **BIO-1: Avoidance and Minimization Measures for Nesting Birds, BIO-2: Avoidance and Minimization Measures for Tricolored Blackbirds, BIO-3: Avoid or Compensate for Removal of Protected Trees**, and **BIO-4: Minimize Construction Effects on Protected Trees to be Retained**, would ensure that all impacts to biological resources would be less than significant. No other biological resources would be substantially affected, and the Project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce

the number or restrict the range of a rare or endangered plant or animal. For additional discussion, please refer to Section 4.1, Biological Resources. No further mitigation would be required.

The Project has the potential to impact cultural and paleontological resources. As discussed above in Section 4.2, Cultural Resources, and Section 4.7, Geology and Soils, there are no documented historical resources or archaeological or paleontological resources in the Project area. Implementation of the mitigation measure **CUL-1: Inadvertent Discovery of Archaeological Resources, CUL-2: Inadvertent Discovery of Human Remains**, and **GEO-2: Inadvertent Discovery of Paleontological Resources**, would ensure that all impacts to cultural and paleontological resources would be less-than-significant, and the Project would not eliminate important examples of the major periods of California history or prehistory. For additional discussion, please refer to Section 4.2, Cultural Resources and Section 4.7, Geology and Soils. No further mitigation would be required.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

(Less Than Significant Impact with Mitigation) As described in the document above, the Project has the potential to cause significant impacts related to Biological Resources and Cultural Resources. Mitigation measures have been identified that would reduce these impacts to less than significant levels.

Cumulative environmental effects are multiple individual effects that, when considered together are considerable or compound or increase other environmental impacts. The individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time.

As discussed in the Initial Study Checklist above, individual project-related significant impacts have been identified for the Project, all of which would be mitigated to less-than-significant levels through implementation of the mitigation measures described in the Initial Study Checklist. The Project has limited impacts on the physical environment and most of the impacts associated with implementation of the Project would occur during construction, and thus would be short-term.

The potential for Project-generated impacts to contribute to a significant cumulative impact would arise if they are located within the same geographic area. In addition to the geographic scope, cumulative impacts can be determined by timing of the other projects relative to the Project. Schedule is particularly important for construction-related impacts. For a group of projects to generate cumulative construction impacts, they must be temporally as well as spatially proximate. There are two projects identified by the City within a 1/2 mile of the Trimble site that could be under construction at the same time as the Project at the Trimble site; a proposed commercial use and hotel project at the southwest corner of West Trimble Road and Orchard Parkway (370 West Trimble Road) (City of San José File No. PD19-017), and a proposed

industrial uses project at 350 West Trimble Road (City of San José File No. H20-014).[43] The Santa Clara Unified School District campus could still be under construction at the same time as the proposed Well NSJ #6 at the Agnews site.

Construction of these other projects, , in conjunction with the facilities for the Trimble and Agnews sites, could cause wind-blown dust that would contribute particulate matter into the local atmosphere. As described in Section 4.5, Air Quality, Implementation of the mitigation measure **AQ-4.5-1: Implement BAAQMD Basic Control Mitigation Measures**, which includes appropriate construction emission management practices and control measures to reduce impacts from fugitive dust, would ensure that short-term air quality construction-related impacts are less-than-significant. Therefore, there would be no significant cumulative impact associated with dust.

Construction of these other projects, in conjunction with the facilities for the Trimble and Agnews sites, could result in affects to the same biological resources as the Project, primarily to nesting birds/trees, in the short term. Impacts from the Project would be reduced to less than significant levels through implementation of mitigation measures **BIO-1: Avoidance and Minimization Measures for Nesting Birds, BIO-2: Avoidance and Minimization Measures for Tricolored Blackbirds, BIO-3: Avoid or Compensate for Removal of Protected Trees, and BIO-4: Minimize Construction Effects on Protected Trees**. Therefore, there would be no significant cumulative impact to biological resources.

Construction of these other projects, in conjunction with the facilities for the Trimble and Agnews sites could result in impacts to unknown paleontological resources. Impacts for the Project would be reduced less than significant levels through implementation of Mitigation Measure **GEO-2: Inadvertent Discovery of Paleontological Resources**. Excavation for these projects would occur within or adjacent to the Young Holocene-age geologic units, which do not have the potential to contain paleontological resources. Therefore, there would be no significant cumulative impact associated with paleontological resources.

Construction of these other projects, in conjunction with the facilities for the Trimble and Agnews sites, could result in noise impacts on existing sensitive receptors. Impacts from the Project would be reduced to less than significant levels through implementation of mitigation measures **NOI-4.4-1a: Noise Reduction** and **NOI-4.4-1b: Notification Requirements**. Therefore, there would be no significant cumulative impact associated with construction-related noise.

Based on the discussion above, cumulative impacts related to construction would be less than significant. No further mitigation would be required.

[43] Public GIS Viewer, Planning Permits. https://csj.maps.arcgis.com/apps/webappviewer/index.html?id=bd2109347a87474fb2214c36f6bf7db4 and sjpermits.org

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

(Less Than Significant Impact with Mitigation) As described in a) above, the Project has the potential to cause significant impacts related to Biological Resources and Cultural Resources. Mitigation measures have been identified to reduce these impacts to less than significant levels. Impacts to air quality (i.e., fugitive dust during construction), water quality (i.e., release of pollutants due to project inundation), and hazardous materials (i.e., exposure to hazardous materials) by the Project could directly affect human beings, and all CEQA impacts discussed above could indirectly affect human beings. For impacts related to Air Quality, Greenhouse Gas Emissions, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Noise, mitigation measures discussed in Sections 4.1 to 4.10 ensure that impacts would be less than significant. No further mitigation would be required.

4.11.12 References

California Department of Conservation, 2016. Farmland Mapping and Monitoring Program, available at https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed September 2, 2020.

California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State—January 1, 2011–2019, Sacramento, CA, May 2019. Available at www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/.

California Department of Forestry and Fire Protection (CalFire), 2008. Fire and Resource Assessment Program, Fire Hazard Severity Zones in State Responsibility Areas, Santa Clara County, California. November 7, 2007.; California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, Very Fire Hazard Severity Zones in Local Responsibility Areas, Santa Clara County, California. May 2008.

California Department of Transportation (Caltrans). 2018 Traffic Volumes on California State Highways, available at http://dot.ca.gov/trafficops/census/; accessed October 5, 2020

California Energy Commission (CEC), 2018. California Annual Retail Fuel Outlet Report Results (CEC-A15) Energy Assessments Division, September 27, 2018.

California Energy Commission, California Energy Demand 2018–2030 Revised Forecast, January 2018.

California Geological Survey (CGS), 1987. Mineral Land Classification: Aggregate Materials in the San Francisco – Monterey Bay Area. DMG Special Report 146 part II.

California Geological Survey (CGS), 2004. Earthquake Zones of Required Investigation, Milpitas Quadrangle. California Geological Survey. Map. Scale 1:24,000.

CGS, 2015. Fault Activity Map of California. California Geological Survey. Available at: https://maps.conservation.ca.gov/cgs/fam/. Accessed September 2, 2020.

City of San José 2018. Transportation Analysis Policy, Approved by Council February 27, 2018 by Resolution No. 78520. Effective date: March 29, 2018.

City of San José 2019. City of San José Fire Department website: Available at: http://www.sanjoseca.gov/index.aspx?NID=197. Accessed September 2, 2020.

City of San José, 2011. Draft EIR for Envision San José 2040 General Plan. Available at https://www.sanjoseca.gov/your-government/departments/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/completed-eirs/envision-san-jose-2040-general-plan-4-year/envision-san-jos-2040-general-plan. Accessed October 5, 2020.

City of San José, Downtown Strategy 2040 Integrated Final EIR, December 2018.

City of San José, Envision San José 2040 General Plan, adopted November 1, 2011 (amended March 16, 2020). Available at https://www.sanjoseca.gov/home/showdocument?id=22359. Accessed September 1, 2020.

County of Santa Clara, Williamson Act Properties. Available at: https://sccplanning.maps.arcgis.com/apps/webappviewer/index.html?id=1f39e32b4c0644b0915354c3e59778ce. Accessed September 2, 2020.

Hannon et al., 1978, Energy and Labor in the Construction Sector. Article in Science Magazine. November 24, 1978.

National Resources Conservation Service (NRCS). 2020. Web Soil Survey. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed September 2, 2020.

Santa Clara County, 2020, Santa Clara County Operational Area Emergency Operations Plan, March 18, 2008, available online at https://www.sanjoseca.gov/DocumentCenter/View/47601 Accessed August 21, 2020.

Santa Clara Valley Transportation Authority, 2016. *2016 CMP Monitoring and Conformance Report*, available at: http://vtaorgcontent.s3-us-west-1.amazonaws.com/Site_Content/Final%20MC%20Report%202016.pdf. accessed October 5, 2020.

U.S. Census Bureau, 2000 and 2010 Census. Available at https://data.census.gov/cedsci/table?q=population&g=1600000US0668000&hidePreview=false&tid=DECENNIALSF12000.P001&vintage=2000&y=2000. Accessed September 2, 2020.

U.S. Geologic Survey, Mineral Resources Data System (MRDS), Mineral Resources On-Line Spatial Data, available http://mrdata.usgs.gov/mineral-resources/mrds-us.html. Accessed September 2, 2020.

USGS, 2020. Liquefaction probability map for M7.8 San Andreas Fault earthquake scenario, Santa Clara County, CA, Open File Report 2008-127.

Valley Transit Authority (VTA), 2019. VTA Transit Maps, dated December 28, 2019. Available at : https://www.vta.org/sites/default/files/2019-11/VTA%20Transit%20Map.pdf Accessed October 5, 2020.

Wiegers, Mark O., (Wiegers), 2011. Landslide Inventory Map of the Milpitas Quadrangle, Alameda and Santa Clara Counties, California. California Geological Survey. Map. Scale 1:24,000. Available at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=ae120962f459434b8c904b456c82669d Accessed September 2, 2020.

CHAPTER 5
Lead Agency and Consultants

5.1 Lead Agency

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5.2 Consultants

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Jyothi Iyer, Air Quality, Greenhouse Gas, and Noise Lead
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