SEQUOIA DATA CENTER

Initial Study and

Proposed Mitigated Negative Declaration

CALIFORNIA
ENERGY COMMISSION
Gavin Newsom, Governor

January 2020
CEC-700-2020-001

DOCKET NUMBER 19-SPPE-03

Initial Study

Sequoia Data Center

(19-SPPE-03)

Lead Agency

California Energy Commission

January 2020

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Section 1

Proposed Mitigated Negative Declaration
and SPPE Recommendation

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Proposed Mitigated Negative Declaration and SPPE Recommendation

Sequoia Data Center Project

19-SPPE-03

1. Proposed Mitigated Negative Declaration

1.1 Project Information

Project: Sequoia Data Center
2600 De La Cruz Boulevard
Santa Clara, California

Applicant: C1-Santa Clara, LLC
Represented by DayZen, LLC
2501 Capitol Avenue, Suite 201
Sacramento, CA 95816

C1-Santa Clara, LLC proposes to construct the Sequoia Data Center, which would include data center buildings and a backup energy generating facility with a generation capacity up to 96.5 megawatts (MW). The California Energy Commission (CEC) is responsible for reviewing, and ultimately approving or denying, all thermal electric power plants, 50 MW and greater, proposed for construction in California. The CEC has a regulatory process, referred to as the Small Power Plant Exemption (SPPE) process, which allows applicants with projects between 50 and 100 MW to obtain an exemption from the CEC's jurisdiction and proceed with local approval rather than requiring a CEC license. The CEC can grant an exemption if it finds that the proposed project would not create a substantial adverse impact on the environment or energy resources.

1.2 Introduction

Pursuant to the California Environmental Quality Act (CEQA), the CEC prepared an Initial Study (IS) for the Proposed Project to determine if any significant adverse effects on the environment would result from project implementation. The IS utilizes the environmental checklist outlined in Appendix G of the CEQA *Guidelines*. If the IS for the project indicates that a significant adverse impact could occur, the CECwould be required to prepare an Environmental Impact Report.

According to Article 6 (Negative Declaration Process) and Section 15070 (Decision to Prepare a Negative Declaration or Mitigated Negative Declaration) of the CEQA *Guidelines*, a public agency shall prepare or have prepared a proposed negative declaration or mitigated negative declaration for a project subject to CEQA when:

(a) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or

(b) The initial study identifies potentially significant effects, but:

(1) Revisions in the project plans or proposals made by, or agreed to by, the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

1.3 Project Description

The applicant proposes to construct and operate the Sequoia Data Center (SDC or project) in Santa Clara, California. The project would include grading of the currently vacant site to construct a four-story 703,450 square foot data center building, substation, generator equipment yard, surface parking and landscaping. The associated Sequoia Backup Generating Facility (SBGF) would consist of a total of fifty-four diesel fired generators that would be used exclusively to provide backup generation to support the Critical Information Technology (IT) load of the server bays, mechanical cooling loads, and house power backup. The maximum electrical load of the SDC would be to 96.5 MW.

The SDC building would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 67.5 MW of Critical IT power. Approximately 70,000 square feet would be dedicated for administrative and office uses.

The 54 backup generators would be located in a generation yard along the west and south sides of the SDC building. Each backup generator is proposed as a fully independent package system with a dedicated and integrated fuel tank located below the bottom level of the generator. The generation yard would be electrically interconnected to the SDC building through above-ground cables to a location within the building that houses electrical distribution equipment. The SDC would include construction of a new 100 megavolt amps (MVA) electrical substation in the western portion of the site. The substation would be capable of delivering electricity to the SDC from SVP but would not allow any electricity generated from the SBGF to be delivered to the transmission grid.

1.4 Environmental Determination

The IS was prepared to identify the potential environmental effects resulting from proposed project implementation, and to evaluate the level of significance of these effects. The IS is based on information from the applicant's SPPE application and associated submittals, site visits, data requests and responses, and additional staff research.

Based on the analysis in the IS, it has been determined that all Sequoia Data Center project-related environmental impacts could be reduced to a less than significant level with the incorporation of feasible mitigation measures. Therefore, adoption of a Mitigated Negative Declaration (MND) will satisfy the requirements of CEQA. The mitigation measures included in this MND are designed to reduce or eliminate the potentially significant environmental impacts described in the IS. Where a measure described in this document has been previously incorporated into the project as a specific project design feature, this is noted in the technical sections. Mitigation measures are structured in accordance with the criteria in Section 15370 of the *CEQA Guidelines*.

1.5 Applicant-Proposed Design Measures/Mitigation Measures

Staff concludes that implementation of the following applicant proposed design measures (APMs), augmented by mitigation language developed by staff and agreed to by the applicant, would avoid potentially significant impacts identified in the Initial Study or reduce them to less than significant levels. For the sake of clarity, original APM language that has been replaced has been struck through and new mitigation measures prompted by Staff's analysis are underlined.

Air Quality

AQ-1: To assure fugitive dust impacts are less than significant, the Applicant will incorporate the Bay Area Air Quality Management District's (BAAQMD) recommended best management practices (BMPs) as a project design feature. These project design features will include:

- All exposed surfaces (for example, 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 surfaces shall be limited to 15 miles per hour.
- 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 Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling [Title 13, Section 2485, 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.
- A publicly visible sign shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

AQ-2: C1 commits to standard operating procedures that will limit operation for maintenance and testing to one generator at a time. It is C1's experience that maintenance and testing of each engine rarely exceeds 10 hours annually. **[SBGF only]**

Biological Resources

~~**BIO-1:** In order to reduce impacts to biological systems and communities, the following measures shall be implemented:~~

- ~~Schedule tree removal activities between September 1 and January 31 (inclusive) to avoid the nesting season (including for raptors) and no additional surveys would be required.~~

- If construction tree removal would take place between February 1 and August 31, pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed.

- Surveys will be completed no more than seven days prior to the initiation of site clearing or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., shrubs) in and immediately adjacent to the construction area for nests.

- If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species). This will ensure that no nests of species protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code will be disturbed during project implementation.

- A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Planning Department prior to the start of construction.

BIO-2: The following pre-construction and construction period measures shall be undertaken to avoid impacts to sensitive wildlife species:

- A qualified biologist shall conduct preconstruction surveys for burrowing owls prior to construction. Should these surveys identify burrowing owls on or near the SDC site, avoidance of disturbance to the burrow will be conducted as outlined below:

    - If an active burrowing owl nest is identified near a proposed work area, work will be conducted outside of the nesting season (March 15 to September 1).

    - If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season, a qualified biologist will establish a no-activity zone. The no-activity zone will be large enough to avoid nest abandonment and will at minimum be 250-foot radius from the nest.

    - If burrowing owls are present within the construction footprint during the non-breeding period, a qualified biologist will establish a no-activity zone of at least 150 feet.

    - If an effective no-activity zone cannot be established in either case, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, and the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.

- Prior to construction, employees and contractors performing construction activities will receive environmental sensitivity training from a qualified wildlife biologist. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on covered species during construction activities. A brief presentation by a qualified wildlife biologist will explain potential wildlife concerns to contractors, their employees, and agency personnel involved in the project. Fact sheets conveying this information and an educational brochure containing color photographs of burrowing owls will be prepared for distribution to the above-mentioned people and anyone else who may enter the project area.

- Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during

~~construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.~~

MM BIO-1 Environmental Sensitivity Training for Avoidance of Biological Resource Impacts. The following pre-construction and construction period measures shall be undertaken to avoid impacts to sensitive wildlife species:

- Prior to construction, employees and contractors performing construction activities will receive environmental sensitivity training from a qualified wildlife biologist. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on special-status species, including birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, during construction activities. A brief presentation by a qualified wildlife biologist will explain potential wildlife concerns to contractors, their employees, and agency personnel involved in project construction. The training will include information on situations when it is necessary to contact a qualified biologist (e.g., should any sensitive biological resources such as an active nest be found during construction). Fact sheets conveying this information and an educational brochure containing color photographs of western burrowing owls will be prepared for distribution to the above-mentioned people and anyone else who may enter the project site. A record of all trained personnel will be kept on site, and a sticker indicating training completion will be worn on all worker hard hats.
- Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the special-status species, including birds protected under the MBTA and California Fish and Game Code, and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.

MM BIO-2. Western Burrowing Owl Avoidance and Minimization Measures (Supersedes APM BIO-2). The following pre-construction and construction period measures shall be undertaken to avoid impacts to western burrowing owl:

- A qualified wildlife biologist shall conduct preconstruction surveys of the entire project site, plus all accessible areas of suitable habitat within a 250-foot radius from the project footprint for burrowing owls prior to construction. Surveys shall follow the most recent California Department of Fish and Wildlife (CDFW) recommendations currently found in Appendix D of the 2012 California Department of Fish and Game Staff Report on Burrowing Owl Mitigation. The final survey shall be conducted within the 24-hour period prior to the initiation of project activities in any given area. Should these surveys identify burrowing owls on or near the project site, avoidance of disturbance to the burrow will be conducted as outlined below:
    - If an active burrowing owl burrow (including burrow surrogates) is identified near a proposed work area, work will be conducted outside of the breeding season (February 1–August 31).
    - If an active nest is identified near a proposed work area and work cannot be conducted outside of the breeding season, a qualified biologist will establish a no activity zone. The no activity zone will be large enough to avoid nest abandonment and will at minimum be a 250-foot radius from the burrow (including burrow surrogates).

- o If burrowing owls are present within the construction footprint during the non-breeding period (September 1–January 31), a qualified biologist will establish a no-activity zone of at least 150 feet around the occupied burrow(s) (including burrow surrogates).
- o The applicable buffer zone will be marked in the field with exclusion fencing and no construction activities, tree removal, or vegetation clearing shall occur within the buffer zone.
- o If monitoring by a qualified biologist indicates that the owls are no longer nesting or the young owls are foraging independently, the buffer may be reduced prior to August 31, in consultation with CDFW.
- o A qualified biologist will monitor the site consistent with the requirements described above to ensure that buffers are enforced and owls are not disturbed.
- o If an effective no-activity zone cannot be established in either case, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, and the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls. The plan shall be approved by the city of Santa Clara in consultation with CDFW.
- o If pre-construction surveys are conducted during the non-breeding season (September 1 through January 31) and burrowing owls are observed on the site, burrows may be removed only if the owls are properly passively relocated following CDFW guidelines. Passive relocation, using one-way doors, may only occur in accordance with an approved Burrowing Owl Exclusion Plan (BOEP). The plan shall be approved by the city of Santa Clara in consultation with CDFW.
- o Loss of occupied burrowing owl burrows will be mitigated offsite at a 3:1 ratio. A mitigation plan shall be included as part of the BOEP and shall be approved by the city of Santa Clara in consultation with CDFW.

MM BIO-3: Nesting Bird Avoidance and Minimization Measures. (Supersedes APM BIO-1). In order to reduce impacts to nesting birds the following measures shall be implemented:

- Avoidance of Nesting Bird Season. Schedule construction activities, including tree removal, between September 1 and January 31 (inclusive) to avoid the nesting season (including for raptors). The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.
- Pre-construction/Pre-disturbance Surveys for Nesting Birds. If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 7 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the breeding season.
- During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests.
- If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer

zone to be established around the nest (typically 250 feet for raptors and 50 to 100 feet for other species) to ensure that nests of bird species protected by the MBTA or Fish and Game code shall not be disturbed during project construction.

- In order to determine the extent of the construction-free buffer zone, the ornithologist shall document pre-construction baseline monitoring of the nest to characterize "normal" bird behavior. The ornithologist shall monitor the nesting birds and shall increase the buffer if the ornithologist determines that the birds are showing signs of unusual or distressed behavior by project activities. Abnormal nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed towards project personnel, standing up from a brooding position, and flying away from the nest.
- If an active nest is found in a tree proposed for removal, tree removal shall be postponed until an ornithologist has determined that the young have fledged or the nest is no longer active due to predation or abandonment.
- A final report indicating the result of the survey and any designated buffer zones for nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of ground disturbance, grading and/or tree removal.

MM BIO-4: Prior to issuance of building permits, the applicant shall submit a Tree Replacement Plan to the City Arborist and Community Development Department for review and approval. The Plan shall provide for equivalent replacement of any tree removed from the project site, as follows:

- The project sponsor shall replace removed trees at a 2:1 ratio within the project site. If 2:1 replacement is not feasible because of site constraints, the project sponsor may instead replace trees at a 1:1 ratio within the project site with approval from the Community Development Director if the tree is larger in size and an appropriate species. Tree species and sizes shall be reviewed and approved, as applicable, by the City arborist.
- The 24-inch box of a replacement tree may be increased to either a 36- inch box or a 48-inch box to supplement the on-site tree planting plan. If trees are replaced at a 1:1 ratio, the replacement trees shall have a 36- inch box.
- If the removed tree is considered a protected tree it shall have a replacement ratio of 2:1 with a 36- inch box.
- If approved by the Community Development Director, an alternative site, within a 2-mile radius of the project site, shall be identified for any additional tree planting necessary to satisfy the requirement to achieve a 2:1 replacement ratio. Alternative sites may include local parks, schools, and/or street frontages.

Cultural Resources

CULT-1: A qualified archaeologist shall be on site to monitor grading and excavation of soil. The project applicant shall submit the name and qualifications of the selected archeologist to the Director of Community Development prior to the issuance of a grading permit. After monitoring the grading phase, the archaeologist shall make recommendations for further monitoring if it is determined that the site has or may have cultural resources. Recommendations for further monitoring shall be implemented during any remaining ground-disturbing activities. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring shall be required. A letter report summarizing the results of

the initial monitoring during site grading and any recommendations for further monitoring shall be provided to the Director of Community Development prior to onset of building construction.

CULT-2: If buried archeological resources are encountered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped, the Director of Community Development shall be notified, and a qualified archaeologist shall examine the find and make appropriate recommendations. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring shall then be submitted to the Director of Community Development.

CULT-3: In the event that human remains are discovered during SDC construction, all activity within a 50-foot radius of the site shall be halted. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Geology and Soils

GEO-1: To reduce the risk of damage to the SDC and SBGF as a result of geologic conditions at and near the SDC site, all recommendations outlined in the site-specific geotechnical investigation performed by Kleinfelder in October 2018 will be incorporated into the SDC and SBGF. These measures have been designed and will be incorporated to reduce the risk of settlement, liquefaction, and damage from expansive soils to ensure that users of the project are not exposed to a significant safety risks as a result of the SDC and SBGF. These measures are listed in full in Appendix E [of the SPPE Application]. The mat slab foundation has been designed to CBC seismic standards.

GEO-2: A Worker Environmental Awareness Training Program will be implemented, which will provide training to construction personnel regarding proper procedures (including identification and notification) in the event fossil materials are encountered during construction.

MM GEO-1: If a fossil is found and determined by the approved paleontologist to be significant and avoidance is not feasible, the qualified paleontologist shall develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in these areas shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall then be deposited in a scientific institution with paleontological collections. A final Paleontological Mitigation Plan Report shall be prepared that outlines the results of the mitigation program. The City shall be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

Greenhouse Gas Emissions

GHG-1: BAAQMD construction-period BMPs would be implemented to reduce GHG emissions during construction, as feasible and applicable. BMPs may include use of alternative-fueled (for example, biodiesel or electric) construction vehicles and equipment for at least 15 percent of the fleet, use of at least 10 percent of local building materials, and recycling or reusing at least 50 percent of construction waste.

GHG-2: To reduce GHG emissions and the use of energy related to building operations, the SDC chillers would be installed with variable frequency drives to provide efficient operation. **[SDC only]**

GHG-3: Water use reduction measures are also be incorporated in the building design, including the use of air-cooled chillers. Development standards for water conservation would be applied to increase efficiency in indoor and outdoor water use areas. Furthermore, SDC and SBGF would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24 baseline standard requirements for energy efficiency, based on the 2019 Energy Efficiency Standards requirements, and CALGreen. For SDC and SBGF, these measures would include **[SDC only]**:

- Water efficient landscaping that is drought tolerant and low maintenance, consisting of native and regionally appropriate trees, shrubs, and groundcover to minimize irrigation requirements
- Use of air-cooled chillers that do not consume water annually

GHG-4: SDC and SBGF would be required to participate in the City's Construction and Demolition Debris Recycling Program by recycling or diverting at least 50 percent of waste materials generated. Additionally, as mitigation incorporated into the project, at least 75 percent of construction waste would be diverted and high-recycled content material would be used where feasible.

GHG-5: As a condition of approval, SDC and SBGF construction would follow BAAQMD construction BMPs including limiting idling times to 5 minutes or less and limiting vehicle speeds to 15 miles per hour or less.

GHG-6: If required by the City as a design review condition, solar panels would be installed at the SDC. **[SDC only]**

GHG-7: SDC would include bicycle and pedestrian amenities consistent with the City's requirements. **[SDC only]**

GHG-8: SDC would include electrical vehicle charging stations. **[SDC only]**

GHG-9: SDC would use lighting control to reduce energy usage for new exterior lighting and air economization for building cooling. Water efficient landscaping and ultra-low flow plumbing fixtures in the proposed building would limit water consumption. In addition, SDC would have a "Cool Roof," using reflective surfaces to reduce heat gains. Waterside economizers would be used to cool data center loads. **[SDC only]**

GHG-10: SDC has a Power Usage Effectiveness of 1.23 and an average rack power rating range of 8 to 10 kilowatts. **[SDC only]**

Hazards and Hazardous Materials

HAZ-1: If contaminated soils from agricultural or industrial use are unexpectedly encountered during any construction activities, work in the area shall be temporarily halted and the corresponding jurisdiction (the City) shall coordinate with the contractor and the Alameda County Environmental Health Department to determine appropriate treatment and removal of contaminated soils.

Noise and Vibration

NOI-1: The applicant shall complete a design level acoustical analysis and include appropriate site and building design, building construction, and noise attenuation techniques to ensure that the SDC's rooftop mechanical equipment meets the City's applicable exterior noise standard at the adjacent land uses. A qualified acoustical consultant shall review the final site plan, building elevations, and roof plan prior to issuance of a building permit to calculate the expected exterior noise levels at nearby land uses and require appropriate noise shielding. The applicant shall implement all recommendations of the acoustical analysis, which may include but not be limited to rooftop screening and/or acoustical wraps. In addition to the noise attenuation techniques that may be identified in the design level acoustical analysis, C1 shall consider the following potential feasible measures that are capable of meeting the City's applicable noise performance standard **[SDC only]**:

> In the realm of physical acoustical screening (like a noise wall), the use of a Perforated Fiberglass Sound-Absorptive Noise Barrier System would allow for a lightweight screening. This solution would provide efficient performance, as the wall system contains no gaps due to its tongue-and-groove design in 12-inch wide segments. This material features a noise reduction coefficient (NRC) rating of 1.05 and sound transmission class (STC) rating of 35. This results in a noise reduction of up to 25 dBA. For application at the SDC, screening would be provided at the perimeter of the rooftop platforms surrounding the air-cooled chillers. The screening walls would be approximately 8 feet high to align with the top of the chiller units.
>
> Noise attenuation wraps for air cooled chillers can be used to produce noise reductions of 4 dBA to about 10 dBA. HUSH COVER™ removable sound blankets attenuate overall decibels and some tonal frequencies. Each chiller would be fitted with the HUSH CORE screw chiller noise reduction system or equal. The chiller noise reduction system to be applied to the suction and discharge piping, compressor housing, and oil separators would be a removable blanket insulation with Velcro flaps. The insulation mass shall be 3 pounds per square foot and shall be applied with 100 percent coverage. The noise reduction product shall be furnished and installed by the manufacturer.

Tribal Cultural Resources

TRIBE-1: A Native American monitor shall be retained to monitor all project-related, ground-disturbing construction activities (e.g., boring, grading, excavation, drilling, trenching). The appropriate Native American monitor shall be selected based on consultation between the City and the NAHC or as a part of AB 52 consultation (if requested).[1] Monitoring procedures and the role and responsibilities of the Native American monitor shall be outlined in a document submitted to the City prior to construction. In the event the Native American monitor identifies cultural or archeological resources, the monitor shall be given the authority to temporarily halt construction (if safe) within 50 feet of the discovery to investigate the find

[1] In accordance with Section 21080.3.1 of the California Public Resources Code and AB 52, the City has provided a Notice of Opportunity to Native American tribes to request consultation for projects within the city. To date, the City has not received any requests from regional tribes to be included on the AB 52 list.

and contact the assigned on-site archeologist (if not present). The Native American monitor shall be provided an opportunity to participate in the documentation and evaluation of the find. If a Treatment Plan or Data Recovery Plan is prepared, the Native American monitor shall be provided an opportunity to review and provide input on the Plan.

2. Proposed Finding

Based on the Initial Study, attached, staff proposes that the CEC find that the project will not have a significant effect on the environment and energy resources.

3. Small Power Plant Exemption Recommendation

Based on the above, Staff recommends that the Sequoia Data Center Project be exempted from CEC jurisdiction and that further permitting be handled at the local permitting level.

Section 2

Environmental Determination

2. Environmental Determination

2.1 Environmental Factors Potentially Affected

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

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

2.2 Environmental Determination

On the basis of this initial evaluation:

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

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

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

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

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

Shawn Pittard, Deputy Director
Siting, Transmission and Environmental Protection Division
California Energy Commission

1-23-2020
Date

Section 3

Introduction to the Initial Study

3. Introduction to the Initial Study

3.1 Energy Commission Jurisdiction and the Small Power Plant Exemption (SPPE) Process

The California Energy Commission (CEC) is responsible for reviewing, and ultimately approving or denying, all thermal electric power plants, 50 MW and greater, proposed for construction in California. CEC has a regulatory process, referred to as the Small Power Plant Exemption (SPPE) process, which allows applicants with projects between 50 and 100 MW to obtain an exemption from the CEC's jurisdiction and proceed with local approval rather than requiring a CEC license. CEC can grant an exemption if it finds that the proposed project would not create a substantial adverse impact on the environment or energy resources.

3.2 CEQA Lead Agency

In accordance with section 25519(c) of the Public Resources Code and the California Environmental Quality Act (CEQA), CEC serves as the lead agency to review an SPPE application and perform any required environmental analyses. Upon granting of an exemption, the local permitting authority—in this case the city of Santa Clara—would perform any follow-up CEQA analysis and impose mitigation, as necessary, for granting approval of the project.

3.3 Purpose of the Analysis

The purpose of this document is to provide objective information regarding the environmental consequences of the proposed project to the Commissioners who will be reviewing and considering the applicant's request for a SPPE, which would exempt the project from CEC's power plant licensing requirements.

3.4 CEQA Analysis Format

The environmental analysis of a SPPE typically takes the form of an Initial Study (IS), which is prepared to conform to the requirements of CEQA, the CEQA Guidelines (California Code of Regulations 15000 et. seq.), and CEC's regulations and policies. The IS is based on information from the applicant's revised SPPE application and associated submittals, site visits, data requests and responses, and additional staff research.

The Sequoia Data Center project consists of two primary components−the Sequoia Data Center (SDC) and the Sequoia Backup Generating Facility (SBGF)−which together represent the whole of the action. For a more complete description of the project, please see **Chapter 4 Project Description**.

This IS evaluates the potential environmental impacts that might reasonably be anticipated to result from the construction and operation of the project. Staff's analysis is broken down into issue areas derived from CEQA Appendix G:

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

In addition, CEC CEQA analysis documents include an analysis of Environmental Justice.

For each subject area, the analysis Includes a description of the existing conditions and setting related to the subject area, an analysis of the proposed project's potential environmental impacts, and a discussion of mitigation measures, if necessary, to reduce potentially significant impacts to less than significant levels.

3.5 Notification and Coordination

Noticing of documents is governed by both CEC's regulations set forth in California Code of Regulations Title 20 and the CEQA guidelines set forth in Title 14. The specific noticing requirements depend on the document at issue and are described below.

Application for Small Power Plant Exemption:

The Application for Small Power Plant Exemption (Application for Exemption) is filed by the project applicant to initiate the exemption proceeding. Noticing of the Application for Exemption is set forth in Title 20 section 1936(d) which requires that a summary of the Application for Exemption be sent to public libraries in the communities near the proposed site as well as libraries in Eureka, Fresno, Los Angeles, San Diego and San Francisco and to any person who requests such mailing. The summary is also required to be published in a newspaper of general circulation in the county of the project site. In this case the advertisements ran in the San Jose Mercury News (in English) and the World Journal (in Mandarin). The relevant mailing lists covering the requirements of section 1936(d) are found in **Appendix C**.

In addition to the required noticing set forth in section 1936(d), CEC staff provided public notice of the Application for Exemption on July 12, 2019 through a Notice of Receipt (NOR). This notice was mailed to property owners and occupants within 1,000 feet of project site and 500 feet of project linears. The NOR was also mailed to a list of environmental and environmental justice organizations developed in collaboration with the Public Adviser's Office with the goal of reaching groups with potential interest in energy generation projects in the Santa Clara region. The NOR pointed recipients to the project webpage and included instructions on how to sign up for the project list serve to receive electronic notification of events and the availability of documents related to the SPPE proceeding. The relevant mailing lists staff used for this outreach can be found in **Appendix C**.

Staff also provided notification to stakeholder agencies via an Agency Request for Participation letter. This letter provided information on how to participate in CEC's evaluation and decision-making process to agencies with potential interest in the project, most notably the California Department of Fish and Wildlife, the Regional Water Quality Control Board, the local Air Pollution Control District, and various departments of the city of Santa Clara's local government. The mailing list used to engage with stakeholder agencies can be found in **Appendix C**.

Staff conducted further outreach to and consultation with regional tribal governments as described in **Chapter 5.5 Cultural and Tribal Cultural Resources**.

Initial Study and Proposed Mitigated Negative Declaration:

The process for public notification of the Initial Study and Proposed Mitigated Negative Declaration (IS/PMND) is set forth in section 15072 of the CEQA guidelines and requires a least one of the following procedures:

(1) Publication at least one time in a newspaper of general circulation in the area affected by the proposed project.

(2) Posting of notice by the lead agency on and off site in the area where the project is to be located.

(3) Direct mailing to the owners and occupants of property contiguous to the project.

To comply with section 15072, staff exceeded the requirements by mailing notification of the IS/PMND to all owners and occupants not just contiguous to the project site but also to property owners and occupants within 1,000 feet of project site and 500 feet of project linears.

A Notice of the Intent to Adopt a Mitigated Negative Declaration will also be filed with the State Clearinghouse. A State Clearinghouse receipt including the list of all state agencies receiving notice through the State Clearinghouse process will be published to the project docket.

Section 4

Project Description

4. Project Description

C1-Santa Clara, LLC (Applicant) is seeking an exemption from the Energy Commission's jurisdiction (Small Power Plant Exemption, or SPPE) and to proceed with local approval rather than requiring certification by the Energy Commission. In reviewing an SPPE application the Energy Commission acts as the lead agency under section 25519(c) of the Public Resources Code and, in accordance with CEQA, would perform any required environmental analysis.

The applicant proposes to construct and operate the Sequoia Data Center (SDC or project) in Santa Clara, California. The project would include grading of the currently vacant site to construct a four-story 703,450 square foot data center building, substation, generator equipment yard, surface parking and landscaping (Sequoia 2019c). The associated Sequoia Backup Generating Facility (SBGF) would consist of a total of fifty-four diesel fired generators that would be used exclusively to provide backup generation to support the Critical Information Technology (IT) load of the server bays, mechanical cooling loads, and house power backup. The maximum electrical load of the SDC would be up to 96.5 MW.

4.1 Project Title

Sequoia Data Center

4.2 Lead Agency Name and Address

California Energy Commission
1516 Ninth Street
Sacramento, California 95814

4.3 Lead Agency Contact Person and Phone Number

Leonidas Payne, Project Manager
Siting, Transmission and Environmental Protection Division
California Energy Commission
(916) 651-0966

4.4 Project Location

Figure 4-1 shows the regional location and **Figure 4-2** identifies the project location.

4.5 Project Overview

The proposed SDC site encompasses 15 acres and is located at 2600 De La Cruz Boulevard in Santa Clara, California. The property is zoned Heavy Industrial. The site was previously developed with a one-story recycled paperboard mill and warehouse. The mill utilized a combined-cycle cogeneration plant with a natural gas turbine. The majority of the site surfaces were paved. The initial development of the site appears to have been begun in the late 1940s and early 1950s. The site is currently vacant and unpaved. The project proposes to grade the site, install utility connections, and construct a data center building and associated generator equipment yard.

The data center building would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 67.5 MW of Critical IT power. The data center

building would be oriented generally east to west, with surface parking on the northern and eastern sides. The SBGF would be along the western and southern exterior of the data center building. Total permanent employees for operation of the SDC is anticipated to be 25.

The SDC building would include 4 stories and would encompass approximately 702,114 square feet of gross area, of which approximately 70,000 square feet would be dedicated for administrative and office uses. The SDC building would employ a steel structure and insulated pre-cast panel cladding, and has been designed to California Building Code (CBC) seismic standards. The SDC will be supported on a mat slab foundation.

SDC has a typical height of 85 feet from adjacent grade to the top of the main parapet, with a 20-foot floor-to-floor height at each of its four stories. Top of screening, when applicable according to sight lines, will be at 99 feet from adjacent grade. A stair and freight elevator tower at the southeast corner of the site exceed the building in height to allow roof access – the parapet of this element is at a 105-foot elevation.

The building footprint is set back in the following dimensions from the property line:

- East elevation: 76 feet from property line, required setback 15 feet per zoning ordinance
- North elevation: 77 feet from property line, required setback 10 feet per zoning ordinance
- South elevation: 93 feet from property line, required setback 10 feet per zoning ordinance
- West elevation: 216 feet from property line, no required setback per zoning ordinance (rear)

SDC's maximum facility-wide load is estimated at approximately 96.5 megawatts (MW) (see **Appendix A**).

The 54 backup generators would be located in a generation yard along the west and south sides of the SDC building. Each backup generator is proposed as a fully independent package system with a dedicated and integrated fuel tank located below the bottom level of the generator. The generation yard would be electrically interconnected to the SDC building through above-ground cables to a location within the building that houses electrical distribution equipment.

Each set of six generators would be dedicated to serve the Critical IT requirement of a data hall. In addition, each set of six generators would share a portion of the overall building mechanical load, which is primarily driven by cooling of the data hall and the common space of the building (lobby, conference area, hallways, etc.). The SDC would have seven data halls, each designed to provide 7.5 MW of Critical IT as well as four data halls each designed to provide 3.75 MW of Critical IT, for a total Critical IT load of 67.5 MW. The total mechanical building load for the SDC, designed for the hottest day in the last 20 years, is 29 MW. Therefore, the maximum SDC building load would be 67.5 MW Critical IT plus 29 MW of Total Mechanical Building Load, or 96.5 MW.

The SDC would include construction of a new 100 megavolt amps (MVA) electrical substation in the western portion of the site. The three-bay substation (two 60/80/100 MVA 60 kV-25 kV step-down transformers with future spare bay) would have an all-weather asphalt surface underlain by an aggregate base. A concrete masonry unit screen wall, 12 feet in height, would surround three sides of the substation with an 8-foot security fence on the remaining side. The substation would be capable of delivering electricity to the SDC from Silicon Valley Power (SVP), but would not allow any electricity generated from the SBGF to be delivered to the transmission grid.

The main site access would be provided from De La Cruz Boulevard at two access points. At the north De La Cruz Boulevard access point, access would be controlled through security clearance. This clearance occurs through multiple layers on the entry lane, including a gate and an arm barrier with card reader authorization. The secondary De La Cruz Boulevard access would be slightly farther to the south and would allow for exiting only, no entry. In addition, a third secure access for trucks would be constructed on the site from Martin Avenue (along the southernmost property line). At that location, a dedicated SVP lane would be provided for access to the substation. A fire loop drive would be located around the building on all four sides and would connect all entrances. On the north side, the fire lane would allow for aerial access by the fire department. Parking is concentrated along the east elevation of the building near the main entrance, as well as along the north elevation. A total of 140 parking spaces are planned to serve the SDC.

Figure 4-3 shows the general arrangement and site layout of the project. Elevation drawings are presented on **Figures 4-4 and 4-5**.

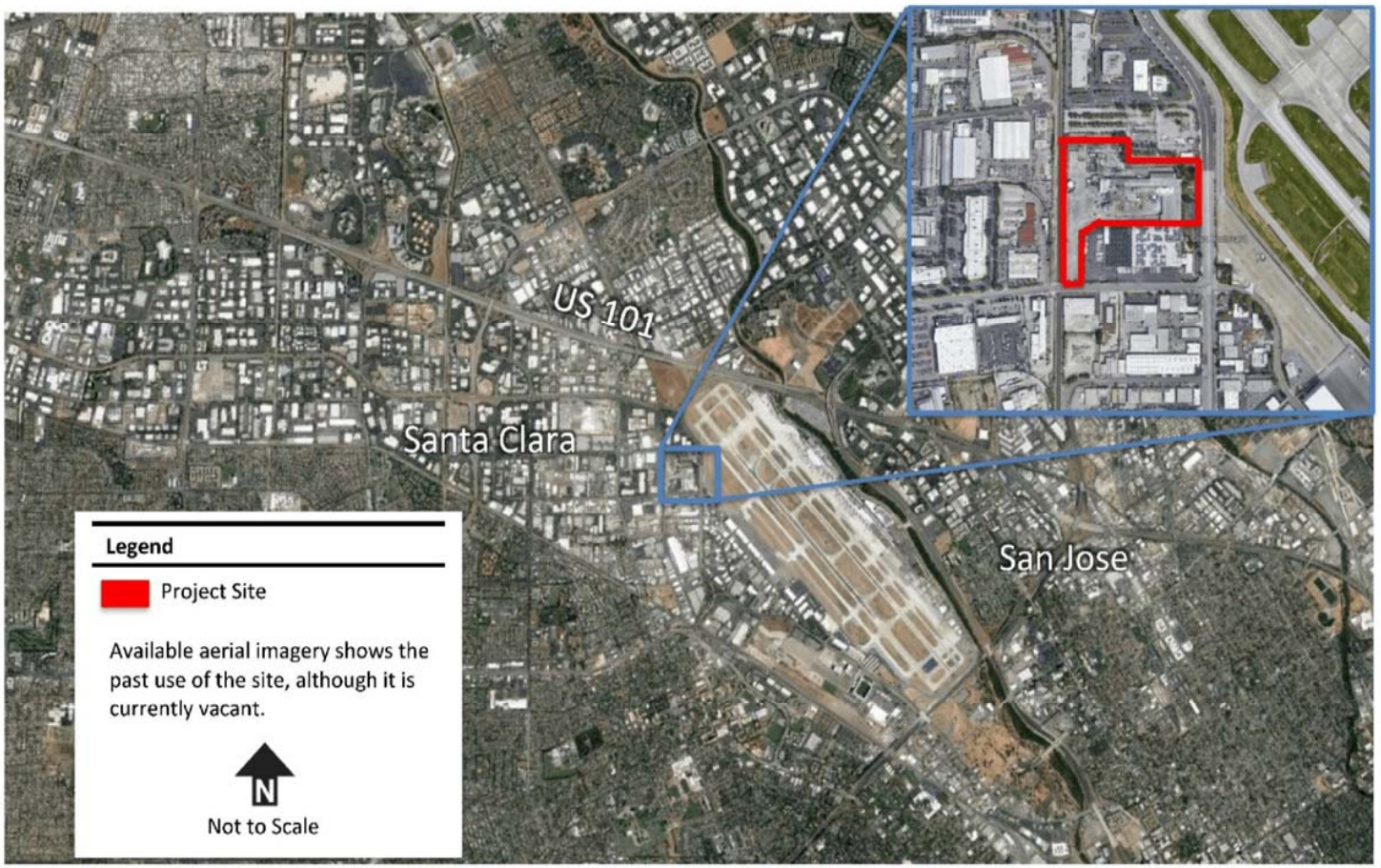

Figure 4-1
Regional Location

Source: Sequoia SPPE Application

Figure 4-2
Site Vicinity

Source: Sequoia SPPE Application

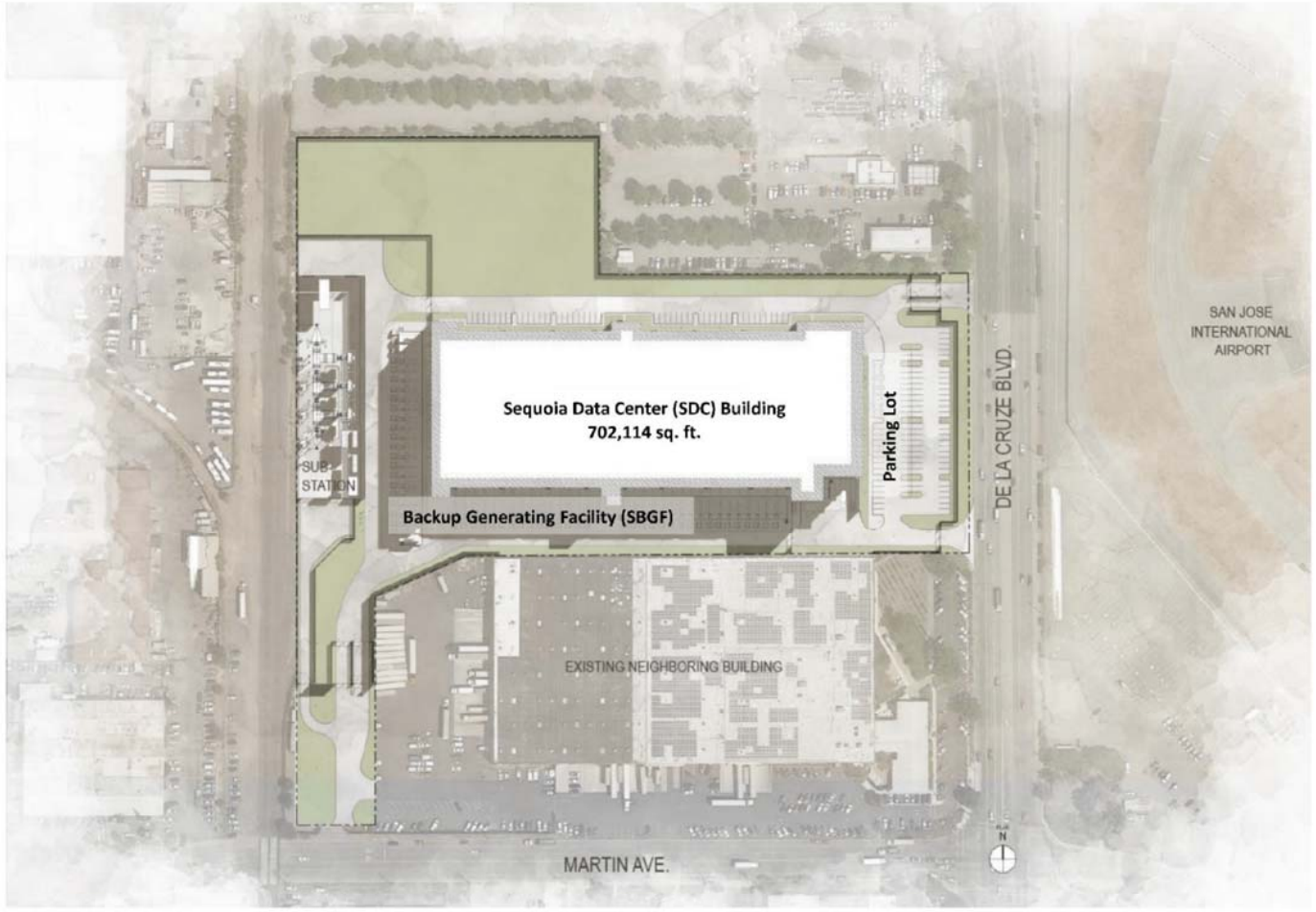

Figure 4-3
Site Plan

Source: Sequoia SPPE Application

PERSPECTIVE – FROM EAST

ELEVATED PERSPECTIVE – FROM SOUTHEAST

Figure 4-4
Exterior Renderings from East and Southeast

Source: Sequoia SPPE Application

PERSPECTIVE – FROM NORTHEAST

ELEVATED PERSPECTIVE – FROM NORTHEAST

Figure 4-5
Exterior Renderings from Northeast

Source: Sequoia SPPE Application

Electrical Supply

Electricity for the SDC would be supplied via a new SDC Substation constructed on the project site, connecting through SVP's 60 kV South Loop. The proposed three-bay substation consists of two 60/80/100 MVA (60/25 kV) transformers and a spare bay. The 60 kV South Loop is fed from Scott Receiving Station (SRS) and Kifer Receiving Station (KRS). Both SRS and KRS are 115/60 kV receiving stations. Both SRS and KRS have two 115/60 kV transformers for redundancy and reliability. The loads on the South Loop can be fully supplied through either of the receiving stations. Staff submitted data requests for a detailed description and schematic diagrams of the proposed SDC Substation and interconnection between SVP and the proposed SDC, but the information was not available to the applicant (Sequoia 2019c, Responses to Data Requests 81 to 83).

Silicon Valley Power System Reliability

The SVP 60 kV loop systems are designed to provide reliable electric service to customers. The looped interconnection allows SVP to provide continuous electricity to customers even under contingency conditions, when one part of the electric network is not functioning. The interconnections for data centers, like the SDC, on the SVP 60 kV system are designed with redundant equipment throughout such that there is no single point of failure. It takes at least two contingencies before customers on the 60 kV system lose power and, in the case of data centers, would instead rely on back-up generators. According to SVP, double outages on the 60 kV loop systems are extremely rare, and the data supports this (see **Appendix B**).

SVP provided a list of all of the outages on its 60 kV system over the last ten-years. There were thirty-one outages, only four of which resulted in customers being without power. This means that in twenty-seven of these outages the redundant design of the system prevented customers from being without power; data centers would not have isolated from the grid and would not have relied on their back-up generators. Only two outages from 2009 to 2019 affected data centers in the SVP service territory. One approximately 7.5 hour outage on May 28, 2016, which was the result of two contingencies (a balloon and a breaker failure), affected two data centers. Another 12 minute outage on December 2, 2016 affected four data centers. SVP's root cause analysis of this outage resulted in changes in maintenance procedures to ensure that breakers are reset before power is restored to a portion of the system that was down for maintenance. Outages would be extremely rare, and the consequences or effects on the fleet of data centers, almost negligible.

Wildfire policies could impact SVP's ability to supply power to customers if curtailments on the Pacific Gas and Electric (PG&E) system interrupt SVP's access to its remote electricity supplies. A Public Safety Power Shutoff (PSPS) essentially de-energizes power lines in order to prevent the lines from causing or being damaged by wildfires. The PSPSs to date have been generally limited to high fire risk zones and only implemented under special conditions. While the SVP service territory and the SVP's primary PG&E bulk transmission line interconnection points are not in high risk zones, a line de-energization in one of PG&E's high risk fire zones to reduce the risk of lines causing a wildfire could reduce the SVP electricity transmission access and supply through PG&E lines. The future impact of safety shutoffs on the PG&E system are not currently known – to date, two broadly implemented PSPSs in PG&E service territory last fall had no impact on SVP and its customers. As the utilities and regulators try to balance the costs and benefits of PSPS by fine tuning and targeting the implementation, the mostly likely outcome is that future PSPS will have even less potential effects on SVP service territory. SVP has the ability to produce about 200 MW through generators located locally, and can adapt to planned outages on the PG&E system just

as they have reacted or recovered from unplanned outages in the past to maintain reliable and high quality electricity supplies to their service territory customers.

Electrical System Engineering

The SDC's purpose is to provide its customers with mission-critical space to support their servers, including space conditioning (temperature control) and a steady stream of high-quality power supply. Interruptions of power could lead to server damage or corruption of the data and software stored on the servers. To ensure a reliable supply of high-quality power, the SBGF was designed to provide backup electricity to the SDC only in the event electricity cannot be supplied from SVP and delivered to the SDC building. To ensure no interruption of electricity service to the servers housed in the SDC building, the servers would be connected to uninterruptible power supply (UPS) systems that store energy and provide near-instantaneous protection from power quality transients and power interruptions. To provide electricity during a prolonged electrical interruption, a backup power generation source is required to continue supplying steady power to the servers and other equipment. The SBGF would provide that backup power.

Each electrical system would consist of a UPS system that would be supported by batteries, electrical switchgear, an electrical inverter, and portions of the SBGF backup generation. The UPS batteries would protect the load against surges, sags, under voltage, and voltage fluctuation without fully isolating SDC from the grid and initiating operation of the SBGF. However, if the UPS sensed a complete loss of grid power, it would isolate SDC from the grid, supply power from its batteries to maintain data integrity while the standby generators in SBGF started and came up to synchronized speed to deliver IT and building load power during grid isolation; the UPS would continue to condition the power from SBGF to prevent SBGF power quality transients from damaging SDC equipment.

The UPS would have built-in protection against permanent damage to itself and the connected load for all predictable types of malfunctions. The load would be automatically transferred to the bypass line without interruption in the event of an internal UPS malfunction. The UPS systems that would be deployed at the SDC would consist of one (1) 1500 kilo-volt ampere (KVA) UPS unit to provide "N Unit" of redundancy for a critical capacity of 1.5 MW. Six 1.5 MW UPS systems would equally share a maximum 7.5 MW critical load. The system would work as a distributive redundant (6 to make 5) N+1 system such that if any single N system were to catastrophically fail, the surviving 5 would have sufficient capacity to provide power to the maximum critical load. There are nine of these 6-to-make-5 systems proposed in the SDC.

Electrical Generation Equipment

Each of the 54 generators would be a Tier-2 standby diesel-fired generator equipped with diesel particulate filters (DPF). The generators would be MTU model 16V4000 DS2250. The maximum peak rating of the DS2250 is 2250 kW with a steady-state continuous generating capacity of 1.91 MW. Specification sheets for each manufacturer and evidence of the steady-state continuous ratings of the generators are provided in Appendix C of the SPPE Application.

Each individual generator would be provided with its own package system. Within that package, the prime mover and alternator would be made ready for the immediate call for the request for power controlled by the UPS. The generator package would integrate a dedicated fuel tank with a capacity of 6,800 gallons. The generators would be located in a generator yard along the west and south sides of the building. The generators are approximately 13 feet wide, 37 feet long, and 17 feet high. Each generator on the western side of the SDC would have a stack height of approximately 38 feet 9 inches. Each generator along the

southern side of the SDC would have a stack height of approximately 24 feet 9 inches. When placed on slab, they would be spaced approximately 5 feet apart horizontally. The generator yards would have 20-foot-high precast concrete screen walls and an 8-foot-high decorative metal fence.

Fuel System

The backup generators would use ultra-low sulfur diesel as fuel (<15 parts per million sulfur by weight). The 54 generators would have a combined diesel fuel storage capacity of 367,200 gallons, designed to provide 24 hours of emergency generation at full demand of the SDC. In a subsequent filing (TN 230893), the applicant informed CEC that the fuel tanks would be lowered four feet seven inches below grade into a concrete pit to maintain consistency with the Santa Clara County Airport Land Use Commission Comprehensive Land Use Plan.

Cooling System

Each generator would be air cooled independently as part of its integrated package and therefore there is no common cooling system for the SBGF.

Water Supply and Use

The SBGF would not require any consumption of water. The SDC will use approximately 5 acre-feet per year of potable water for domestic and irrigation uses to be supplied by the City via a new pipeline from the building to an interconnection with an existing water pipeline located in De La Cruz Boulevard. Chilled hydronic water piping would require an initial one-time water use of approximately 0.5 acre-feet prior to commercial operation.

As part of the construction of the new data center building, domestic water, fire water, and sanitary sewer connections would be installed through an extension of utility lines from City infrastructure systems located along De La Cruz Boulevard. The potable water system for the building would be served with a 4-inch to 6-inch service to accommodate the data center water demand.

Waste Management

The SBGF would not create any waste materials other than minor amounts of solid waste created during construction and maintenance activities. The SDC would generate sanitary sewage which would be sent via underground pipeline from the building to an interconnection with an existing sewer pipeline located in De La Cruz Boulevard.

Hazardous Materials Management

The project would require the preparation of a Spill Prevention, Control and Countermeasure Plan (SPCC) to address the storage, use, and delivery of diesel fuel for the generators.

Each generator unit and its integrated fuel tanks have been designed with doublewalls. The interstitial space between the walls of each tank would be continuously monitored electronically for the presence of liquids. This monitoring system would be electronically linked to an alarm system in the security office. This system would alert personnel if a leak is detected. Additionally, the standby generator units would be housed within a self-sheltering enclosure that prevents the intrusion of storm water.

Diesel fuel would be delivered on an as-needed basis in a compartmentalized tanker truck with maximum capacity of 8,500 gallons. The tanker truck would park at the gated entrances to the generator yard for re-fueling.

The SBGF would not include loading/unloading racks or containment for re-fueling events; however, a spill catch basin would be located at each fill port for the generators. To prevent a release from entering the storm drain system, drains would be blocked off by the truck driver and/or facility staff during fueling events. Rubber pads or similar devices would be kept in the generation yard to allow quick blockage of the storm sewer drains during fueling events.

To further minimize the potential for diesel fuel to come into contact with stormwater, to the extent feasible, fueling operations would be scheduled at times when storm events are improbable.

Warning signs and/or wheel chocks would be used in the loading and/or unloading areas to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines. An emergency pump shut-off would be utilized if a pump hose breaks while fueling the tanks. Tanker truck loading and unloading procedures would be posted at the loading and unloading areas.

4.6 Existing Site Condition

The proposed SDC site encompasses 15 acres and is located at 2600 De La Cruz Boulevard in the City, California, assessor's parcel number (APN) 230-03-105. The property is zoned Heavy Industrial. The site was previously developed with a one-story recycled paperboard mill and warehouse. The mill utilized a combined-cycle cogeneration plant with a natural gas turbine. The majority of the site surfaces were paved. The initial development of the site appears to have been begun in the late 1940s and early 1950s. The site is currently vacant and unpaved.

The property is bound to the north by an Enterprise Rent-a-Car Facility, to the south by a furniture warehouse, to the east by the San Jose International Airport, and to the west by warehouse structures. The project area consists primarily of industrial land uses. Buildings in the area are generally similar in height and scale. The airport is approximately 100 feet east of the site.

4.7 Project Construction

Demolition

The City of Santa Clara issued a demolition permit to C1 on February 7, 2019 and at the time of the filing, demolition activities had been completed for every project feature except for piping and miscellaneous infrastructure associated with the former cogeneration facility.

Construction

The site grading plan includes the pad grading for the building, rough and fine grading of parking lot, sidewalks, driveways and landscape areas including bioretention planters. The fills and cuts would be between 2 to 3 feet. The expected volume of cut material is 12,500 cubic yards and the anticipated amount of fill material is 11,300 cubic yards. Excavation spoils for footings and utility trenches would be used within parking lot areas or hauled off. Grindings from existing concrete and asphalt would be reused for parking and building areas.

Construction of the SDC and SBGF would require the removal of 66 trees on-site. A total of 114 replacement trees would be planted in at-grade planters on and around the site, replacing trees at a 1:1 replacement ratio. New landscaping would be drought tolerant and low maintenance, consisting of native and regionally appropriate trees, shrubs, and groundcover to be installed throughout the SDC site and along the property boundaries in similar hydrozones. Trees would be planted five feet away from new or existing water mains or utility lines. Irrigation design will comply with the requirements of the California Model Water Efficient Landscape Ordinance, Santa Clara, and Santa Clara County guidelines. The irrigation system will be a fully automatic weather-based system using rain sensor, low flow drip, and bubbler distribution. The system will include a master control valve and flow sensing capability which will shut down all or part of the system if leaks are detected.

The SDC includes construction of stormwater infiltration treatment areas consisting of 18-inch sand loam and 12-inch rock with perforated pipe. The stormwater treatment areas total approximately 18,250 square feet. The stormwater treatment areas would be located around the perimeter of the site and adjacent to paved parking areas. The existing stormwater lift station located on the southwest corner of the site would be removed, and the existing 24-inch storm connection to De La Cruz Boulevard would be replaced or repaired. Repair would include cleaning out the pipe to remove debris. The existing manhole in street would need to be raised, as it is presently paved over.

No storm drain connections to the new building are proposed, as the runoff from the new building is required to be treated on-site in accordance with C.3 regulations. Runoff from the new building would be collected from the roof downspouts and conveyed via an on-site storm drain system to the stormwater planter areas for treatment. Site runoff is designed to surface flow to the treatment planters. The overflow structures from the treatment planters would then direct the overflow runoff through an onsite storm drain system to the public storm system in De La Cruz Boulevard.

As part of the construction of the new data center building, domestic water, fire water, sanitary sewer, fiberoptic, and natural gas connections would be installed through an extension of utility lines from City infrastructure systems located along De La Cruz Boulevard.

The potable water system for the building would be served with a 4-inch to 6-inch service to accommodate the data center water demand. A looped 10-inch fire service line would be installed with fire hydrants spaced evenly every 300 feet around the building. A new fire pump would be provided to accommodate required sprinkler flows for the building. A 6-inch sanitary sewer connection is proposed for the project from De La Cruz Boulevard. An electrical substation would be constructed on site to meet the electrical requirements of the data center. Gas services would be provided from De La Cruz Boulevard.

Since the site preparation activities for the SDC would include the ground preparation and grading of the entire SDC site, the only construction activities for the SBGF would involve construction of the generation yard, including the below-grade concrete pits where the fuel tanks would be located. This would include construction of concrete slabs, fencing, installation of above-ground conduit and electrical cabling to interconnect to the SDC Building switchgear, and placement and securing of the generators.

The generators themselves would be assembled offsite and delivered to the site by truck. Each generator would be placed within the generation yard by a crane.

C1 would construct a new distribution substation to support the SDC. The 60-kV side of the substation would ultimately be owned and operated by SVP as part of its distribution network. The transformers and

secondary substation will be owned and operated by C1. The new substation would be interposed on SVP's South Loop between the 115-kV receiving station and an adjacent 60 kV substation. The South Loop terminal ends are comprised of 115 kV receiving stations (#1 and #2) which are connected to the greater SVP Bulk Electric System. Each 115-kV receiving station steps the voltage down to SVP's service territory transmission voltage of 60 kV. Reliability is maintained such that, if there is a fault along any section of the Loop, electric service is still supplied from the receiving stations from either end.

The new conductor that interconnects the new substation to the bulk electrical system will be an aluminum conductor composite reinforced type, size 715 double bundle with a carrying capacity of 310 MVA. SVP's general practice is to use tubular steel transmission poles for the two dead end structures. While SVP has not yet designed the 60 kV transmission lines that interconnect the new substation, the transmission line that currently passes near the western property line on the railroad right-of-way will be intercepted and rerouted into the new substation to form a loop on the SVP 60 kV transmission system. Each line terminal and transformer tap will be protected by 60 kV breakers.

4.8 Construction Schedule

Grading, utility installation, and building construction activities would last approximately 13 months. Construction of the generation yard and placement of the generators is expected to take 6 months. Project construction would employ an average of 125 workers per month and have a peak workforce of 300 workers per month.

4.9 Facility Operation

The backup generators would be run for short periods for testing and maintenance purposes. Other than maintenance and testing, the generators would not be operated unless there is a disturbance or interruption of the utility supply. The Bay Area Air Quality Management District's (BAAQMD) Authority to Construct and the California Air Resources Board's (CARB) Airborne Toxic Control Measures (ATCM) limits each engine to no more than 50 hours of operation annually for reliability purposes (i.e., testing and maintenance). However, it is C1's experience that maintenance and testing of each engine rarely exceeds 10 hours annually. In addition, C1 will only operate one engine at a time for maintenance and testing activities.

4.10 Project Design Measures

The applicant has incorporated numerous design measures into the project to avoid environmental impacts. Since these measures address specific technical areas, they are listed in the technical sections that follow this project description chapter, along with a discussion of any changes prompted by Staff's analysis.

4.11 References

Sequoia 2019a – Application for Small Power Plant Exemption: Sequoia Data Center, dated August, 2019. (TN 229419-1). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Sequoia 2019c – Applicant responses to Data Request Set 1. (TN 229938-1/2, 229973, 230507, and 230893). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Section 5

Environmental Setting and Environmental Impacts

5 Environmental Setting and Environmental Impacts

5.1 Aesthetics

This section describes the environmental and regulatory setting, and discusses impacts specific to aesthetics associated with the construction and operation of the Sequoia Data Center (SDC or project) in the existing landscape.[1]

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

Environmental checklist established by CEQA Guidelines, Appendix G.

5.1.1 Setting

The proposed project is located on relatively flat land in a highly developed urban area within the City of Santa Clara, California. Norman Y. Mineta San Jose International Airport (Airport) is approximately 100 feet to the east and U.S. Highway 101 is 2,800 feet to the north, respectively.

Industrial uses in the city are the predominant land use between U.S. 101 and the Caltrain[3] corridor, as well as adjacent to the Airport off De La Cruz Boulevard. Uses include manufacturing, construction-related industries, warehousing and distribution, data centers, and repair services. Airport-related support services are close to the Airport along De La Cruz Boulevard and Martin Avenue.

A number of large facilities are near the project site: Owens Corning Santa Clara Plant, Digital Realty Data Center, Hitachi Vantara, The Town Square Furniture Warehouse, and BrandSafway Services San Jose.

[1] The authors define a "landscape" as, "The outdoor environment, natural or built, which can be directly perceived by a person visiting and using that environment. A scene is the subset of a landscape which is viewed from one location (vantage point) looking in one direction." (Hull and Revell 1989) "The term landscape clearly focuses upon the visual properties or characteristics of the environment, these include natural and man-made elements and physical and biological resources which could be identified visually; thus non-visual biological functions, cultural/historical values, wildlife and endangered species, wilderness value, opportunities for recreation activities and a large array of tastes, smells and feelings are not included."(Daniel and Vining 1983)

[2] The proposed project is not an "employment center project" on an "infill site" within a "transit priority area" as defined in Public Resources Code, section 21099. For the purposes of this subdivision, "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment" (Pub. Resources Code, §21099[d][1]).

[3] Commuter rail service between San Francisco and San Jose, with weekday commute-hour service to Gilroy.

The approximate 15.23-acre project site was occupied by a single story 109,000-square foot building that operated as a paper mill and warehouse, and a cogeneration plant. The facility closed in December 2017 and the structures were largely demolished, leaving only the electric substation of the former cogeneration plant and a water storage tank.

The SDC includes a four-story 703,450-square foot building. The building would be a steel with insulated precast concrete cladding structure on a mat slab foundation. The SDC would have 54 standby generators located along the outside of the building, and a substation (100-megavolt). The project includes the planting of 66 onsite trees. Refer to the **Section 4.1, Project Description** for further details regarding the project.

Regulatory Background

Federal

No federal regulations related to aesthetics apply to the project.

State

California Scenic Highway Program. California's Scenic Highway Program is a provision of the Streets and Highways Code established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The Scenic Highway Program includes highways that are eligible for designation as scenic highways or designated as such. A city or county may propose highways with outstanding scenic elements to the list of eligible highways; however, state legislation is required for a highway to be eligible for designation as a scenic highway. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives the designation from Caltrans. Review of the California Scenic Highway Mapping System shows no designated state scenic highway near the project.

Local

City of Santa Clara. The City of Santa Clara 2010–2035 General Plan (General Plan) adopted November 16, 2010 shows the project site designated Heavy Industrial. This land use designation "allows primary manufacturing, refining and similar activities. It also accommodates warehousing and distribution, as well as data centers.... Because uses in the designation may be noxious or include hazardous materials, places of assembly, such as religious institutions and schools, and uses catering predominately to sensitive receptors, such as children and the elderly, as well as entertainment uses such as clubs, theaters and sports venues south of U.S. Highway 101, are also prohibited. The maximum FAR [floor area ratio] is 0.45." (Santa Clara 2014.)

The Santa Clara Zoning Map shows the project within the Heavy Industrial (MH) zoning district (Santa Clara 2019a, Chapter 18.50). "This district is intended to encourage sound heavy industrial development in the City by providing and protecting an environment exclusively for such development, subject to regulations necessary to ensure the purity of the air and the waters in the bay area, and the protection of nearby uses of the land from hazards, noise, or other radiated disturbances." (Santa Clara 2019a, § 18.50.020)

The Santa Clara Zoning Code (Santa Clara 2019a) establishes zoning districts applied to individual properties consistent with the General Plan land use designations. For each of the zoning districts, the

Code identifies land uses that are permitted, conditionally permitted, and not permitted. It also establishes standards such as minimum lot size, maximum building height, and the minimum distance buildings are set back from the street. Provisions for parking, landscaping, lighting, and other rules that guide the development of projects are also included. Staff reviewed the following zoning code requirements that have some relation to scenic quality:

- The MH zoning district has a maximum building height of 70 feet (Santa Clara 2019a, § 18.50.070).
- The MH zoning district has no maximum building coverage (Santa Clara 2019a, § 18.50.110).
- The MH zoning district requires an open landscaped area on a project site containing ground cover, trees, and shrubs (Santa Clara 2019a, § 18.50.120).
- The MH zoning district requires new onsite lighting to be reflected away from residential areas and public streets (Santa Clara 2019a, § 18.50.140(c)).
- The MH zoning district requires trash disposal areas to be screened from public view by a masonry enclosure, with solid wood gates, at least six feet in height (Santa Clara 2019a, § 18.50.140(d)).
- The MH zoning district states that the height of mechanical equipment and any accompanying screening shall be subject to architectural committee approval (Santa Clara 2019a, § 18.50.140(f)).

The project's buildings and site improvements would be subject to the City of Santa Clara's architectural review (Santa Clara 2019a, Chapter 18.76). Architectural review is to "encourage the orderly and harmonious appearance of structures and property; maintain the public health, safety and welfare; maintain the property and improvement values, and to encourage the physical development of the City as intended by the general plan…." (Santa Clara 2019a, § 18.76.010) The City has Community Design Guidelines that they use in the review of non-single family residential development (Santa Clara 2019b.).

"The Architectural Review process is the responsibility of the Architectural Committee or Zoning Administrator, as designated…. The Committee reviews plans and drawings submitted for architectural review for design, aesthetic considerations, and consistency with zoning standards, generally prior to submittal for Building Permits. The Architectural Committee may require the applicant or owner of any such proposed development to modify buildings, parking areas, landscaping, signs, and other facilities and improvements as conditions of approval. No permit shall be issued, and no structure, building, or sign shall be constructed or used in any case until such plans and drawings have been approved by the Architectural Committee." (Santa Clara 2019b.)

5.1.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: None.

The CEQA Guidelines Appendix G Environmental Checklist Form, I. Aesthetics (CCR 2018) was used to assess the proposed project's potential environmental effect. The project's aesthetics effect is discussed below.

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

Construction, Operation and Maintenance

NO IMPACT. Construction, operation and maintenance of the project would not have a substantial adverse effect on a scenic vista. Neither CEQA nor the CEQA Guidelines provide a clear-cut definition of what constitutes a scenic vista. Lead agencies may look to local planning documents for guidance

when defining the visual impact standard for the purposes of CEQA.[4] The Santa Clara General Plan does not identify a distinct scenic vista or a specific related policy.

In addition, staff uses as the definition for a scenic vista "a distant view of high pictorial quality perceived through and along a corridor or opening." The California Energy Commission in its Commission Decision (certification) for a number of thermal power plant projects used this definition.[5] Review of aerial and street view imagery show the project site is not located within a scenic vista under this definition. The project site is located on relatively flat land in a highly developed urban area within the city. Aboveground buildings, structures, earthwork, trees, and vegetation that surround the project site restrict its public view. Therefore, the project would not have a substantial adverse effect on a scenic vista.

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

Neither CEQA nor the CEQA Guidelines provide a clear-cut definition of what constitutes a scenic resource. A scenic resource may be explained in general as a widely recognized natural or man-made feature tangible in the landscape (e.g., a scenic resource designated in an adopted federal, state, or local government document, plan, or regulation, a landmark, or a cultural resource [historic values however differ from aesthetic or scenic values]). This analysis evaluated if the project would substantially damage—eliminate or obstruct—the public view[6] of a scenic resource, and if the project is situated so that it changes the visual aspect of the scenic resource by being different or in sharp contrast.

Construction, Operation and Maintenance

NO IMPACT. Construction, operation and maintenance of the project would not substantially damage scenic resources. Review of aerial and street view imagery and the City's General Plan found no scenic resource on the site or in the area.

The Santa Clara General Plan Environmental Impact Report identified the Santa Cruz Mountains and the Diablo range of the Pacific Coast Ranges, San Tomas Aquino Creek, and the Guadalupe River as "dominant visual resources" (Santa Clara 2011). In a visual impact assessment, areas beyond the foreground-middleground zone from a viewpoint, but usually less than 15 miles away are in the background zone. Areas not seen as foreground-middleground or background are in the seldom-seen zone. The background and seldom-seen zones are viewed in less detail by the observer, and most impacts blend with the landscape because of distance. (BLM 1986) The Santa Cruz Mountains and Diablo range are in the seldom-seen zone from the project site. San Tomas Aquino Creek is a little more than a mile to the west and the Guadalupe River a little less than a mile to the east of the project site. Both are not noticeable due to aboveground buildings, structures, earthwork, trees, and vegetation. The project would not be situated such that it would change the visual aspect of a scenic

[4] *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal. App. 4th 477.

[5] California Energy Commission Final Decision for GWF Tracy Combined Cycle Power Plant Project Docket Number 08-AFC-7, Visual Resources, p. 321; California Energy Commission Decision for Mariposa Energy Project Docket Number 09-AFC-3, Visual Resources, p. 5; California Energy Commission Decision for Blythe Solar Power Project Docket Number 09-AFC-6, Visual Resources, p. 514; California Energy Commission Decision for Genesis Solar Energy Project Docket Number 09-AFC-8, Visual Resources, p. 7-8; California Energy Commission Decision for Pio Pico Energy Center Docket Number 11-AFC-01, Visual Resources, p. 8.5-4.

[6] Public view is the visible area from a location where the public has a legal and physical right of access to real property (e.g., city sidewalk, public park, town square, state highway).

resource by being different or in sharp contrast. Therefore, the project would not substantially damage a scenic resource.

c. Would the project, 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?

Public Resources Cod (PRC) section 21071 defines an *urbanized area*.[7] Based on information from the U.S. Census Bureau, the City of Santa Clara 2018-population estimate was 128,448 (US Census 2018). Therefore, the project is within an urbanized area.

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Construction, operation, and maintenance of the project would not conflict with applicable zoning and other regulations governing scenic quality. The MH zoning district is intended to encourage sound heavy industrial development in the City by providing and protecting an environment exclusively for such development, subject to regulations necessary to ensure the purity of the air and the waters in the Bay Area, and the protection of nearby uses of the land from hazards, noise, or other radiated disturbances.

The project would have 54 diesel-fired generators to provide standby generation in case of an interruption in electrical supply. The cold start-up of the standby generators on a cool, humid day when the outdoor air is at or near saturation, may result in the formation of a publicly visible water vapor plume (visible plume) emitted to the atmosphere for a brief time until normal operating temperature is obtained. The operation of these generators and their emitting of a visible plume would be rare. Although the plume could be large and noticeable to the area, it would rarely occur. Because the plume would be a rare occurrence and of a relatively short duration it would not become a nuisance.

The MH zoning district requires open landscaped area on a project site (Santa Clara 2019a, § 18.50.120). Specifically, the zoning district requires the following yards and areas be developed into and permanently maintained as open landscaped area containing ground cover, trees, and shrubs:

(a) A minimum of ten feet of the required front and street side yards, exclusive of City-permitted driveway cuts, shall be developed into and permanently maintained as open landscaped areas subject to the approval of the Director of Planning and Inspection.

(b) A minimum landscaped area equal to at least ten percent of the required parking area to be evenly distributed throughout the parking area and adjacent to buildings.

The project would only have street frontage along De La Cruz Boulevard and would comply with (a) above by providing an open landscaped area of approximately 28 feet, which would exceed the ten-foot minimum (Sequoia 2019d, TN 230353, p. 49). The project proposes a total landscaped area of 70,592 square feet to be evenly distributed throughout the parking area and adjacent to the building, which would exceed the ten percent minimum of the required parking area, or 24,500

[7] An "urbanized area" includes "(a) An incorporated city that meets either of the following criteria: (1) Has a population of a least 100,000 persons. (2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons." (Public Resources Code section 21071).

square feet, in compliance with (b) above (Sequoia 2019d, TN 230353, p. 49, and TN 230354, p. 11-13).

The MH zoning district requires new onsite lighting to be reflected away from residential areas and public streets (Santa Clara 2019a, § 18.50.140 (c)). The project site does not border a residential area. Exterior lighting would be limited to safety lighting in the parking lot, building exterior, and along pathways. The project design includes directional and/or shielded light fixtures to keep lighting onsite and to minimize brightness and glare.

The MH zoning district requires trash disposal areas to be screened from public view by a masonry enclosure, with solid wood gates, at least six feet in height (Santa Clara 2019a, § 18.50.140(d)). The site plan and exterior renderings show the trash disposal area and loading dock screened from public view by a solid masonry wall about 10-12 feet tall at the southeast corner of the data center building.

"SDC has a typical height of 85 feet from adjacent grade to the top of the main parapet, with a 20-foot floor-to-floor height at each of its four stories. Top of screening, when applicable according to sight lines, will be at 99 feet from adjacent grade. A stair and freight elevator tower at the southeast corner of the site exceed the building in height to allow roof access – the parapet of this element is at a 105-foot elevation." (Sequoia 2019a, p. 2-9)

The MH zoning district has a building height limit of 70 feet (Santa Clara 2019a, § 18.50.070). For zoning code conformance purposes, the applicant is currently working to obtain a minor modification from the City's Zoning Administrator to allow a building height of 85 feet for the data center. The height exceedance for the building being 15 feet. The Zoning Administrator has the authority to grant a minor modification of the building height limit that does not exceed 25 percent. The proposed building height would be a 17.6 percent exceedance. An exceedance greater than 25 percent would require granting of a variance by the Planning Commission (Santa Clara 2019a, § 18.90.020). The applicant anticipates the granting of the minor modification during building permit review.

The City's Special Height Regulations include regulations pertaining to height requirements subject to additional requirements, conditions and exceptions to those already required by a zoning district. "[T]he height limitations contained in the schedule of district regulations do not apply to spires, belfries, cupolas, antennas, water tanks, ventilators, chimneys, or other mechanical appurtenances usually required to be placed above the roof level and not intended for human occupancy or to be used for any commercial or advertising purposes." (Santa Clara 2019a, § 18.64.010) Mechanical equipment would be located on the roof of the data center that includes 52 air chillers, three exhaust fans, and five dedicated outdoor air systems (Sequoia 2019a, p. 4.13-8). The height of exposed mechanical equipment and any accompanying screening is subject to approval by the City's Architectural Committee (Santa Clara 2019a, § 18.50.140, subd. (f)). Therefore, the heights and screening for the mechanical equipment and the parapets hiding the equipment would conform to the City's Special Height Regulations.

A few purposes of a height limit are to preserve a scenic vista, protect the public view of a scenic resource (e.g., architectural structure, a landmark, natural feature), and to maintain the character of a site and surrounding area (e.g., residential or commercial area). As previously discussed, review of aerial and street view imagery show the project site is not located within a scenic vista, and the project would not block the public view of a scenic resource.

The exterior of the building, proposed screening fences, and lighting plans would be subject to the City's design review process and would conform to current community design guidelines and landscaping standards for the MH zoning district. The guidelines were developed to support community aesthetic values, preserve neighborhood character, and promote a sense of community and place throughout the City (Santa Clara 1986).

The project as proposed would not significantly affect a scenic vista or scenic resources, and inclusive of the minor modification in allowable building height would maintain the character of the site and surrounding area without resulting in a conflict with applicable zoning and other regulations governing scenic quality. The project would have a less than significant effect within this urbanized area.

Required Mitigation Measures: None

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

A project may cause light trespass, sky glow, and glare affecting night and daytime views. Light trespass is "light falling where it is not wanted or needed" (e.g., spill light, obtrusive light) (IDA 2017). Sky glow is a result of light fixtures that emit a portion of their light directly upward into the sky where light scatters, creating an orange-yellow glow in the nighttime sky. Glare is "intense and blinding light that reduces visibility. A light within the field of vision that is brighter than the brightness to which the eyes are adapted." (IDA 2017)

Construction

LESS THAN SIGNIFICANT IMPACT. Construction laydown and staging areas may have nighttime lighting for security purposes. Outdoor construction-related lighting would be directed away from offsite properties and the public right-of-way. Light fixtures would be hooded/shielded. Thus, the construction–related activity would not create a new source of substantial light or glare adversely affecting day and nighttime views in the area.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project includes outdoor lighting for driveways, entrances, walkways, parking areas, and security purposes. The MH zoning district requires new onsite lighting to be reflected away from residential areas and public streets (Santa Clara 2019a, § 18.50.140 (c)). The project site does not border a residential area.

Fully shielded light fixtures prevent light emission above the horizon into the sky, greatly reducing sky glow. The project design includes directional and/or shielded light fixtures to keep lighting onsite and to minimize brightness and glare.

The SDC building is a steel with insulated precast concrete cladding structure. The generation yard would have 20-foot high precast concrete screen walls and 8-foot-high decorative metal fence. The exterior surface of the stacks for the generators would be untreated. A 12-foot tall masonry wall would surround three sides of the substation. These surfaces and finish would reduce reflectivity during daytime hours.

As proposed, the project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. The project would have a less than significant effect.

Required Mitigation Measures: None

5.1.3 References

BLM 1986 – Bureau of Land Management (BLM). U.S. Department of Interior Bureau of Land Management Manual Handbook H-8410-1 Visual Resources Inventory, January 17, 1986. Available online at: http://blmwyomingvisual.anl.gov/documents/. Accessed on: September 6, 2019.

Daniel and Vining 1983 – Terry C. Daniel and Joanne Vining, *Behaviour and the Natural Environment,* Plenum Press, New York, 1983, "Methodological Issues in the Assessment of Landscape Quality," pp. 39-83, and S. Amir and E. Gidalizon, "Expert-based method for the evaluation of visual absorption capacity of the landscape," *Journal of Environmental Management*, Vol. 30, No. 3, April 1990, pp. 251-263 cited by *The James Hutton Institute*, August 12, 2014, Available online at: http://www.macaulay.ac.uk/ccw/task-two/evaluate.html. Accessed on: September 4, 2019.

Hull and Revell 1989 – R. Bruce Hull and Grant R.B. Revell, "Issues in sampling landscapes for visual quality assessments," *Landscape and Urban Planning*, Vol. 17, No. 4, August 1989, pp. 323-330 cited by *The James Hutton Institute*, August 12, 2014. Available online at: http://www.macaulay.ac.uk/ccw/task-two/evaluate.html. Accessed on: September 4, 2019.

IDA 2017 – International Dark-Sky Association (IDA). Available online at: https://www.darksky.org/our-work/grassroots-advocacy/resources/glossary/. Accessed on: September 4, 2019.

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Sequoia 2019a – Application for Small Power Plant Exemption: Sequoia Data Center, dated August, 2019. (TN 229419-1). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Sequoia 2019d – Applicant responses to Data Request Set 2. (TN 230348, 230347, 230353-54, and 230356-57). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

US Census 2018 – United States Census Bureau (US Census). QuickFacts. Last updated: July 1, 2018. Available online at: https://www.census.gov/quickfacts/fact/table/santaclaracitycalifornia,US/PST045218.

5.2 Agriculture and Forestry Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to agriculture and forestry resources.

AGRICULTURE AND FORESTRY RESOURCES In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

5.2.1 Setting

The project site is in a developed area that includes industrial and commercial uses. The site was in agricultural use through at least the late 1930s (Ramboll US Corporation 2018). The site was undeveloped until the mid-1950s. In 1956, a recycled paperboard mill was constructed on the site, which was expanded in 1985 to include an on-site cogeneration power plant. The commercial paper mill operated continuously until 2017 when the facility ceased operations and was closed. The city issued a demolition permit to the applicant in February 2019, and the project site is now vacant except for miscellaneous infrastructure.

Regulatory Background

Federal

No federal regulations relating to agriculture and forestry resources apply to the proposed project.

State

Williamson Act. The California Land Conservation Act of 1965, or Williamson Act, is the principal method for encouraging the preservation of agricultural lands in California (Gov. Code, § 51200 et seq.). It enables local governments to enter into contracts with private landowners who agree to maintain specified parcels of land in agricultural or related open space use in exchange for tax benefits. California Department of Conservation (CDOC) agriculture maps show that the developed and urbanized region encompassing the project site, including most of the City of Santa Clara, is designated Urban and Built-up Land (CDOC 2018a). No properties with this designation are in agricultural use; therefore, none would be subject to Williamson Act contracts.

Farmland Mapping and Monitoring Program. CDOC established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to assess the location, quantity, and quality of agricultural lands and conversion of those lands to other uses. The FMMP identifies and maps agricultural lands as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The maps also designate Urban and Built-up Land to indicate land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, landfills, sewage treatment, and water control structures. The Important Farmland map for Santa Clara County shows that the project site is within an extensive region with the Urban and Built-up Land designation.

Local

City of Santa Clara General Plan and Zoning Ordinance. The project site is in an area designated Heavy Industrial by the *City of Santa Clara 2010–2035 General Plan*. "This classification allows primary manufacturing, refining and similar activities. It also accommodates warehousing and distribution, as well as data centers" (City of Santa Clara 2010). The project site is in the MH, Heavy Industrial zoning district; permitted uses include "manufacturing, processing, assembling, research, wholesale, or storage uses…" (City of Santa Clara Zoning Code, tit. 18, § 18.50.030, subd. (b)).

5.2.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: None.

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-agricultural use?

Construction, Operation and Maintenance

NO IMPACT. The project site is within the intensively developed and urbanized northwest portion of the county. As shown on the *Santa Clara County Important Farmland Map 2016*, the predominant designation for the region encompassing the site is Urban and Built-up Land (CDOC 2018b). No Farmland is located in the project area or the region surrounding the site. Therefore, construction, operation, and maintenance activities would not convert Farmland to a non-agricultural use, and no impact would occur.

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

Construction, Operation and Maintenance

NO IMPACT. The project site is zoned MH, Heavy Industrial, which is a non-agricultural zoning district. CDOC agriculture maps show that the site and surrounding urbanized region is designated Urban and Built-up Land. No properties with this designation are in agricultural uses, and none would be subject to Williamson Act contracts. Therefore, construction, operation, and maintenance activities would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

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

Construction, Operation and Maintenance

NO IMPACT. The project site is in the MH, Heavy Industrial zoning district; permitted uses include "manufacturing, processing, assembling, research, wholesale, or storage uses…" (City of Santa Clara Zoning Code, tit. 18, § 18.50.030). Development in the region includes various urban uses. The project area primarily includes industrial and commercial businesses. No land in the region is zoned for forest land, timberland, or timberland production; therefore, project construction, operation, and maintenance would cause no impact on such lands or uses.

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

Construction, Operation and Maintenance

NO IMPACT. The project site does not contain forest land and is not in a region where forest land is present; therefore, project construction, operation, and maintenance would cause no loss of forest land, and no impact would occur.

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

Construction, Operation and Maintenance

NO IMPACT. The project would not cause other changes in the existing environment that could convert Farmland or forest land to other uses. The site was previously developed for an industrial use, and the proposed project would constitute a new industrial use. Therefore, project construction, operation, and maintenance would cause no impact relating to conversion of Farmland or forest land.

5.2.3 References

CDOC 2018a – California Department of Conservation. DOC Maps: Agriculture. Available online at: https://maps.conservation.ca.gov/agriculture/. Accessed on September 23, 2019.

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Ramboll US Corporation 2018 – *Phase I Environmental Site Assessment. Graphic Packaging International, LLC. 2600 De La Cruz Boulevard. Santa Clara, CA.* February 1, 2018. Pages 1–7. Project Number 1690001664-001. Emeryville, CA.

5.3 Air Quality

This section describes the environmental and regulatory setting and discusses impacts associated with the construction, readiness testing and maintenance, and potential emergency operation of the Sequoia Data Center (SDC) and the Sequoia Backup Generating Facility (SBGF, or project) with respect to air quality. It is important to note that intermittent and standby emitting sources, like those proposed in this project, could operate for emergency use, and such emergency operations would be infrequent and for unplanned circumstances, which are beyond the control of the project owner. Emergency operations and the impacts of air pollutants during emergencies are generally exempt from air district permitting. Emissions from emergency operation are not regular, expected, or easily quantifiable such that they cannot be analyzed with certainty.

AIR QUALITY Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental checklist established California Environmental Quality Act (CEQA) Guidelines, Appendix G.

5.3.1 Setting

Criteria Pollutants

The United States Environmental Protection Agency (US EPA) and the California Air Resources Board (ARB) have established ambient air quality standards for several pollutants based on their adverse health effects. The US EPA has set National Ambient Air Quality Standards (NAAQS) for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than or equal to 10 microns (PM10), fine particulate matter less than or equal to 2.5 microns (PM2.5), sulfur dioxide (SO_2), and lead (Pb). These pollutants are commonly referred to as "criteria pollutants". Primary standards were set to protect public health; secondary standards were set to protect public welfare against visibility impairment, damage to animals, crops, vegetation, and buildings. In addition, ARB has established California Ambient Air Quality Standards (CAAQS) for these pollutants, as well as for sulfate (SO_4), visibility reducing particles, hydrogen sulfide (H_2S), and vinyl chloride. California standards are generally stricter than national standards. The standards currently in effect in California and relevant to the project are shown in **Table 5.3-1**.

Attainment Status and Air Quality Plans

The US EPA, ARB, and the local air districts classify an area as attainment, unclassified, or nonattainment. The classification depends on whether the monitored ambient air quality data show compliance, insufficient data are available, or non-compliance with the ambient air quality standards, respectively. The proposed project would be located in Santa Clara County in the San Francisco Bay Area Air Basin (SFBAAB),

under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). **Table 5.3-2** summarizes attainment status for the relevant criteria pollutants in the SFBAAB with both the federal and state standards.

TABLE 5.3-1 NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [a]	National Standards [b]	
			Primary	Secondary
O_3	1-hour	0.09 ppm (180 µg/m^3)	—	Same as Primary Standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
PM10	24-hour	50 µg/m^3	150 µg/m^3	Same as Primary Standard
	Annual Mean	20 µg/m^3	—	
PM2.5	24-hour	—	35 µg/m^3	Same as Primary Standard
	Annual Mean	12 µg/m^3	12 µg/m^3	15 µg/m^3
CO	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	—
	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	—
NO_2	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3) [c]	—
	Annual Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
SO_2 [d]	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas) [d]	—
	Annual Mean	—	0.030 ppm (for certain areas) [d]	—

Notes: ppm=parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; "—" = no standard

[a] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded.

[b] National standards (other than O_3, PM, NO_2 [see note c below], and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

[c] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. With a complete year of data, this compares to the highest 1-hour concentration on the 8th highest day.

[d] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Source: ARB 2016

Overall air quality in the SFBAAB is better than most other developed areas in California, including the South Coast, San Joaquin Valley, and Sacramento regions. This is due to a more favorable climate, with cooler temperatures and regional air flow patterns that transport pollutants emitted in the air basin out of the air basin. Although air quality improvements have occurred, violations and exceedances of the state ozone and PM standards continue to persist in the SFBAAB, and still pose challenges to state and local air pollution control agencies (ARB 2013). The project area's proximity to both the Pacific Ocean and the San Francisco Bay has a moderating influence on the climate. This portion of the Santa Clara Valley is bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the southwest, and the Diablo Range to the east. The surrounding terrain greatly influences winds in the valley, resulting in a prevailing wind that flows along the valley's northwest-southeast axis.

Pollutants in the air can cause health problems, especially for children, the elderly, and people with heart or lung problems. Healthy adults may experience symptoms during periods of intense exercise. Pollutants can also cause damage to vegetation, animals, and property.

TABLE 5.3-2 ATTAINMENT STATUS FOR SFBAAB

Pollutant	Averaging Time	State Designation	Federal Designation
O_3	1-hour	Nonattainment	—
	8-hour	Nonattainment	Nonattainment
PM10	24-hour	Nonattainment	Unclassified
	Annual	Nonattainment	—
PM2.5	24-hour	—	Nonattainment [a]
	Annual	Nonattainment	Unclassifiable/attainment [b]
CO	1-hour	Attainment	Attainment
	8-hour	Attainment	Attainment
NO_2	1-hour	Attainment	Unclassifiable/Attainment
	Annual	Attainment	Attainment
SO_2	1-hour	Attainment	Attainment/Unclassifiable [c]
	24-hour	Attainment	— [d]
	Annual	—	— [d]

Notes: [a] On January 9, 2013, US EPA issued a final rule to determine that the Bay Area attains the 24-hour PM2.5 national standard (US EPA 2013). This US EPA rule suspends key state implementation plan (SIP) requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this US EPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour PM2.5 standard until such time as the BAAQMD submits a "redesignation request" and a "maintenance plan" to US EPA, and US EPA approves the proposed redesignation.

[b] In December 2012, US EPA strengthened the annual PM 2.5 NAAQS from 15.0 to 12.0 µg/m^3. In December 2014, US EPA issued final area designations for the 2012 primary annual PM 2.5 NAAQS (US EPA 2014). Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

[c] On January 9, 2018, US EPA issued a final rule to establish the initial air quality designations for certain areas in the US for the 2010 SO_2 primary NAAQS (US EPA 2018). This final rule designated the SFBAAB as attainment/unclassifiable for the 2010 SO_2 primary NAAQS.

[d] See note d under **Table 5.3-1**.

Sources: ARB 2019a, BAAQMD 2019a, US EPA 2011c, US EPA 2013, US EPA 2014, US EPA 2018

Existing Ambient Air Quality

The nearest background ambient air quality monitoring station to the project is the San Jose – Jackson Street station, which is about 2.9 miles southeast of the project site. **Table 5.3-3** presents the air quality monitoring data from the San Jose – Jackson Street monitoring station from 2013 to 2018, the most recent years for which data are available. Data in **Table 5.3-3** that are marked in **bold** indicate that the most-stringent current standard was exceeded during that period.

The maximum concentration values listed in **Table 5.3-3** have not been screened to remove values that are designated as extreme events. Violations that are the result of extreme events such as wildfires are normally excluded from consideration as AAQS violations. Extreme events undoubtedly affected many of the maximum concentration values listed for 2017 and 2018, most of which occurred from September to mid-November during a period of extensive California-wide wildfire activity. The ozone[1] and PM in 2017 and 2018 strongly illustrate the effect of events like the extensive northern California wild-land fires. Even though they were 100's of miles from the monitoring stations, the blanket of smoke and adverse air quality affected air monitoring adjacent to the urban setting for the project.

[1] Wildfires also emit substantial amounts of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter (NOAA 2019).

TABLE 5.3-3 AMBIENT AIR QUALITY MONITORING DATA

Pollutant	Averaging Time	2013	2014	2015	2016	2017	2018
O_3 (ppm)	1-hour	**0.093**	0.089	**0.094**	0.087	**0.121**	0.078
	8-hour	**0.079**	0.066	**0.081**	0.066	**0.098**	0.061
PM10 (µg/m^3)	24-hour	**58.1**	**54.7**	**58**	41	**69.8**	**155.8**
	Annual	**22.2**	20	**21.9**	18.3	**21.3**	**23.1**
PM2.5 (µg/m^3)	24-hour (98th percentile)	35	28	32	20	**41**	**133.9**
	Annual	**12.4**	9.3	10.6	8.4	10.1	**12.9**
NO_2 (ppb)	1-hour (maximum)	59	58	49	51	68	86
	1-hour (98th percentile)	52	55	44	42	50	59
	Annual	15.18	13.07	12.81	11.26	12.24	12
CO (ppm)	1-hour	3	2.4	2.4	1.9	2.1	2.5
	8-hour	2.5	1.9	1.8	1.4	1.8	2.1
SO_2 (ppb)	1-hour (maximum)	2.5	3	3.1	1.8	3.6	6.9
	1-hour (99th percentile)	2	2	2	2	3	na
	24-hour	1.4	0.9	1.1	0.8	1.1	1.1

Notes: Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
na – Not available.
Sources: ARB 2019b, US EPA 2019, BAAQMD 2019c

Health Effects of Criteria Pollutants

Below are descriptions of the health effects of criteria pollutants that are a concern in the regional study area. The California Health and Safety Code Section 39606 requires the Air Resources Board to adopt ambient air quality standards at levels that adequately protect the health of the public, including infants and children, with an adequate margin of safety. Ambient air quality standards are the legal definition of clean air (ARB 2007).

Ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NOx), including nitrogen dioxide (NO_2). ROG and NOx are known as precursor compounds for O_3. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately 3 hours.

Ozone can cause the muscles in the airways to constrict, trapping air in the alveoli, potentially leading to wheezing and shortness of breath (US EPA, 2019). Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema, and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease (US EPA, 2019). Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development, and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung

development in children (US EPA, 2019). Inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms, and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath (ARB, 2016a).

People most at risk for adverse health effects from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers (US EPA, 2019). Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure (US EPA, 2019). Studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults (ARB, 2016a). Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to notice their own symptoms and avoid harmful exposures.

Particulate Matter. PM10 and PM2.5 represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain absorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility.

Nitrogen Dioxide. Breathing air with a high concentration of NO_2 can irritate airways in the human respiratory system. Such exposures over short periods (as represented by the 1-hour standards) can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 (as represented by the annual standards) may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2. NOx (NO_2 and NO – nitric oxide) reacts with other chemicals in air and sunlight to form both particulate matter and ozone.

Carbon Monoxide. CO is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Sulfur Dioxide. SO_2 is produced through combustion of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (PM10 and PM2.5) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead.

Toxic Air Contaminants[2]

According to section 39655 of the California Health and Safety Code, a toxic air contaminant (TAC) is "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health". TACs, also referred to as hazardous air pollutants (HAPs) or air toxics, are different from criteria air pollutants such as ground-level ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. Criteria air pollutants are regulated using national and state Ambient Air Quality Standards as noted above. However, there are no ambient standards for most TACs[3] so site-specific health risk assessments (HRAs) are conducted to evaluate whether risks of exposure to TACs create an adverse impact. Specific TACs have known acute, chronic, and cancer health impacts. TACs that have been identified by CARB are listed at Title 17, California Code of Regulations, sections 93000 and 93001. The nearly 200 regulated TACs include asbestos, organic, and inorganic chemical compounds and compound categories, diesel exhaust, and certain metals. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act apply to facilities that emit these listed TACs above regulated threshold quantities.

Health Effects of TACs

The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs could cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis or genetic damage; or short-term effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches (BAAQMD 2017b, Section 5.1). Numerous other health effects also have been linked to exposure to TACs, including heart disease, Sudden Infant Death Syndrome, respiratory infections in children, lung cancer, and breast cancer (OEHHA 2015).

The primary on-site TAC emissions sources for the SBGF are diesel engines, both during construction and readiness testing and maintenance. Diesel exhaust is a complex mixture of thousands of gases and fine particles and contains over 40 substances listed by the US EPA as hazardous air pollutants and by ARB as toxic air contaminants. The solid material in diesel exhaust is known as DPM (ARB 2019c). DPM is primarily composed of aggregates of spherical carbon particles coated with organic and inorganic substances. Diesel exhaust deserves particular attention mainly because of its ability to induce serious noncancerous effects and its status as a likely human carcinogen. Diesel exhaust is also characterized by ARB as "particulate matter from diesel-fueled engines". The impacts from human exposure would include both short- and long-term health effects. Short-term effects can include increased coughing, labored breathing, chest tightness, wheezing, and eye and nasal irritation. Effects from long-term exposure can include increased coughing, chronic bronchitis, reductions in lung function, and inflammation of the lung. Epidemiological studies strongly suggest a causal relationship exists between occupational diesel exhaust exposure and lung cancer. Diesel exhaust is listed by the US EPA as "likely to be carcinogenic to humans" (US EPA 2003).

Sensitive Receptors

Sensitive receptors are defined as groups of individuals that may be more susceptible to health risks due to chemical exposure. Sensitive individuals, such as infants, the aged, and people with specific illnesses or

[2] According to section 39655 of the California Health and Safety Code, a toxic air contaminant (TAC) is "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." In addition, substances which have been listed as federal hazardous air pollutants (HAPs) pursuant to section 7412 of Title 42 of the United States Code are TACs under the state's air toxics program pursuant to section 39657 (b) of the California Health and Safety Code. The Air Resources Board formally made this identification on April 8, 1993 (Title 17, California Code of Regulations, section 93001) (OEHHA 2019).

[3] Ambient air quality standards for TACs exist for lead (federal and state standards), hydrogen sulfide (state standard), and vinyl chloride (state standard).

diseases, are the subpopulations which are more sensitive to the effects of toxic substance exposure. Examples of sensitive receptors include residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities. Residences could include houses, apartments, and senior living complexes. Medical facilities could include hospitals, convalescent homes, and health clinics. Playgrounds could be play areas associated with parks or community centers (BAAQMD 2017b). The potential sensitive receptor locations evaluated in the HRA for SBGF include (Sequoia 2019a, page 4.3-22, BAAQMD 2012):

- Residential dwellings, including apartments, houses, condominiums
- Schools, colleges, and universities
- Daycares
- Hospitals
- Senior-care facilities

Sensitive Receptors Near the Project

BAAQMD recommends that any proposed project that includes the siting of a new TAC emissions source assess associated community risks and hazards impacts within 1,000 feet of the proposed project, and take into account both individual and nearby cumulative sources (that is, proposed project plus existing and foreseeable future projects). Cumulative sources represent the combined total risk values of each individual source within the 1,000 foot evaluation zone (BAAQMD 2017b).

A sensitive receptor search was conducted by the applicant within a 1-mile zone of influence, which is broader than the 1,000-foot (0.19 mile) distance recommended by BAAQMD. In addition to residents, it was determined that nearby sensitive receptors include daycares and an indoor soccer field. The area directly surrounding the SBGF site consists of various businesses, industrial uses, railroad tracks, and the San Jose International Airport (SJC). The applicant stated that the nearest residential neighborhoods are located approximately one third mile north and east of the site (Sequoia 2019a, page 4.3-22). Staff drove around the project site, and found that additional nearby residences are located to the southwest of the site at a distance of approximately 1,725 ft. (0.33 miles). These additional residences are located more often downwind of the project site than the residences identified by the applicant. No schools, residences, parks, playgrounds, day care centers, nursing homes, or hospitals were found to be located within 1,000 ft. of the SBGF. Please see **Figure 5.3-1** for the map of sensitive receptors near the project. Staff visited Heartland Hospice Services and determined that this was a business office and that patient care was not conducted at this site.

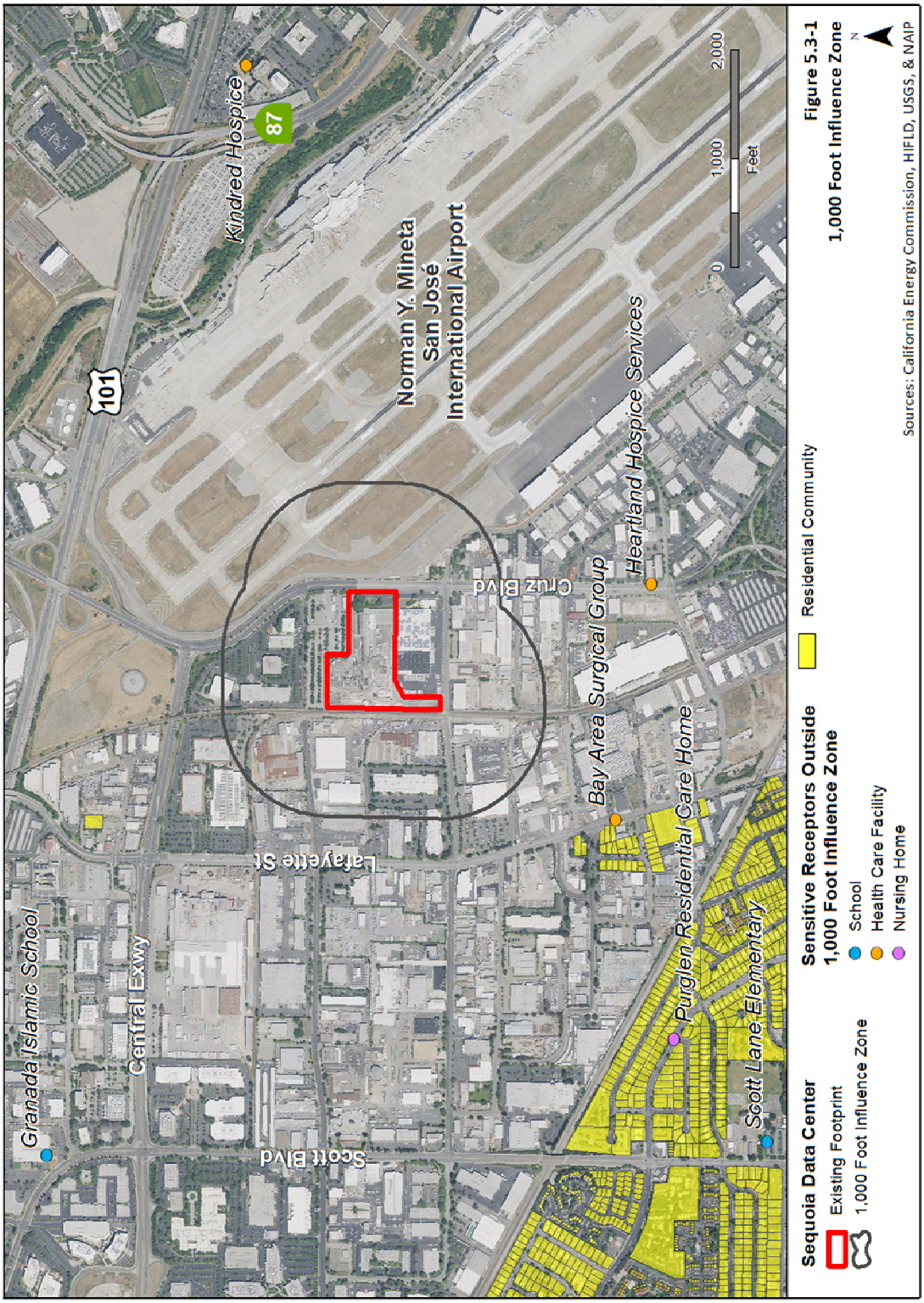

Figure 5.3-1
1,000 Foot Influence Zone

Regulatory Background

Federal, state, and regional agencies regulate air quality in the SFBAAB, within which the project site is located.

Federal

Clean Air Act. The federal Clean Air Act (CAA) establishes the statutory framework for regulation of air quality in the United States. Under the CAA, the US EPA oversees implementation of federal programs for permitting new and modified stationary sources, controlling toxic air contaminants, and reducing emissions from motor vehicles and other mobile sources.

Title I (Air Pollution Prevention and Control) of the federal CAA requires establishment of NAAQS, air quality designations, and plan requirements for nonattainment areas. States are required to submit a state implementation plan (SIP) to the US EPA for areas in nonattainment with NAAQS. The SIP, which is reviewed and approved by the US EPA, must demonstrate how state and local regulatory agencies will institute rules, regulations, and/or other programs to attain NAAQS.

CAA section 112 (Title 42, U.S. Code section 7412) addresses emissions of hazardous air pollutants (HAPs). This section requires new sources that emit more than ten tons per year (tpy) of any specified HAP or more than 25 tpy of any combination of HAPs to apply Maximum Achievable Control Technology (MACT).

National Emission Standards for Hazardous Air Pollutants. The CAA defines HAPs as a variety of substances that pose serious health risks. Direct exposure to HAPs has been shown to cause cancer, reproductive effects or birth defects, damage to brain and nervous system, and respiratory disorders. Categories of sources that cause HAP emissions are controlled through separate standards under CAA Section 112: National Emission Standards for Hazardous Air Pollutants (NESHAP). These standards are specifically designed to reduce the potency, persistence, or potential bioaccumulation of HAPs. New sources that emit more than ten (10) tpy of any specified HAP or more than 25 tpy of any combination of HAPs are required to apply Maximum Achievable Control Technology (MACT).

Asbestos is a HAP regulated under the US EPA NESHAP. The asbestos NESHAP is intended to provide protection from the release of asbestos fibers during activities involving the handling of asbestos. Air toxics regulations under the CAA specify work practices for asbestos to be followed during operations of demolitions and renovations. The regulations require a thorough inspection of the area where the demolition or renovation operations would occur and advance notification of the appropriate delegated entity. Work practice standards that control asbestos emissions must be implemented, such as removing, wetting, and sealing in leak-tight containers all asbestos-containing materials (ACM) and disposing of the waste as expediently as practicable.

State

The Air Resources Board (ARB) is the primary administrator of the California's federal CAA compliance efforts, while local air quality districts administer air rules and regulations at the local and regional levels. ARB is also responsible for California's state regulated air quality management, including establishment of CAAQS for criteria air pollutants, mobile source/off-road equipment/portable equipment emission standards, portable equipment registration, greenhouse gas (GHG) regulations, as well as oversight of local or regional air quality districts and preparation of implementation plans, including regulations for stationary sources of air pollution.

Air Toxic "Hot Spots" Information and Assessment Act. The Air Toxic "Hot Spots" Information and Assessment Act, also known as Assembly Bill (AB) 2588, identifies TAC hot spots where emissions from specific stationary sources may expose individuals to an elevated risk of adverse health effects, particularly cancer or reproductive harm. Many TACs are also classified as HAPs. AB 2588 requires that a business or other establishment identified as a significant stationary source of toxic emissions provide the affected population with information about health risks posed by their emissions.

Airborne Toxic Control Measure (ATCM) for Emergency Standby Diesel-Fueled Engines. Statewide regulations govern the use of and establishes emissions performance standards for emergency standby diesel-fueled engines, including those of the project. As defined by the California Code of Regulations (17 CCR §93115.4), an emergency standby engine is one that provides electrical power during an emergency use and is not the source of primary power at the facility; an emergency standby engine is not operated to supply power to the electric grid. The ATCM (17 CCR §93115.6) restricts each emergency standby engine to operate no more than 50 hours per year for maintenance and testing purposes. The ATCM establishes no limit on engine operation for emergency use or for emission testing to show compliance with the ATCM's standards.

Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations. ARB has established the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations to minimize the generation of asbestos from earth disturbance or construction activities. The Asbestos ATCM applies to any project that would include sites to be disturbed in a geographic ultramafic rock unit area or an area where naturally occurring asbestos (NOA), serpentine, or ultramafic rocks are determined to be present. Based upon review of the US Geological Survey map detailing natural occurrence of asbestos in California, NOA is not expected to be present at the project site (CDOC 2011).

Regional

The BAAQMD is the regional agency charged with preparing, adopting, and implementing emission control measures and standards for stationary sources of air pollution pursuant to delegated state and federal authority, for all projects located within their jurisdiction. Under the California CAA, the BAAQMD is required to develop an air quality plan to achieve and/or maintain compliance with federal and state nonattainment criteria pollutants within the air district's boundary.

Bay Area 2017 Clean Air Plan. BAAQMD adopted the Bay Area 2017 Clean Air Plan (CAP) on April 19, 2017 (BAAQMD 2017a). The 2017 CAP provides a regional strategy to protect public health and protect the climate. The 2017 CAP updates the most recent Bay Area ozone plan, the 2010 Clean Air Plan, pursuant to air quality planning requirements defined in the California Health & Safety Code. The 2017 CAP defines an integrated, multi-pollutant control strategy to reduce emissions of particulate matter, TACs, ozone and key ozone precursors, and greenhouse gases.

BAAQMD California Environmental Quality Act Guidelines. BAAQMD publishes California Environmental Quality Act (CEQA) guidelines to assist lead agencies in evaluating a project's potential impacts on air quality. The BAAQMD published the most recent version of its CEQA Guidelines in May 2017 (BAAQMD 2017b).

BAAQMD Regulation 2, Rule 2: New Source Review. This rule applies to all new or modified sources requiring an Authority to Construct and/or Permit to Operate. It requires the applicant to use the Best Available Control Technology (BACT) to control emissions if the source will have the potential to emit a

BAAQMD BACT pollutant in an amount of 10 or more pounds per day (lbs/day). Note that pollutant calculations only include those emissions from readiness testing and maintenance, as emissions from emergency operations are exempt from district permitting. Offsets are required at a 1:1 ratio if more than 10 tpy of nitrogen oxides (NO_X) or Precursor Organic Compounds (POC), or more than 100 tpy of PM2.5, PM10, or SO_2, are emitted. If the potential to emit for NOx or POC is 35 tons per year or more the offset ratio increases to 1.15:1 and offsets can no longer be obtained through the Small Facility Banking Account.

On June 3, 2019, the BAAQMD staff issued a new policy to protect the Small Facility Banking Account from over withdrawal by new emergency backup power generator sources. The policy provides procedures for calculating a facility's potential to emit (PTE) to determine eligibility for emission reduction credits (ERCs) from the Small Facility Banking Account for emergency backup power generators (BAAQMD 2019b, added to BAAQMD website on June 12, 2019). When determining the PTE for a facility with emergency backup power generators, the district shall include emissions resulting from emergency operation of 100 hours per year per standby generator, in addition to the permitted limits for readiness testing and maintenance (generally 50 hours/year or less per standby or backup engine). However, after comparing the PTE calculated to determine the account eligibility threshold, the applicant would only be required to use permitted emissions from readiness testing and maintenance and not the emissions from emergency operation to calculate the project PTE that would be offset from the regular district banking and offset procedures.

Emissions offsets represent ongoing emission reductions that continue every year, year after year, in perpetuity. BAAQMD uses offsets to counterbalance regular and predictable emissions, not emissions that would only occur infrequently when emergency conditions arise. The BAAQMD will not allow an owner/operator to accept a permit condition to limit emergency operation to less than 100 hours per year to reduce the source's PTE for purposes of qualifying for the Small Facility Banking Account. However, an owner/operator may reduce PTE for ERC mitigation purposes by accepting lower limits on readiness testing and maintenance or by installing an emissions control device (BAAQMD 2019b).

The project as proposed by the applicant, due to the new BAAQMD policy on PTE calculations, would not qualify for offsets from the BAAQMD's Small Facility Banking Account. The applicant has confirmed that they plan to purchase ERCs from the market to offset emissions from readiness testing and maintenance. The applicant's proposal seeks to limit readiness testing and maintenance to 50 hours per year per standby generator[4]. The applicant estimates annual NOx emissions of 35.9 tons per year which, after applying a 1.15:1 offset ratio, would require 41.3 tons of NOx ERCs from the District's emissions credit bank. Final details regarding the amount and the source of the NOx ERCs required for the project to comply with the offset requirements in BAAQMD's Regulation 2, Rule 2, under District policy, would be determined through the permitting process with the BAAQMD.

BAAQMD Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. This rule provides for the review of new and modified sources of TAC emissions to evaluate potential public exposure and health risk. Under this rule, a project would be denied an Authority to Construct if it exceeds any of the specified risk limits, which are consistent with BAAQMD's California Environmental Quality Act (CEQA) significance thresholds. Best Available Control Technology for Toxics (TBACT) would also be required for any new or

[4] The applicant's estimate of the expected readiness testing and maintenance events for each engine, including generation tests (monthly and annual), contingency readiness testing and maintenance totals 10 hours of engine use per year per engine (Sequoia 2019c, Data Response to Data Request 16). The monthly generation tests would require the engines to operate at 10 percent load for 30-minutes. Annual four (4) hour duration readiness testing and maintenance would require the engines to operate at 25 percent load for 45 minutes, 50 percent load for the next 45 minutes, 75% load for the next 45 minutes, and then 100 percent load, for 1 hour and 45 minutes.

modified source of TACs where the source has a cancer risk greater than 1.0 in 1 million or a chronic hazard index (HI) greater than 0.20. The specific toxicity values of each particular TAC, as identified by OEHHA, are listed in Table 2-5-1 of this rule for use in the HRA (BAAQMD 2017d).

BAAQMD Regulation 9, Rule 8: Nitrogen Oxides And Carbon Monoxide From Stationary Internal Combustion Engines. This rule limits NOx and CO emissions from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower, including the standby engines of the project. This regulation (Rule 9-8-231) defines emergency use as "the use of an emergency standby or low usage engine during any of the following: "

- In the event of unforeseeable loss of regular natural gas supply;
- In the event of unforeseeable failure of regular electric power supply;
- Mitigation or prevention of an imminent flood;
- Mitigation of or prevention of an imminent overflow of sewage or waste water;
- Fire or prevention of an imminent fire;
- Failure or imminent failure of a primary motor or source of power, but only for such time as needed to repair or replace the primary motor or source of power; or
- Prevention of the imminent release of hazardous material

Significance Criteria

This analysis is based upon the methodologies and related thresholds in the most recent BAAQMD CEQA Guidelines (BAAQMD 2017b). These methodologies include qualitative determinations and determination of whether project construction and readiness testing and maintenance would exceed numeric emissions and health risk thresholds. "A threshold of significance is "an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant" (CEQA Guidelines §15064.7). ... While thresholds of significance give rise to a presumption of insignificance, thresholds are not conclusive, … [T]hresholds of significance must be supported by substantial evidence." (BAAQMD 2017b).

BAAQMD project-level thresholds of significance for directly-emitted non-attainment criteria pollutants and non-attainment precursor criteria pollutant emissions and TAC emissions health risks that apply during construction and operation are shown in **Table 5.3-4**. 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.

For construction period fugitive dust emissions, BAAQMD does not have a significance threshold. Rather, the BAAQMD recommends using a current Best Management Practices (BMPs) approach, which has been a pragmatic and effective approach to the control of fugitive dust emissions.

Significance criteria also include Significant Impact Levels (SILs) for the particulate matter portions of the analysis. SILs from the South Coast Air Quality Management District are used rather than the BAAQMD because BAAQMD does not use such criteria. Regulatory agencies have traditionally applied SILs as a *de minimis* value, which represents the offsite concentration predicted to result from a source's emissions that does not warrant additional analysis or mitigation. If a source's modeled impact at any offsite

location does not exceed the relevant SIL, the source owner would typically not need to assess multi-source or cumulative air quality analysis to determine whether or not that source's emissions would cause or contribute to a violation of the relevant NAAQS or CAAQS.

TABLE 5.3-4 BAAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction	Operation	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NOx	54	54	10
PM10	82 (exhaust)	82	15
PM2.5	54 (exhaust)	54	10
PM10/ PM2.5 (fugitive dust)	Best Management Practices	None	
Risk and Hazards for New Sources and Receptors (Individual Project)	Same as Operation Threshold	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM2.5 increase: > 0.3 µg/m^3 annual average Zone of Influence: 1,000-foot radius from property line of source or receptor	
Risk and Hazards for New Sources and Receptors (Cumulative Threshold)	Same as Operation Threshold	Compliance with Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: > 10.0 Hazard Index (from all local sources) (Chronic) PM2.5: > 0.8 µg/m^3 annual average (from all local sources) Zone of Influence: 1,000-foot radius from property line of source or receptor	

Source: BAAQMD 2017b

In addition to the BAAQMD thresholds provided above, staff considers a project's potential to expose sensitive receptors to substantive exposures to all criteria pollutants.[5] The AAQS are health protective values, so staff uses these health-based regulatory standards to help define what is considered a substantive exposure. The BAAQMD thresholds of significance are an important aspect of staff's air quality analysis for SBGF. Therefore, staff's analysis determines whether the project would be likely to exceed any ambient air quality standard or contribute substantially to an existing or projected air quality violation, and if necessary, proposes mitigation to reduce or eliminate these pollutant exceedances or substantial contributions. To determine if the project could contribute to or create a substantial pollutant concentration for the nonattainment pollutant PM10, the US EPA PM10 Significant Impact Levels (SILs) for 24-hour impacts (5 µg/m^3) and for annual impacts (1 µg/m^3) have been used.[6] Additionally, as shown above in **Table 5.3-4**, the BAAQMD significance threshold for a project-level annual ambient PM2.5 increase (0.3 µg/m^3), along with the potential to cause a new exceedance of an AAQS, are both used to determine project significance for PM2.5.

[5] This approach provides a complete analysis that describes the foreseeable effects of the project in relation to all potential air quality related health impacts, including impacts of criteria pollutants to sensitive receptors; and therefore addresses the California Supreme Court December 2018 Sierra Club v. County of Fresno opinion (https://www.courts.ca.gov/opinions/archive/S219783A.PDF).

[6] BAAQMD does not have localized impact significance criteria for PM10, or 24-hour localized impact significance criteria for PM2.5. Comparable significance criteria, for an area with greater levels of particulate pollution, would be the SCAQMD project operation localized significant concentration threshold bases for PM10 (24-hour = 2.5 µg/m^3, and annual = 1.0 µg/m^3) and PM 2.5 (24-hour = 2.5 µg/m^3).

For a health risk evaluation, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Therefore, there are two kinds of thresholds for TACs. Cancer risk is expressed as excess cancer cases per 1 million exposed individuals, typically over a lifetime of exposure. Acute and chronic exposure to non-carcinogens is expressed as a hazard index (HI), which is the ratio of expected exposure levels to acceptable reference exposure levels (REL) for each of the TACs with acute and chronic health effects (BAAQMD 2017b). The significance thresholds for TACs and PM2.5 applied to the licensing or permitting of a new source are listed in **Table 5.3-4** and summarized in the following text (BAAQMD 2017b).

The BAAQMD significance thresholds for a single source of TAC emissions are as follows:

- An excess lifetime cancer risk level of more than 10 in 1 million
- A non-cancer chronic HI greater than 1.0
- A non-cancer acute HI greater than 1.0
- An incremental increase in the annual average PM2.5 concentration of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$)

The BAAQMD significance thresholds for cumulative TAC impacts are also summarized below. A project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot distance from the fence line of a source and the contribution from the project, exceeds the following:

- An excess lifetime cancer risk level of more than 100 in 1 million
- A non-cancer chronic HI greater than 10.0
- An annual average PM2.5 concentration of greater than 0.8 $\mu g/m^3$

5.3.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Measures: The applicant proposes to implement the following project design measures (termed Applicant Proposed Measures, or APMs, in this analysis) as part of the project to reduce potential construction and operation impacts related to Air Quality (Sequoia 2019e).[7] **APM AQ-1** applies during construction and **APM AQ-2** applies during operation. The BAAQMD's CEQA Guidelines consider fugitive dust impacts to be less than significant through the application of best management practices (BMPs). To assure fugitive dust impacts are less than significant, the applicant proposes to incorporate the BAAQMD's recommended "basic construction mitigation measures" (aka BMPs), that also include some on-road vehicle/off-road equipment engine emissions reduction measures, as project design features.

APM AQ-1:

- All exposed surfaces (for example, 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.

[7] The BMPs listed in the SPPE Application Project Description do not exactly match those presented in the BAAQMD BMPs verbatim, but generally include the actions listed in the BAAQMD BMPs.

- 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 surfaces shall be limited to 15 miles per hour.
- 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 Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling [Title 13, Section 2485, 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.
- A publicly visible sign shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

APM AQ-2:

- The project owner commits to standard operating procedures that will limit operation for maintenance and testing to one generator at a time. It is project owner's experience that maintenance and testing of each engine rarely exceeds 10 hours annually. [SBGF only]

These project design measures outlined above have been determined by staff to be sufficient, and would reduce Air Quality emissions even further than construction period emissions levels that were analyzed by staff. Energy Commission staff does not recommend any additional Air Quality mitigation measures for construction or operation.

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Construction, and Readiness Testing and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project site is within the BAAQMD's jurisdiction, which is the agency primarily responsible for assuring that federal and state ambient air quality standards are met and maintained in the SFBAAB. The BAAQMD has permit authority over stationary sources, acts as the primary reviewing agency for environmental documents, and develops regulations that must be consistent with or more stringent than federal and state air quality laws and regulations. The applicable air quality plan (AQP) is the Bay Area 2017 CAP.

A project is considered to be consistent with the AQP if that project (BAAQMD 2017b, page 9-2):

1. Supports the primary goals of the AQP.

   The determination for this criterion, per BAAQMD, can be met through consistency with the District-approved CEQA thresholds of significance. As can be seen in the impact analysis discussions under checklist questions (b) and (c) below, the project would have less than significant impacts related to the District-approved CEQA thresholds. Therefore, the project would have a less than significant impact related to the primary goals of the AQP.

2. Includes applicable control measures from the AQP.

   The project would include the implementation of applicable control measures from the AQP. These project level applicable control measures include Green Buildings (BL1), Urban Heat Island Mitigation (BL4), and Trip Reduction Programs (TR2) through Rule 14-1 compliance.

3. Does not disrupt or hinder implementation of any AQP control measures.

   Examples of disrupting or hindering implementation of an AQP would be proposing excessive parking or precluding the extension of public transit or bike paths. The project design as proposed is not known to hinder the implementation of any AQP control measure.

Therefore, given that the project would not exceed CEQA thresholds of significance, as discussed below under checklist question (b) and ambient air quality standards under checklist question (c), the project would be consistent with the AQP and would have less than significant impacts.

Proposed Mitigation Measures: None.

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

This section focuses on whether the project's non-attainment criteria pollutant emissions exceed any of the BAAQMD construction or operation emissions significance thresholds for criteria pollutants. TAC effects are not included because they are not criteria pollutants.

Construction

LESS THAN SIGNIFICANT IMPACT. The City of Santa Clara issued a demolition permit to the project owner on February 7, 2019 and at the time of the filing of this SPPE, demolition activities have been completed except for demolition of the foundations, asphalt, and underground utilities of the former cogeneration facility, which is expected to take approximately 20 days. Construction of the SDC and SBGF is expected to take approximately 18 months (Sequoia 2019a, page 4.3-12). Emissions would occur during the 18-month construction period due to construction equipment, material movement, paving activities, and onsite and offsite vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles.

On December 16, 2019, the applicant filed Data Responses Set 3. The data responses included a detailed description of the recently-added construction activity associated with grading the newly-proposed underground fuel storage basin. The applicant stated, "the fuel tanks will be located in a recessed concrete pit with the top of the tank matching adjacent grade. The top of the tank will be covered by the generator and enclosure integral to the generator system. Each tank will be independent of each other and dedicated to a single generator" (Sequoia 2019f).

The applicant estimated the emissions for the construction period using diesel-fueled equipment emission factors, horsepower, load factors, and paving emission factors from the California Emissions Estimator Model[8] (CalEEMod) User's Guide (CAPCOA 2017); and onsite and offsite vehicle exhaust

[8] CalEEMod was developed by the California Air Pollution Control Officers Association in collaboration with California Air Districts. This model is a construction and emissions estimating computer model that estimates direct criteria pollutant and direct and indirect greenhouse gas

and idling emission factors from EMFAC2014 (the most recent US EPA approved version). The applicant derived the fugitive dust emission factors for truck dumping/loading, grading, construction waste generation, and construction waste loading activities using methodology from the CalEEMod User's Guide (CAPCOA 2017). The applicant derived the fugitive dust emission factors for vehicle travel on paved and unpaved roads using methodology from AP-42 (US EPA 2011a and US EPA 2006, respectively). **Table 5.3-5** shows the applicant estimated criteria pollutant emissions during the project's construction period.

The average daily construction emissions shown in **Table 5.3-5** are based on the total project emissions averaged over the entire construction duration. Excluding fugitive dusts, these average daily construction emissions are compared to the BAAQMD's significance thresholds for construction-related average daily emissions. For fugitive dust, construction emissions are not considered significant if the project uses BMPs. The BAAQMD's significance thresholds for PM10 and PM2.5 emissions apply to exhaust emissions only. However, the applicant conservatively included both exhaust and fugitive dust emissions to compare with the BAAQMD's significance thresholds for PM10 and PM2.5 exhaust emissions.

TABLE 5.3-5 CRITERIA POLLUTANT EMISSIONS FROM PROJECT CONSTRUCTION

Pollutant	Average Daily Emissions (lbs/day) [a]	Maximum Project Emissions (tons)	BAAQMD Significance Thresholds for Construction-related Average Daily Emissions (lbs/day)	Threshold Exceeded?
ROG	16.3	4.3	54	No
CO	18.8	5.3	None	N/A
NOx	23.8	6.3	54	No
SOx	0.06	0.015	None	N/A
PM10 [b]	3.4	0.23	82	No
PM2.5 [b]	1.7	0.22	54	No

Notes:
[a] The BAAQMD's thresholds are average daily thresholds. Accordingly, the results reported are the total project emissions averaged over the entire construction duration of 559 days. See **Table 5.3-4** for BAAQMD significance thresholds.
[b] The PM emissions estimates conservatively include both exhaust and fugitive dust emissions, even though the BAAQMD's thresholds are specific to exhaust emissions only. Fugitive emissions are from Data Responses Set 1, Data Response 9.
Source: Sequoia 2019a, Sequoia 2019c, Sequoia 2019f.

Table 5.3-5 shows that the average daily construction emissions would be lower than the thresholds of significance from the BAAQMD May 2017 CEQA Guidelines. There is no numerical threshold for fugitive dust generated during construction in BAAQMD. BAAQMD considers fugitive dust emissions to be significant without BMPs. Consequently, dust emissions generated by project construction activities would be potentially significant. The BAAQMD May 2017 CEQA Guidelines require control of fugitive dust through BMPs in order to conclude that impacts from fugitive dust emissions are less than significant. As mentioned under **Applicant Proposed Measures** in the beginning of **Section 5.3.2**, the applicant proposes to incorporate the BAAQMD's recommended construction BMPs as a project design feature. The project would not conflict with or obstruct implementation of the applicable air quality plan and impacts would be less than significant with the implementation of the **APM AQ-1** during construction.

emissions for a variety of land use projects. The model calculates maximum daily and annual emissions. The model also identifies mitigation measures to reduce criteria pollutant and GHG emissions along with calculating the benefits achieved from measures.

Readiness Testing and Maintenance

LESS THAN SIGNIFICANT IMPACT. Emissions would occur during readiness testing and maintenance as a result of diesel fuel combustion from the SBGF's standby diesel generator engines, offsite vehicle trips for worker commutes and material deliveries, and facility upkeep, such as architectural coatings, consumer product use, landscaping, water use, waste generation, natural gas use for comfort heating, and electricity use (Sequoia 2019a, page 4.3-14). Each of these types of emission sources is described in more detail below.

Stationary Sources. The project would include fifty-four (54) standby diesel fueled engine generators (standby generators) with a nominal output of 3,017 horsepower at full load for a maximum generating capacity of 2.25 megawatts (MW) and a continuous steady-state, output capacity of 1.91 MW.[9] These generators would be made by MTU[10] Friedrichshafen. They would comply with US EPA Tier 2 emission standards and include a Johnson Matthey CRT® Diesel Particulate Filter (DPF) System that controls engine exhaust particulate matter by at least 85 percent. All standby generators would be tested routinely for readiness to ensure they would function during an emergency. During readiness testing and maintenance, criteria pollutants and TACs would be emitted directly from the engines. In Data Responses Set 1, the applicant stated multiple generator engines would not run simultaneously during monthly or annual readiness testing and maintenance events (Sequoia 2019c). Subsequently, the applicant docketed Project Design Measures stipulating that operation for readiness testing and maintenance be limited to one generator at a time (**APM AQ-2**) (Sequoia 2019e). The applicant has estimated the total hours of readiness testing and maintenance would be around ten hours annually, but they are pursuing a permit for up to 50 hours per year. Each standby generator would be tested four hours once per year, and 30-minutes once per month (Sequoia 2019c). Emissions that could occur in the event of an outage that triggers emergency operations would not occur on a regular or predictable basis and are not included in the determination of whether the project would result in a cumulatively considerable net increase of criteria air pollutants, but are analyzed qualitatively further below (BAAQMD 2019b).

Mobile Sources. Approximately 25 employees and 24-hour on-site security personnel would be at the project site on a daily basis. There would be an average of 695 total daily vehicle trips, including vendor and employee trips, which would result in mobile source criteria pollutant emissions. The applicant estimated these emissions using vehicle exhaust and idling emission factors from CalEEMOD.

Area and Energy Sources. The project would result in area and energy source criteria pollutant emissions associated with facility upkeep (that is, readiness testing and maintenance). Area sources include landscaping activities, consumer product use, and periodic painting emissions. Energy sources include natural gas combustion for space heating, from sources assumed exempt from BAAQMD

[9] Steady state continuous generating capacity is 85 percent of the peak generating capacity. (Sequoia 2019a, section 1.2.1, page 1-4 and Sequoia 2019b, Appendix C).

[10] "Motor (Engine) and Turbine Union", MTU Friedrichshafen remained a subsidiary of DaimlerChrysler until 2006 when it was sold off to the EQT IV private equity fund, becoming a part of the Tognum Corporation. Rolls-Royce Holdings and Daimler AG acquired Tognum in 2011. In 2014, Tognum was renamed Rolls-Royce Power Systems, having become a 100 per cent subsidiary of Rolls-Royce Holdings (Google, for MTU engines, 10/1/19).

permitting.[11] The applicant estimated the facility upkeep emissions using the CalEEMod (version 2016.3.2), based on the square footage of the buildings to be constructed and paved areas.

Table 5.3-6 provides the annual criteria pollutant emission estimates for project readiness testing and maintenance using the emissions source assumptions noted above. **Table 5.3-6** shows that with NOx emissions from the readiness testing and maintenance of the standby generators fully offset through the permitting process with the BAAQMD, the project would not exceed any of the BAAQMD emissions significance thresholds. The BAAQMD CEQA Guidelines state that if the project's daily average or annual emissions of operational-related criteria air pollutants or precursors do not exceed any applicable Threshold of Significance listed in **Table 5.3-4**, the proposed project would not result in a cumulatively significant impact (BAAQMD 2017b). The BAAQMD significance thresholds for daily emissions are daily average values that scale to equal the annual thresholds. Therefore, a separate comparison of the project's average daily emissions versus the BAAQMD average daily significance thresholds is unnecessary.

TABLE 5.3-6 ANNUAL CRITERIA POLLUTANT EMISSIONS FROM PROJECT TESTING AND MAINTENANCE

	Annual Emissions (tpy)					
Source Type	**ROG**	**CO**	**NOx**	**SO_2**	**PM10**	**PM2.5**
Mobile Sources	0.14	1.8	0.63	0.003	0.58	0.16
Facility Upkeep (Area and Energy Sources)	3.2	0.76	0.9	0.01	0.07	0.07
Standby Generators (Testing Only)	0.54	6.4	35.96	0.03	0.16	0.16
Proposed Offsets at 1:15 to 1	--	--	(-41.35)	--	--	--
Net Project Emissions	3.9	8.9	- 5.39	0.04	0.81	0.39
BAAQMD Annual Significance Thresholds	10	--	10	--	15	10
Mitigated Emissions Exceed BAAQMD Threshold? (Y/N)	No	N/A	No	N/A	No	No

Sources: Sequoia 2019b

Table 5.3-6 shows that the project would not be expected to result in a cumulatively considerable net increase of criteria pollutants during the lifetime of the project, including readiness testing and maintenance of the standby generators. The project would provide offsets for the NOx emissions that are generated during the assumed 50 hours of readiness testing and maintenance to be requested during the BAAQMD permitting process. Per District policy and at the BAAQMD's Regulation 2, Rule 2 offset ratio of 1:15 to 1, the project must provide 41.3 tpy of NOx offsets. The NOx emissions of the emergency generators during readiness testing and maintenance would be fully offset through the permitting process with the BAAQMD. Therefore, the SBGF readiness testing and maintenance would not result in a cumulatively considerable net increase of any criteria pollutant, and these impacts would be less than significant.

Required Mitigation Measures: None.

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

This impact analysis considers the potential for exposure to substantial pollutant concentrations for both criteria pollutants, in Air Quality Impact Analyses (AQIA), and toxic air contaminants, in Health

[11] Note that CalEEMod does not calculate criteria pollutant emissions associated with electricity consumption, because that is considered an indirect source of emissions that occurs at an unknown location. Accordingly, the energy source criteria pollutant emissions only include emissions from the estimated amount of on-site natural gas combustion necessary for comfort heating (air and water). Similarly, criteria pollutant emissions associated with waste generation and water use would be tied to electricity consumption and are not included in this analysis.

Risk Assessments (HRA). This section discusses criteria pollutant impacts from construction and readiness testing and maintenance. Then the section discusses health risk assessments for these two topics. Finally, the section discusses issues associated with potential emergency operations.

Criteria Pollutant Air Quality Impact Analysis

Staff considers new AAQS exceedances and substantial contributions to any existing AAQS exceedance caused by project emissions to be substantial evidence of potentially significant impacts that would require the evaluation of potential mitigation measures.

Construction Air Quality Impact Assessment (AQIA)

LESS THAN SIGNIFICANT IMPACT. As shown in **Table 5.3-5** under checklist question (b) above, the exhaust emissions during construction of the project would not exceed significance thresholds for construction activities established in the BAAQMD CEQA Guidelines. There is no numerical threshold for fugitive dust generated during construction in the BAAQMD Guidelines. Instead, the guidance calls for use of BMPs to reduce fugitive dust emissions to consider impacts from fugitive dust emissions less than significant. Without these BMPs, the impact from fugitive dust emissions would be considered significant. The applicant stated it would incorporate measures into the project design that are consistent with the BAAQMD recommended BMPs to reduce fugitive dust emissions. The applicant-proposed measures would avoid the potential for generating substantial pollutant concentrations due to fugitive dust. With these measures in place, impacts of criteria pollutant emissions during the construction period would be less than significant.

In response to staff data requests, the applicant provided the modeled ambient air quality concentrations caused by the construction emissions (Sequoia 2019f). The applicant found the maximum combustion-related concentrations to be approximately 0.058 µg/m^3 for the annual-average PM2.5 impact. These modeled results are shown in **Table 5.3-7**.

TABLE 5.3-7 SEQUOIA MAXIMUM IMPACTS DURING CONSTRUCTION (µg/m^3)

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10	24-hour	0.49	**69.8**	**70.3**	**50**	**141%**
	Annual	0.06	**21.9**	**22.0**	**20**	**110%**
PM2.5	24-hour	0.31	31.0	31.3	35	89%
	Annual	0.06	10.6	10.7	12	89%
CO	1-hour	51	2,748	2,799	23,000	12%
	8-hour	23	2,061	2,084	10,000	21%
NO_2	State 1-hour	114	128	242	339	71%
	Federal 1-hour	---	---	171	188	91%
	Annual	---	---	28	57	49%
SO_2	State 1-hour	0.267	9.4	9.7	655	1%
	Federal 1-hour	0.254	6.1	6.4	196	3%
	24-hour	0.051	2.9	3.0	105	3%

Notes:
Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
The federal 24-hour PM2.5 background of 31.0 µg/m^3 is based on 98th percentile averaged over 3 years of recent data (2015-2017) excluding 2018.
Source: Response to Data Request 111 (Sequoia 2019f).

The results provided in **Table 5.3-7** are the maximum impacts determined at any point at the project fence line or beyond. The maximum impacts for sensitive receptors would be lower than these maximum values. **Table 5.3-7** shows the maximum modeled impacts during the construction period, and the impacts of criteria pollutant emissions during the construction period would be less than significant.

Readiness Testing and Maintenance AQIA

LESS THAN SIGNIFICANT IMPACT. The applicant provided an ambient air quality impact analysis to compare worst-case ground-level impacts resulting from the project's readiness testing and maintenance with established state and federal ambient air quality standards. The applicant used the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD [Version 18081]) with regulatory default options, as recommended in US EPA's *Guideline on Air Quality Models* (US EPA 2017).

The applicant's modeling analysis, described in more detail below, included the standby generator engines emissions source, but did not include other on-site emissions sources, such as natural gas combustion emissions for space heating. The applicant's modeling analysis included an impacts analysis for readiness testing and maintenance.

Meteorological Data. The applicant used a 5-year (2013-2017) record of hourly meteorological data by the BAAQMD (Sequoia 2019f). The meteorological data were collected at the San Jose International Airport surface station, which is located approximately 3 km (1.9 miles) from the eastern edge of the proposed site and best represents atmospheric conditions at the site. The concurrent daily upper air sounding data from the Oakland International Airport station were also included. The BAAQMD preprocessed the data with AERMET (Version 18081) for direct use in AERMOD (Sequoia 2019f).

Refined Analysis for 1-Hour NO_2 standards. For comparison to the 1-hour NO_2 NAAQS and CAAQS, the applicant's modeling followed a third-tier approach using the Plume Molar Volume Molar Ratio Method (PVMRM), as described in US EPA's *Guideline on Air Quality Models* (US EPA 2017). For the applicant's PVMRM modeling analysis, the applicant selected an in-stack NO_2/NOx ratio (ISR) of 0.1, which is a typical ratio for diesel-fired internal combustion engines.

The applicant's use of PVMRM uses historic monitored ozone data for every hour of the 5-year record (2013-2017) as one set of inputs and the seasonal hourly (SEASHR) background data for NO_2 to add together to predict the total NO_2 impacts. For seasonal NO_2 trends, the applicant used NO_2 data from the monitoring station at 158 Jackson Street in San Jose, California from the 5-year period of January 2013 to December 2017. The applicant computed the 5-year average of third-highest value for the season and hour-of-day entry to arrive at 24 hourly background NO_2 values for each season (Sequoia 2019b).

The applicant's presentation of 1-hour NO_2 CAAQS results (Sequoia 2019f, Table DR 118) does not include the background NO_2 concentrations and only presents the project's incremental daily maximum 1-hour concentrations from AERMOD averaged over five years. To properly compute NO_2 impacts, staff conducted an additional refined analysis using the AERMOD control setting of "POLLUTID NO2 H1H" to arrive at the single highest 1-hour NO_2 result with background to obtain the correct result for comparison against the CAAQS.

For both 1-hour NO_2 NAAQS and CAAQS analyses, the applicant assumed only one generator would operate at a time for testing and maintenance purposes.

Modeling Assumptions for Readiness Testing Maintenance

The Project Description indicates that the 54 standby engine generator sets would be installed along two sides of the facility with the generators on the western side of the facility having a stack height of 11.81 meters above ground and the generators along the southern side of the facility having a stack height of 7.54 meters above ground (Sequoia 2019b). None of the engine exhaust stacks would have horizontal releases or rain caps (Sequoia 2019c).

All the proposed engines were modeled in a screening analysis for loads from 25% to 100% load, with a source group for each individual engine (only one engine would be tested at any one time). This means that the worst-case impact during readiness testing and maintenance would be due to a single generator in use because only a single generator would operate at a given time for readiness testing (Sequoia 2019b).

Table 5.3-8 shows that the impacts from the standby generator engine testing during readiness testing and maintenance would not cause exceedances of the PM2.5, CO, NO_2, or SO_2 standards. **Table 5.3-8** also shows that the existing 24-hour and annual PM10 background concentrations are already above the CAAQS. The project could therefore contribute to existing exceedances of the 24-hour and annual PM10 CAAQS. However, the modeled PM10 and PM2.5 concentrations from project engine testing are below the PM10 SILs of 5 µg/m^3 for 24-hour impacts and 1 µg/m^3 for annual impacts, and the BAAQMD threshold for annual-average PM2.5 of 0.3 ug/m^3, for risk and hazards. Therefore, SBGF would not significantly impact existing exceedances of PM10 or PM2.5 CAAQS.

TABLE 5.3-8 SEQUOIA MAXIMUM IMPACTS DURING READINESS TESTING AND MAINTENANCE-TESTING ONLY (µg/m^3)

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM10	24-hour	0.76	**69.8**	**70.6**	**50**	**141%**
	Annual	0.05	**21.9**	**22.0**	**20**	**110%**
PM2.5	24-hour	0.58	31.0	31.6	35	90%
	Annual	0.05	10.6	10.7	12	89%
CO	1-hour	3,053	2,748	5,801	23,000	25%
	8-hour	1,967	2,061	4,028	10,000	40%
NO_2	State 1-hour [a]	---	---	333	339	98%
	Federal 1-hour [b]	---	---	187	188	99%
	Annual	13.2	24.1	37.3	57	65%
SO_2	State 1-hour	0.21	9.4	9.6	655	1%
	Federal 1-hour	0.19	6.1	6.3	196	3%
	24-hour	0.08	2.9	3.0	105	3%

Notes:
Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.
Results are the worst-case impact of a single generator in use because only a single generator would operate at a given time for testing and maintenance.
The federal 24-hour PM2.5 background of 31.0 µg/m^3 is based on 98th percentile averaged over 3 years of recent data (2015-2017) excluding 2018.
[a] For CAAQS 1-hour NO_2 impacts, this is the project impact and seasonal hour of day background for source "C1SWEG01" at a 75% load; staff reports the highest 1-hour NO_2 modeled result (on 5/12/2017).

[b] For NAAQS 1-hour NO_2 impacts, this is the project impact and seasonal hour of day background for source "C1WEG019" at a 100% load; applicant reports the maximum 8th-highest daily 1-hour result as averaged over five years to relate to the yearly 98th percentile (Sequoia 2019c).
Source: Staff analysis for CAAQS 1-hour NO_2; Response to Data Request 27 (Sequoia 2019c)

The results provided in **Table 5.3-8** are the maximum impacts determined at any point at the project fence line or beyond. The maximum impacts for sensitive receptors would be lower than these maximum values. The criteria pollutant concentrations in **Table 5.3-8** show that impacts during readiness testing and maintenance would be less than significant.

Localized CO Impacts

Continuous engine exhaust may elevate localized CO concentrations, resulting in "hot spots". Receptors exposed to these CO hot spots may have a greater likelihood of developing adverse health effects. CO hot spots are typically observed at heavily congested intersections where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. BAAQMD screening guidance indicates that a project would not exceed the CO significance threshold if a project's traffic projections indicate traffic levels would not increase at any affected intersection to more than 44,000 vehicles per hour or at any affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited.

Operation of the proposed project would generate a small number of vehicle trips to the site. These trips include workers, material, and equipment deliveries. It is unlikely that the addition of vehicle trips from the project on any roadway in the vicinity of the project site would result in an exceedance of the BAAQMD screening threshold. As a result, the additional vehicle trips associated with the project would result in a negligible effect on CO concentrations in the vicinity of the project site.

Table 5.3-8 shows that the CO impacts from the standby generators during readiness testing and maintenance would be well below the limiting standards for the 1-hour and 8-hour average CO concentrations.

Required Mitigation Measures: None.

Health Risk Assessment

Staff conducted a Health Risk Assessment (HRA) for the project that separated the long-term health impacts (cancer and chronic health risks) of construction and that of the standby generator readiness testing and maintenance.

Construction HRA

LESS THAN SIGNIFICANT IMPACT. The construction period for the SDC and SBGF would be approximately 18 months (Sequoia 2019a, page 4.3-12). Construction emissions are a result of construction equipment, material movement, paving activities, and onsite and offsite vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles (Sequoia 2019a, page 4.3-12). TACs considered in evaluating the health impacts of SDC and SBGF are those included in BAAQMD Regulation 2, Rule 5. The TACs evaluated in the construction HRA were diesel particulate matter (DPM), PM2.5, and speciated total organic gases (TOG) from gasoline vehicles (exhaust and evaporation) (Sequoia 2019c, page 2/7). DPM emissions were assumed equal to exhaust PM10 emissions (Sequoia 2019a, Table 4.3-9). The TACs from speciated TOG include (Sequoia 2019a, page 4.3-26):

- 1,3-butadiene
- Acetaldehyde
- Benzene
- Formaldehyde
- Methanol
- Methyl ethyl ketone (MEK)
- Styrene
- Toluene
- Xylene

Cancer and non-cancer chronic risks were modeled based on annual DPM emissions. DPM does not have an acute REL. Therefore, non-cancer acute risks were modeled based on 1-hour speciated TOG emissions (Sequoia 2019a, page 4.3-27).

Applicant's Construction HRA

A screening HRA was conducted to evaluate the potential health risks due to construction of the SDC and SBGF. The TAC emissions associated with the project construction were calculated with the following assumptions and exceptions (Sequoia 2019c, page 2/7):

1. Diesel Particulate Matter (DPM): DPM emissions were used to evaluate the cancer risk and noncancer chronic HI from project construction. In applicant's analysis, only onsite (i.e., construction equipment) Particulate Matter less than or equal to 10 microns (PM10) exhaust emissions were calculated as DPM and modeled within the project boundary. All off-road construction equipment was assumed to be default Tiers as specified in California Emission Estimator Model version 2016.3.2 (CalEEMod®).
2. PM2.5: Exhaust Particulate Matter less than or equal to 2.5 microns (PM2.5) emissions were used to evaluate the PM2.5 concentration due to the project construction. PM2.5 emissions include exhaust emissions from construction equipment and fugitive emissions.
3. TOG: Speciated (total organic gases) TOG emissions from gasoline vehicles (exhaust and evaporation) were used to evaluate non-cancer acute HI from project construction. These include emissions from gasoline truck trips and construction equipment. TOG emitted from gasoline vehicle exhaust and evaporative losses are composed of a number of toxic components such as benzene, naphthalene and acetaldehyde. Unlike DPM, no surrogate method is currently approved to estimate health impacts from TOG as a whole. Thus, TOG impacts must be calculated using a component based method. Total TOG emissions from construction equipment are split into individual toxic components using CARB's diesel off-road exhaust profile.

As shown in **Table 5.3-9**, the maximum cancer risk from construction activities is seen in worker receptors (Point of Maximum Impact/Maximally Exposed Individual Worker or PMI/MEIW) and is calculated to be 0.22 in 1 million, compared to a threshold of 10 in 1 million. Construction activities would also result in a non-cancer acute hazard index of 0.0118 and non-cancer chronic hazard index of 0.0115 (compared to a significance threshold of 1.0), and maximum PM2.5 concentration of 0.06 micrograms per cubic meter (µg/m3) (compared to a significance threshold of 0.3 µg/m3). These results are all below the BAAQMD thresholds of significance.

As mentioned above, in addition to residents, it was determined that sensitive receptors include nearby daycare centers and an indoor soccer field. The maximum risks (the incremental cancer risk and chronic and acute HI) were also calculated in these three locations: Maximally Exposed Individual Resident (MEIR), Maximally Exposed Soccer Child Receptor (MESCR) and Maximally Exposed Childcare Receptor (MECR).The results of the HRA for construction activities in **Table 5.3-9** show that the excess cancer risks, chronic HIs, acute HIs and maximum PM2.5 concentration at the residential receptor (MEIR) and two other sensitive receptors (MESCR and MECR) are all less than BAAQMD's significance thresholds of 10 in 1 million and 1 in 1 million, respectively.

TABLE 5.3-9 CONSTRUCTION -- MODELED RECEPTOR MAXIMUM HEALTH RISK

Receptor Type	Cancer Risk Impact (in one million)	Chronic Non-Cancer Hazard Index (HI)	Acute Non-Cancer Hazard Index (HI)	Max PM2.5 Concentration (µg/m^3)
Residential (MEIR[1])	0.1	9.08E-05	8.84E-05	4.2E-04
Soccer Child (MESCR[2])	0.1	1.19E-04	1.16E-04	5.6E-04
Childcare (MECR[3])	0.1	4.66E-05	4.54E-05	2.2E-04
PMI[4]/MEIW[5]	0.22	1.18E-02	1.15E-02	0.06
BAAQMD Threshold	10	1	1	0.3

Source: Sequoia 2019c, page 22 and Table 6

Notes:

1 Maximally Exposed Individual Resident (MEIR). This residential receptor is located to the southwest of the site at a distance of approximately 1724.38 ft. (0.327 miles).

2 Maximally Exposed Soccer Child Receptor (MESCR)

3 Maximally Exposed Childcare Receptor (MECR)

4 Point of maximum impact (PMI). It is located at the southeast corner of the project boundary.

5 Maximally Exposed Individual Worker (MEIW)

Readiness Testing and Maintenance HRA

LESS THAN SIGNIFICANT IMPACT. Project operation would include TAC emissions from the readiness testing and maintenance of 54 backup generators, all of which are fired exclusively on diesel fuel. All 54 backup generators were assumed to operate for 50 hours per year (Sequoia 2019a, page 4.3-27) for purposes of evaluating TAC impacts. The specific TACs evaluated in the project HRA were diesel particulate matter (DPM) and speciated total organic gases (TOG) in diesel exhaust. DPM emissions were assumed equal to exhaust PM10 emissions (Sequoia 2019a, Table 4.3-9). The TACs from speciated TOG include (Sequoia 2019a, page 4.3-26):

- 1,3-butadiene
- Acetaldehyde
- Benzene
- Formaldehyde
- Methanol
- Methyl ethyl ketone (MEK)
- Styrene
- Toluene
- Xylene

As mentioned above, cancer and non-cancer chronic risks were modeled based on annual DPM emissions. DPM does not have an acute REL. Therefore, non-cancer acute risks were modeled based on 1-hour speciated TOG emissions (Sequoia 2019a, page 4.3-27).

Applicant's Readiness Testing and Maintenance HRA

Applicant's HRA was conducted in accordance with the following guidance:

- Air Toxic Hot Spots Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2015),
- BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines (BAAQMD 2016), and
- Guideline on Air Quality Models (EPA 2017).

The HRA included potential health impacts from TAC exposure on receptors through the inhalation, dermal absorption, soil ingestion, and mother's milk pathways, as required by OEHHA Guidance. The inhalation cancer potency, oral slope factor values, and RELs used to characterize health risks associated with the modeled impacts were obtained from the Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values (OEHHA 2018). The pathways for surface drinking water, still-water fishing, and subsistence farming are not applicable per regulatory guidance and thus were not included in the assessment. Residential exposure through the consumption of homegrown produce, including pork, chicken, and eggs, were included. OEHHA default exposures were assumed for the mother's milk, homegrown produce, and soil exposure pathways (Sequoia 2019a, page 4.3-24).

Cancer risk was evaluated based on the annual TAC ground-level concentrations, as calculated from AERMOD and the 2015 OEHHA assumptions for inhalation cancer potency, oral slope factor, frequency, and breathing rate of exposed persons (OEHHA 2015) (Sequoia 2019a, page 4.3-25). Chronic toxicity is defined as adverse health effects from prolonged chemical exposure caused by chemicals accumulating in the body. To assess chronic non-cancer exposures from project, annual TAC ground-level concentrations were compared with the RELs developed by OEHHA to obtain a chronic HI. The REL is a concentration in ambient air at, or below which, no adverse health effects are anticipated. Non-cancer chronic health risks were calculated as a hazard quotient, which is the calculated exposure of each contaminant divided by its REL. Hazard quotients for pollutants affecting the same target organ are summed with the resulting totals expressed as HIs for each organ system (Sequoia 2019a, page 4.3-25). Acute toxicity is defined as adverse health effects caused by a brief chemical exposure of no more than 24 hours. To assess acute non-cancer exposures from the project, 1-hour TAC ground-level concentrations were compared with the acute REL to obtain an acute HI. Similar to assessing chronic non-cancer health risks, acute health risks were calculated as a hazard quotient, which is the calculated exposure of each contaminant divided by its REL. Hazard quotients for pollutants affecting the same target organ were summed with the resulting totals expressed as HIs for each organ system (Sequoia 2019a, page 4.3-25).

These exposed populations include residential, worker, and sensitive receptors. Both long-term health impacts (cancer risk and chronic HI) and short-term health impacts (acute HI) were evaluated for all locations, as applicable. Offsite resident receptors were assumed to be present at one location for a 30-year period, beginning with exposure in the third trimester of pregnancy. Offsite worker receptors were assumed to be present at one location for a 25-year period, beginning with exposure at the age of 16, for 8 hours per day and 250 days per year (Sequoia 2019a, page 4.3-33). The cancer risk, chronic HI and acute HI for the Maximally Exposed Individual Resident (MEIR), Maximally Exposed Individual

Worker (MEIW), or Maximally Exposed Sensitive Receptor (MESR) were compared to corresponding BAAQMD threshold levels (Sequoia 2019a, page 4.3-25). These results are presented below.

The results of the applicant's HRA for facility wide SBGF readiness testing and maintenance are presented in **Table 5.3-10** and show that the incremental cancer risk and chronic and acute HI at each of the PMI, MEIR, MEIW, and MESR locations would be less than the BAAQMD's significance thresholds of 10 in 1 million and 1 in 1 million, respectively.

TABLE 5.3-10 READINESS TESTING AND MAINTENANCE – MODELED RECEPTOR MAXIMUM HEALTH RISK

Receptor Type	Cancer Risk Impact (in one million)	Chronic Non-Cancer Hazard Index (HI)	Acute Non-Cancer Hazard Index (HI)	Max PM2.5 Concentration ($\mu g/m^3$)
MEIR[1]	0.19	0.00005	0.1	0.0003
MEIW[2]	2.2	0.007	0.54	0.04
MESCR[3]	0.002	0.00006	0.11	0.00031
MECR[4]	0.5	0.00003	0.06	0.00016
PMI[5]	2.2	0.007	0.54	0.04
BAAQMD Threshold	10	1	1	0.3

Source: Sequoia 2019a, Table 4.3-12 and Sequoia 2019b, Table 17

Notes:
1 Maximally Exposed Individual Resident (MEIR). This residential receptor is located to the southwest of the site at a distance of approximately 1724.38 ft. (0.327 miles).
2 Maximally Exposed Individual Worker (MEIW)
3 Maximally Exposed Soccer Child Receptor (MESCR)
4 Maximally Exposed Childcare Receptor (MECR)
5 Point of maximum impact (PMI). It is located to the south of the site at a distance of approximately 200 ft.

Evaluating Emergency Operations

The air quality impacts of emergency generator operation during emergencies are not quantified below because impacts of emergency operations are typically not evaluated during facility permitting and air districts do not normally conduct an air quality impact assessment of such impacts. Energy Commission staff assessed the likelihood of emergency events, but finds that assessing the air quality impacts of emergency operations would require a host of unvalidated, unverifiable, and speculative assumptions about when and under what circumstances such a hypothetical emergency would occur. Such a speculative analysis is not required under CEQA (CEQA Guidelines § 15064(d)(3)).

Staff determined that assessing air quality impacts of emergency operation of the SBGF standby generators would be speculative for the following reasons:

- Emergency operations only occur when the facility has a power outage. Power outages in the SVP service territory have historically been very infrequent and irregular and are expected to remain so. Outages have been unplanned and unpredictable. During most years there have been no outages that have triggered operation of emergency generators at data centers in SVP's service territory. Even when outages have occurred, they have affected only a small number of similar facilities.
- Outage durations are variable and unpredictable, depending on the cause and the remedy. For example, some would be short enough to avoid triggering emergency operation of the standby generators. Another may be longer if equipment repair or replacement is required. Another may

be avoided entirely if a redundant transmission component can be immediately switched into service.

- The number of standby generators that could need to operate during a triggering outage and associated emissions would be continuously variable. The number of generators operating during an emergency would depend on instantaneous power demand of the data center at the time of an outage, and could vary with changing demand during the outage. The number of standby generations that would need to operate during an emergency could also vary because some engines are redundant to ensure reliability should one or more of the engines fail during the emergency. As a result, the exact stack combinations and their locations within SBGF are indeterminate for a specific emergency scenario. Modeling results are highly sensitive to even minor adjustments to these variables.
- The load levels at which the standby generators would need to operate during a power outage would be variable based on the actual power demand during the outage and the level of backup power reliability required by parties contracting to use the data servers. Backup strategies vary, for example, as in how many standby backup generators might be started up to provide "backup" for the other, operating backup generators as a way to provide compound redundancy, should an occupant contract for it.

Factors that would affect the instantaneous power demand of the data center include the data center's level of occupancy, type of occupants and their operational use of their servers, time of day, day of week, holiday or not, the rate of transactions occurring during the outage, and so forth. Data center occupants instantaneously vary the number of servers operating by turning them on or off to adjust to varying processing demand to maintain responsiveness to online customers at the lowest operational cost. For example, the data center power demand required for processing credit card transactions would be expected to be much higher on a "Black Friday" shopping day following a Thanksgiving holiday, than on a slower shopping day. Conversely, overnight server activity could be higher than normal daytime commercial activity when the servers perform backup or mirroring activities.

The amount of electrical demand also depends on the need for cooling, which would vary by season and hour of day.

Additionally, occupants could have varying responses to power outages. They could, for instance, immediately begin shifting their processing load to another data center requiring high initial power demand, and then, once shifting was complete, drastically reduce demand for the remainder of the outage. Similar unpredictable power demand variability can be expected with a mix of other customers such as banking, streaming entertainment, university, call centers, government and public operations and email, communications, and social media. Varying server demand, of course, influences other facility demands, such as for air conditioning to cool operating data servers.

Therefore, staff is unable to make an informed assumption of the level of electrical demand that would be needed during an outage and therefore cannot make an informed estimate of quantified emission rates during emergency use of the backup generator engines.

Historical SVP Power Outage Frequency

This section provides information on the likelihood of an interruption of SVP's electrical supply that would trigger emergency operations of the standby generators at the SBGF. Approximately 10 years

of historical data of past outages of data centers in the SVP service territory is available. Staff has used it to estimate the frequency and duration of reasonably foreseeable future electrical outages that could trigger emergency operations. By definition, emergency operations would be unplanned and infrequent.

Reliability statistics for all electric customers served by SVP appears within the 2018 Integrated Resource Plan (IRP), and to expand on this information, Energy Commission staff explored specifically how data centers in SVP's territory have been historically affected by outages.

From the 2018 IRP: "SVP's electric system experiences approximately 0.5 to 1.5 hours of outage time per customer per year. This compares favorably with other utilities in California with reliability factors ranging from 1.0 to 2.5 hours outage per customer per year" (SVP 2018a). The 2018 IRP for SVP reports the Average Service Availability Index (ASAI) – defined as the customer-minutes-available divided by the total customer-minutes, expressed as a percentage – and the ASAI has been 99.979% or higher in each recent year, with an average of 99.989 over the past seven years. The SAIFI (interruptions per customer) shows that one or fewer outages have occurred, on average, for all customer types annually (SVP 2018a). This data for all customers is summarized in **Table 5.3-11**.

TABLE 5.3-11 SVP RELIABILITY STATISTICS FOR ALL CUSTOMER TYPES

Year	ASAI (%)	SAIDI (minutes)	SAIFI (interruptions per customer)	Total Outages (number)
2012	99.994	29.34	0.48	67
2013	99.991	47.33	0.49	69
2014	99.989	56.6	0.48	80
2015	99.986	73.96	0.59	123
2016	99.993	36.29	0.5	123
2017	99.979	109.08	1.03	195
2018	99.992	42.61	0.41	132

Notes:
ASAI (%): Average Service Availability Index - (customer minutes available / total customer minutes, as a %).
SAIDI (minutes): System Average Interruption Duration Index - (average minutes interrupted per customer for all customer).
SAIFI (number): System Average Interruption Frequency Index - (number of interruptions per customer for all customers).
Source: SVP 2018a.

The proposed SDC would be a large customer that would receive better-than-average reliability compared to all SVP customers by including a dedicated onsite substation that would be directly served by SVP's looped 60 kV system. Staff reviewed the frequency and duration of known data center customers' outages as provided by SVP (CEC 2019a) to discern how redundant features allow SVP's system to provide greater reliability to data centers when compared with average SVP customers.

That data indicates that the likelihood of an outage on SVP's looped 60 kV system that forces emergency operation of a data center's standby generator would be "extremely rare" (CEC 2019a). Project-specific design factors include the site-specific substation that would connect SDC to the SVP looped 60 kV system, a limited number of commercial customers on the looped 60 kV system, redundant transformers to supply SDC, and SDC's proposed uninterruptible power supply (UPS) battery system to carry critical loads during short-term electric service disruptions or transients.

In a series of email messages from SVP dated August 2 and August 8, 2019, staff obtained information showing the historical frequency of power outages to data centers in the SVP service territory, rather than to *all* of SVP's electric customers. The Record of Conversation (ROC) included a summary of the past 10 years of operating the SVP system, beginning with 2009. Between December 6, 2012 and August 2, 2019, there were a total of 31 "outages" on some part SVP's 60-kV lines that provide electrical power to the 12-kV distribution system that feeds power to data centers and other customers. Of these 31 outages on the 60-kV system, only two of them actually interrupted service to any data centers. These customers are all served by a distribution system which includes "looped" lines that can provide alternate flow paths for power flow to data centers. Thus, in general, it takes more than one 60-kV system path failure to cause a power outage at data center.

TABLE 5.3-12 SVP OUTAGES KNOWN TO TRIGGER DATA CENTER EMERGENCY OPERATIONS

Date of Outage	Number of Data Centers Experiencing Interruption	Duration of Each Data Center Outage (minutes)	Total Data Center-Minutes Interrupted (per event)	Weighted Average Data Center Minutes Interrupted per Interruption (minutes)
May 28/29, 2016	2	443	886	156
Dec 2, 2016	4	12	48	
Total	**6**	---	**934**	

Notes:
Weighted Average Data Center Minutes Interrupted per Interruption is calculated by dividing total of data center-minutes interrupted by number of data centers interrupted.
Sources: SVP 2018; CEC 2019a

One of the data center outages occurred on May 28/29, 2016 (CEC 2019b, Table 2); the interruption lasted for 7 hours and 23 minutes and forced two data centers into emergency operations (CEC 2019a). The other data center outage occurred on December 2, 2016 and lasted for 12 minutes, forcing four data centers into emergency operations. These two power outages are summarized in **Table 5.3-12**.

Using terms equivalent to those of **Table 5.3-11 (**of total minutes of outages divided by minutes of total service provided), conversations with SVP confirmed that data centers have experienced greater reliability than customers have overall (CEC 2019a). Over the same seven year time span as shown in **Table 5.3-11**, the existing data centers in SVP territory have an ASAI of greater than 99.999% (compared to an average of 99.989% for all customers) , for a data center outage rate of less than 0.001% of data center customer minutes.

Frequency of SVP Data Center Power Outages. Information from SVP and summarized in **Table 5.3-12** indicates that six data center customer interruptions occurred since 2009 (CEC 2019a), for an average of less than one data center outage per year (six data center interruptions over ten years). This implies a chance of 6-out-of-10 or 60%, that one data center somewhere across SVP's entire territory could experience an outage in any given year. SVP indicates that there were 37 operating data centers in the service territory at the time of the Record of Conversation (CEC 2019a), and that they connected to five different loops within the SVP territory, which minimizes the potential that more than one data center would experience simultaneous outage. The combined probability of any one given data center, like SDC, to experience an outage would be the product of 60% (chance of

outage for any data center within SVP) times the 1-out-of-37 (2.7%) chance of any one data center experiencing the outage. Therefore, out of the 37 or more data centers historically served by SVP, the probability of a given facility (such as SDC) experiencing an outage in a given year has historically been 60% * 2.7%, or 1.6% probability of an outage per year. Alternatively, this could be expressed as a 98.4% probability that any given data center would *not* experience an outage during any given year.

With the limited history and details available, staff is unable to refine its estimate of the likelihood of SBGF operating during a SVP outage and have requested SVP staff to recommend the likelihood of this occurring. It is worth noting that *all* data center outages occurred in the same year, 2016. Of the 10 years reviewed, only 1 year had *any* data center outages, and 9 of the 10 years had *no* outages.

Staff has no reason to expect that future reliability would be worse than the past.

Duration of Data Center Power Outages. Historical outage data is limited to only two transmission line outages that affected a data center served by SVP 60-KV lines, one of 12 minutes duration and affecting 4 data centers, and one of 443 minutes duration affecting 2 data centers. The weighted average duration of data center outages that have occurred in SVP territory since 2009 as shown in in **Table 5.3-12** was about 156 minutes or 2.6 hours per outage. Outage durations can reasonably be expected to be driven down in the future. Any potential ambient air impacts from emergency operations would thus be expected to be of short duration.

Based on discussions with SVP, outages are always reviewed for root cause (CEC 2019a), and data center customers and SVP can be expected to implement preventative measures to ensure that reliability consistently improves over time, with both outage frequency and outage duration becoming less in the future.

With the high reliability of the SVP system as shown in **Table 5.3-11** and **Table 5.3-12,** emergency operation of the SBGF's standby generators would remain speculative due to the infrequent, irregular, and unplanned nature of outages. It is impossible to predict how frequently emergency operation of the backup standby generators could occur, and should an emergency operation occur, how long it would last, at what power demand level, or how even many facilities would be affected. Although emergency operation of the standby generators due to an electrical outage is reasonably foreseeable, based upon historical SVP data, such operation would be expected to be very infrequent and of short duration. Therefore, it would be speculative to assign any level of certainty to any particular emergency-use scenario.

Air Quality Effects during Emergency Operations

The air quality impacts of emergency operations are generally exempted from modelling by air districts in their permitting evaluations, and such is the practice of BAAQMD (and other air districts), in whose jurisdiction SBGF would be located. Guidelines from US EPA and local air districts regarding permit evaluations generally do not require air quality impact analysis of emissions that would occur infrequently, be highly intermittent and unpredictable, or be triggered by an emergency.

Permitting of emissions from routine or regularly scheduled activities such as readiness testing and maintenance of emergency engines *are* subject to impacts analyses. The applicant has stated that for the purposes of readiness testing and maintenance, each of the 54 standby generators would operate approximately 10 hours per year (Sequoia 2019a). The impact analysis at SBGF for the proposed readiness testing and maintenance was provided earlier in this air quality analysis.

The BAAQMD regulation on stationary internal combustion engines (Regulation 9, Rule 8, section 231.5) defines emergency use as "the use of an emergency standby or low usage engine in the event of [an] unforeseeable failure of [the] regular electric power supply. Emergencies are therefore, unplanned, uncontrolled, infrequent, and unlikely." Additionally, BAAQMD Regulation 9, Rule 8, section 237 defines unforeseeable as "not able to be reasonably anticipated and demonstrated by the owner or operator to the satisfaction of the Air Pollution Control Officer to have been beyond the reasonable control of the owner or operator."

The BAAQMD and other air districts and permitting agencies routinely conduct air quality impact analyses (called AQIAs) when evaluating projects involving stationary air pollution sources. For emergency-use-only equipment, the 35 California local air district rules typically do not require them to include emergency operations in their AQIA. Some air districts place a limit of 200 hours of emergency operation, while other agencies rely on the ARB Air Toxic Control Measure (ATCM), which allows unlimited emergency operation:

1. ARB's ATCM allows for 50 to 100 hours per year for readiness testing and maintenance, and includes unlimited hours for emergency operations.

   The emission limitations in the ATCM are different depending on whether an engine is used as an emergency standby engine (i.e., used only during emergencies such as an electrical outage, flood, or fire) or as a prime engine. Emergency standby engines, since they typically operate no more than 20 to 50 hours a year, have different standards than prime engines, which operate hundreds to thousands of hours per year. The ATCM limits the number of hours an emergency standby engine can operate for maintenance and testing purposes to no more than 50 to 100 hours per year. The ATCM does not limit emergency use hours (ARB 2010).

2. BAAQMD uses the ARB's ATCM and allows 50 hours of readiness testing and maintenance and unlimited hours of emergency operations. In some permits, the engineering evaluations resulted in fewer than 50 hours of testing following the ARB's ATCM requirements; however, the applicant requested those limitations at the time of permitting.

3. South Coast Air Quality Management District (SCAQMD) Rule 1304 specifically allows their Executive Officer to exempt AQIA modeling of emergency standby equipment and the requirement for such equipment to obtain emissions offsets as long as this equipment does not operate more than 200 hours per year. In addition, SCAQMD Rule 1401 exempts such equipment from an evaluation of toxic air contaminants during an emergency.

4. Sacramento AQMD published guidance effective January 1, 2012, that stated how they would evaluate emergency operations of emergency generators in a Policy and Procedures document titled "NO_2 Modeling for Intermittent Operating Units". They estimated that for facilities that would operate only 50 to 200 hours per year, there was only a 0.57 to 2.34 percent chance of having a peak project impact during the same time as peak background concentrations. The guidance document concluded that there was therefore no need to conduct an AQIA for such facilities for permitting purposes.

5. San Joaquin Valley (SJV) APCD's Rule 2201 (Part 4.6.2) also specifically exempts emergency standby equipment that operates no more than 200 hours per year from the requirement to obtain offsets. This district also developed guidance for evaluating emergency operations of emergency equipment located at a permitted facility and this guidance mirrors the guidance described above that was developed by Sacramento Metropolitan AQMD (SJVAPCD 2011).

6. The U.S. Environmental Protection Agency (U.S. EPA) provides guidance on their requirements for evaluating intermittent facility operations under New Source Reviews in their *Guideline on Air Quality Models*. Additionally, a March 1, 2011 guidance memorandum from U.S. EPA states that modeling intermittent emissions units, such as emergency generators, is a "major challenge" and that is one of the reasons for their guidance on how to evaluate intermittent operations. This document emphasizes that there is sufficient discretion within the existing guidelines for reviewing authorities to not include intermittent emissions from emergency generators in compliance demonstrations.

   The Code of Federal Regulations, 40 CFR 52.21(b)(23), generally calls for an AQIA if a project's new or modified emissions are over 40 tons/year of NOx. SBGF would have to be permitted for more than the estimated 50 hours at full load before this requirement would be triggered.

Based on staff's review of air quality agency practices summarized above, staff concludes that emergency operations are too infrequent and unable to be reliably evaluated for ambient air quality impacts. Staff takes into consideration: the low likelihood of emergency operation occurring and the intermittency of emergency equipment operating for emergency purposes; the expectation these standby generators would run only a few hours per year due to emergencies; and the unlikelihood that emergency emissions would occur during the same time as a peak background concentration. Staff's review of the guidance suggests that modeling to evaluate ambient air quality impacts for criteria pollutants, specifically for the 1-hour NO_2 standard, due to a hypothetical emergency scenario, is not warranted. As of the time of publication of this initial study, staff has not received any contrary guidance from any air quality agency.

Due to the number of factors that need to be considered, evaluating ambient air quality impacts during emergency operations would require unnecessary speculation. Staff concludes that an impacts analysis would be more informative as a qualitative assessment of whether a project would operate under an emergency scenario. Such an emergency operation would be very infrequent, if it occurs at all. Silicon Valley Power, which would provide grid power to the facility, provides an average service availability to all customers of at least 99.979 percent, according to **Table 5.3-11**, meaning that the need for the Sequoia Backup Generating Facility to provide emergency power would be very low. Emergency operations would certainly not occur routinely during the lifetime of the facility, and the reliability of electricity service from SVP ensures that the majority of years would most likely see no emergency operation at all.

Based on this information, the project's unlikely emergency operation, due to the reliability of the SVP transmission systems suggests that SBGF would rarely enter into emergency operations. Accordingly, the possibility of any adverse impacts to ambient air quality concentrations would be a very low probability event.

Thus, staff concludes that assessing the impacts of emergency operation of the standby generators would be speculative due to the infrequent, irregular, and unplanned nature of outages. In combination with the reliability of the SVP system as shown in **Table 5.3-11**, the project's emergency operation would be unlikely to expose sensitive receptors to substantial concentrations of criteria air pollutants.

Health Risk Assessment During Emergency Operations

The potential health impacts of toxic air contaminants emitted as a result of emergency operations would be similar to those evaluated for readiness testing and maintenance. As described above, the SBGF would rarely enter into emergency operations. Accordingly, the possibility of any adverse impact to health risk, including cancer risk, chronic non-cancer, and acute non-cancer effects would be unlikely. Health risks during readiness testing and maintenance were evaluated assuming a total of 50 hours of operation per year for all 54 generators operating simultaneously. Readiness testing and maintenance activities are expected to occur 10 to 12 hour per year. Thus, the analysis can be extended to include emergency operations up to 38 hours per year per engine and HRA results presented for readiness testing and maintenance should capture the effect of likely emergency operation.

The applicant's analysis of acute impacts, shown in **Table 5.3-10** includes all standby generators in emergency operation for acute impacts determination related to the standby generators TACs that have acute RELs; that analysis showed the acute impacts to be below the significance threshold, so no additional impact analysis is required to evaluate emergency operations for acute risk. Therefore, including consideration of potential emergency operation, the project is expected to have less than significant acute health risks.

The chronic health risks determined for project construction and readiness testing and maintenance, shown in **Tables 5.3-9** and **5.3-10** are substantially below the significance threshold, and no reasonable emergency operation scenario would change that finding. Therefore, including consideration of potential emergency operations, the project would have less than significant chronic health risks.

Required Mitigation Measures: None.

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

The BAAQMD states that, while offensive odors rarely cause direct health impacts or any physical harm, they still can be very unpleasant and lead to considerable distress among the public, often generating citizen complaints to local governments and the BAAQMD (BAAQMD 2017b). Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact. Odor impacts on residential areas and other sensitive receptors warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Construction

LESS THAN SIGNIFICANT IMPACT. Potential odor sources during construction activities include diesel exhaust from heavy-duty equipment. Odors from construction activities near existing receptors would be temporary in nature and dissipate as a function of distance. Accordingly, construction of the project is not expected to result in odor impacts that would exceed BAAQMD's odor thresholds.

Fugitive dust emissions can also create a nuisance that can cause adverse effects. The project is proposing to comply with the BAAQMD construction fugitive dust control BMPs and so should not have substantial fugitive dust emissions during construction that could adversely affect a substantial number of people.

Therefore, during construction the project would not result in other emissions that could adversely affect a substantial number of people, and would have less than significant impacts.

Readiness Testing and Maintenance, and Emergency Operation

LESS THAN SIGNIFICANT IMPACT. Potential odor sources from project testing and maintenance along with emergency operations would include diesel exhaust from standby generator readiness testing and maintenance, trash pick-up and other heavy-duty delivery vehicles, and the occasional use of architectural coatings during routine maintenance. When compared to existing odor sources near the project site, which include heavy and light industrial uses, odor impacts from project testing and maintenance along with emergency operations would be similar.

Under the BAAQMD CEQA guidelines, determining the significance of potential odor impacts involves a two-step process. First, determine whether the project would result in an odor source and receptors being located within the distances indicated in **Table 5.3-13**. This table also lists types of facilities known to emit objectionable odors. Second, if the proposed project would result in an odor source and receptors being located closer than the screening level distances indicated in **Table 5.3-13**, a more detailed analysis should be conducted, as described in the BAAQMD 2017 CEQA Guidelines (BAAQMD 2017b).

TABLE 5.3-13 PROJECT SCREENING TRIGGER LEVELS FOR POTENTIAL ODOR SOURCES

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

Source: BAAQMD 2017b

The project is not an odor source listed in **Table 5.3-13** and this project type is not known to cause any significant odor impacts. A further evaluation of this facility is not warranted by any local conditions or special circumstances. Therefore, staff finds that the project would not likely create objectionable odors affecting a substantial number of people.

The project would have no ongoing fugitive dust emissions sources once it is built and operating. Therefore, nuisance dust impacts would not occur during readiness testing and maintenance or any emergency operation. During testing and maintenance along with emergency operation, the project

would not result in other emissions that could adversely affect a substantial number of people, and would have less than significant impacts.

Required Mitigation Measures: None.

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5.4 Biological Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC) and associated Sequoia Backup Generating Facility (SBGF), collectively "the project," with respect to biological resources that occur in the project area.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

5.4.1 Setting

Existing Habitat

The proposed project would be located on an approximately 15-acre site within an industrial and commercial area in the city of Santa Clara, California. The property is zoned Heavy Industrial and was previously developed with a one-story recycled paperboard mill and warehouse. The adjacent properties consist of an Enterprise Rent-a-Car Facility to the north, a furniture warehouse to the south, Norman Y Mineta San Jose International Airport (SJC) to the east, and adjacent railroad tracks to the west (Sequoia 2019a). The site is currently vacant and undeveloped with most structures demolished since the closure of the paperboard mill in 2017. Ground cover includes paved access roads and unpaved areas with piles of demolition debris and material, including pipes, located in the center of the site (Sequoia 2019c). Mature trees and ornamental landscaping are located along De La Cruz Blvd to the east as well as the northern and western property boundaries.

There are no natural or sensitive habitats located on or adjacent to the site. The closest habitat is non-native annual grassland located at the SJC where western burrowing owls (*Athene cunicularia hypugaea*;

SSC[1]**),** are known to occur (CNDDB 2019). There are no waterways, wetlands, or other aquatic resources located on or adjacent to the site. The Guadalupe River is the nearest waterway, located approximately 0.6 mile northeast of the site. The river drains into the San Francisco Bay.

Special Status Species

Due to the disturbed state of the project site and ongoing disturbance and industrial activity from surrounding areas, the site does not provide habitat capable of supporting a diverse assemblage of wildlife. Most special-status plant and wildlife species are not expected to be present on the highly disturbed project site. Special-status species are plant and wildlife species that have been afforded special recognition by federal, state, or local resource agencies or organizations. No special-status wildlife species were identified in the area during field surveys conducted by the applicant (Sequoia 2019c). However, western burrowing owl are known to occur as year-round residents at the SJC, located immediately east across De La Cruz Blvd (CNDDB 2019; Albion 1997). Potentially suitable burrows for western burrowing owl were observed on the project site during reconnaissance surveys by the applicant. Therefore, due to the proximity to a known population and presence of low quality habitat, there is a low potential for this species to occur on the site.

Species observed during CEC staff's site visit in September 2019 included a pair of northern mockingbirds (*Mimus polyglottos*). In addition, staff observed the multiple small mammal burrows,possibly created by California ground squirrel (*Otospermophilus beecheyi*), near mature landscape trees located along the eastern boundary of the site, which were also reported by the applicant. These burrow complexes are located in areas where the asphalt has been removed in conjunction with demolition of the former facility (Sequoia 2019c). Other urban adapted species such as western fence lizard (*Sceloporus occidentalis*), Brewer's blackbird (*Euphagus cyanocephalus*), and lesser goldfinch (*Spinus psaltria*) may tolerate the conditions of disturbed habitats; however, none of these species were observed during the site visit. In addition, birds, including raptors (birds of prey), could use mature trees on the project site for nesting or as a roost. Raptors and other migratory birds are protected by the Federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Section 703, et seq.).

Northern coastal salt marsh, located approximately 5 miles north, is known to support several special-status species of birds and mammals. This includes California Ridgway's rail (*Rallus obsoletus*; FE, SE, FP), salt marsh common yellowthroat (*Geothlypis trichas sinuosa;* SSC), Alameda song sparrow (*Melospiza melodia pusillula*; BCC, SSC), salt marsh wandering shrew (*Sorex vagrans halicoetes*; SSC), and salt marsh harvest mouse (*Reithrodontomys raviventris*; FE, SE). Northern coastal salt marsh is considered a sensitive habitat by the California Department of Fish and Wildlife and is included as a sensitive natural community in the California Natural Diversity Database (CNDDB 2019). This habitat occurs along margins of the San Francisco Bay in areas that are sheltered from excessive wave action (Mayer, K.E. and W.F. Laudenslayer, Jr. 1988) The nearest known occurrence of this habitat is located approximately 5 miles northwest of the proposed project.

Landscape Trees

Mature trees and ornamental landscaping are present on the project site along De La Cruz Blvd as well as along the northern and western property boundaries. A certified arborist conducted a survey and provided an inventory report of the trees that are on the proposed project site or on a neighboring

[1] STATUS CODES: FT = Federally Threatened; FC = Federal Candidate; BBC = Bird of Conservation Concern (Federal); SE = State Endangered; SC = State Candidate; SSC = California Species of Special Concern; FP = Fully Protected (State).

property overhanging into the project site (Sequoia 2019b). There are 72 existing trees which consist of the following 14 species: African sumac (*Rhus lancea*), Brazilian pepper (*Schinus terebinthifolius*), Canary Island pine (*Pinus canariensis*), Chinese pistache (*Pistacia chinensis*), eucalyptus (*Eucalyptus* spp.), European olive (*Olea europaea*), evergreen ash (*Fraxinus uhdei*), Fremont cottonwood (*Populus fremontii*), holly oak (*Quercus ilex*), Hollywood juniper (*Juniperus chinensis*), Chinese flame tree (*Koelreuteria bipinnata*), Mexican fan palm (*Washintonia robusta*), strawberry tree (*Arbutus unedo*), and tanoak (*Notholithocarpus densiflorus*).

Regulatory Background

Federal

Endangered Species Act (16 U.S.C., § 1531 et seq., and 50 C.F.R., part 17.1 et seq.). The Endangered Species Act (ESA) of 1973 designates and provides for protection of threatened and endangered plant and animal species, and their critical habitat. "Take" of federally listed species as defined in the ESA is prohibited without incidental take authorization, which "Take" is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include significant habitat modification or degradation that directly results in death or injury to a listed wildlife species by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 C.F.R., part 17.3). Take authorization may be obtained through Section 7 consultation (between federal agencies) or Section 10 Habitat Conservation Plan. The administering agencies are the United States Fish and Wildlife Service (USFWS), the National Oceanic Atmospheric Administration (NOAA), and National Marine Fisheries Service (NMFS).

Migratory Bird Treaty Act (16 U.S.C., §§ 703–711). The Migratory Bird Treaty Act (MBTA) makes it unlawful to take or possess any migratory nongame bird (or any part of such migratory nongame bird including nests with viable eggs). The administering agency is the USFWS.

Clean Water Act Sections 401 and 404 (33 U.S.C., § 1341 and 33 U.S.C., §§1251–1376). The Clean Water Act (CWA) requires the permitting and monitoring of all discharges to surface water bodies. Section 404 requires a permit from the United States Army Corps of Engineers (USACE) to discharge dredged or fill material into waters of the United States, including wetlands. Section 401 requires a permit from the regional water quality control board for the discharge of pollutants. The administering agencies are the USACE and State Regional Water Quality Control Board.

State

California Endangered Species Act (Fish and G. Code, §§ 2050–2098). The California Endangered Species Act (CESA) of 1984 protects California's rare, threatened, and endangered species. CESA allows California Department of Fish and Wildlife (CDFW) to issue an incidental take permit for a species listed as candidate, threatened, or endangered only if that take is incidental to otherwise lawful activities and specific criteria are met. These criteria are listed in Title 14 of the California Code of Regulations, section 783.4 subdivisions, (a) and (b). For purposes of CESA, "take" means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill (Fish and G. Code, § 86). The administering agency is CDFW.

Fully Protected Species (Fish and G. Code, §§ 3511, 4700, 5050, and 5515). These sections designate certain species as fully protected and prohibit the take of such species or their habitat unless for scientific purposes (see also Cal. Code Regs., tit. 14, § 670.7). Incidental take of fully protected species may also be

authorized in a Natural Community Conservation Plan (NCCP) (Fish and G. Code, § 2835). The administering agency is CDFW.

Nest or Eggs (Fish and G. Code, § 3503). This section protects California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. The administering agency is CDFW.

Nest of Eggs of Falconiformes and Strigiformes (Fish and G. Code, § 3503.5). This section makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes and Strigiformes or to take, possess, or destroy the nest or eggs of any such bird. The administering agency is CDFW.

Migratory Birds (Fish and G. Code, § 3513). This section protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame birds. The administering agency is CDFW.

Native Plant Protection Act (Fish and G. Code, § 1900 et seq.). The Native Plant Protection Act (NPPA) of 1977 designates state rare and endangered plants and provides specific protection measures for identified populations. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and, after properly notifying CDFW, for vegetation removal from canals, roads, and other sites; changes in land use; and in certain other situations. The administering agency is CDFW.

Local

City of Santa Clara 2010 – 2035 General Plan. The General Plan goals and policies that address the protection and preservation of the city's natural habitat and wildlife are described in Section 10 Environmental Quality (Chapter 5, *Goals and Policies*). The administering agency is the Planning Division of the city of Santa Clara. General Plan goals and policies applicable to the proposed project are as follows:

- 5.3.1-P10 Provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the proposal to help increase the urban forest and minimize the heat island effect.
- 5.10.1-G1 Protect fish, wildlife and their habitats, including rare and endangered species.
- 5.10.1-P1 Require environmental review prior to approval of any development with the potential to degrade the habitat of any threatened or endangered species.
- 5.10.1-P3 Require preservation of all City-designated heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan.
- 5.10.1-P4 Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way.
- 5.10.1-P12 Encourage property owners and landscapers to use native plants and wildlife-compatible nonnative plants, when feasible.

Santa Clara City Code Chapter 12.35 Section 020. This section of the Santa Clara City Code specifies how to proceed with certain issues with trees and shrubs growing in the streets or public places. This includes addressing the removal, alteration, or damage to trees via trenching. Special authorization for removal or

alteration is required for trees and shrubs growing in the streets or public places. The administering agency is the Streets Department in the Department of Public Works of the city of Santa Clara.

5.4.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Measures

The applicant proposes to implement the following design measures (Applicant Proposed Measures or APM) as part of the project (Sequoia 2019a).

APM BIO-1: In order to reduce impacts to biological systems and communities, the following measures shall be implemented:

- Schedule tree removal activities between September 1 and January 31 (inclusive) to avoid the nesting season (including for raptors) and no additional surveys would be required.
- If construction tree removal would take place between February 1 and August 31, pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed.
- Surveys will be completed no more than seven days prior to the initiation of site clearing or construction activities. During this survey, the ornithologist will inspect all trees and other potential nesting habitats (e.g., shrubs) in and immediately adjacent to the construction area for nests.
- If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 250 feet for raptors and 50-100 feet for other species). This will ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during project implementation.
- A report indicating the result of the survey and any designated buffer zones shall be submitted to the satisfaction of the Planning Department prior to the start of construction.

APM BIO-2: The following pre-construction and construction period measures shall be undertaken to avoid impacts to sensitive wildlife species:

- A qualified biologist shall conduct preconstruction surveys for burrowing owls prior to construction. Should these surveys identify burrowing owls on or near the SDC [project] site, avoidance of disturbance to the burrow will be conducted as outlined below:
    - If an active burrowing owl nest is identified near a proposed work area, work will be conducted outside of the nesting season (March 15 to September 1).
    - If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season, a qualified biologist will establish a no-activity zone. The no activity zone will be large enough to avoid nest abandonment and will at minimum be 250-foot radius from the nest.
    - If burrowing owls are present within the construction footprint during the non-breeding period, a qualified biologist will establish a no-activity zone of at least 150 feet.
    - If an effective no-activity zone cannot be established in either case, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, and the sensitivity and habituation of

the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.

- Prior to construction, employees and contractors performing construction activities will receive environmental sensitivity training from a qualified wildlife biologist. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on covered species during construction activities. A brief presentation by a qualified wildlife biologist will explain potential wildlife concerns to contractors, their employees, and agency personnel involved in project construction. Fact sheets conveying this information and an educational brochure containing color photographs of burrowing owls will be prepared for distribution to the above-mentioned people and anyone else who may enter the SDC [project] site vicinity.
- Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.

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

Construction

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The project site is paved and unpaved, disturbed, previously developed land that is surrounded by light industrial and office development. Land cover is mostly bare ground or gravel and vegetation is generally limited to the perimeter of the project site and consists of mature landscape trees and shrubs as well as ruderal weedy species (Sequoia 2019c). Most rare, threatened, endangered, and sensitive plant and wildlife species are not expected to occur on the site because the site does not contain suitable habitat for most species (e.g., vernal pools, marsh, riparian, chaparral, coastal scrub, or serpentine soils) (CNDDB 2019). There is no designated or proposed critical habitat for federally-listed species in the project area. However, one special-status wildlife species, western burrowing owl, is known to occur in close proximity at the San Jose International Airport (SJC). In addition, existing mature trees on and near the project site provide potential nesting habitat and food sources for bird species, including raptors (birds of prey) and other migratory birds, protected by the Migratory Bird Treaty Act (MBTA) and Sections 3503 and 3503.5 of the California Fish and Game Code.

Western Burrowing Owl

The *Burrowing Owl Management Plan San Jose International Airport* (Albion 1997) documents western burrowing owl habitat as occurring in areas between and adjacent to the taxiways and runways (infields) which are nearly flat and contain grasses and other herbaceous vegetation with most owls documented in the northern and western areas of the SJC, near De La Cruz Blvd (Albion 1997). Western burrowing owl are known to occur as year-round residents (breeding and non-breeding season) and utilize both natural and artificial burrows for breeding on the SJC. Since 2014, this population has seen a steady decline based on the results of surveys done for burrowing owls in Santa Clara County in relation to the Santa Clara Valley Habitat Plan (SCVHP). In 2014 there were 35

adults and 34 chicks; in 2019 there were 4 adults and 11 chicks (Garrison pers comm 2019a). Surveys conducted in October 2019 by SJC biologists detected 3 owls on the western side of the SJC (Chow pers comm 2019). Impacts to this community include potential direct impacts to burrowing owls from airport-related construction activities and loss of habitat from planned airport expansions (City of San Jose 2018).

Western burrowing owl have a low potential to occur in the project area due to the disturbed nature of the site and lack of herbaceous ground cover. Potential burrows were detected on the far eastern side of the project site where California ground squirrels were observed in ornamental plantings adjacent to the former parking lot. These burrow complexes are located in areas where the asphalt has been removed in conjunction with demolition of the former facility (Sequoia 2019c). Additionally, old ground squirrel burrows (collapsed) were observed along the western edge of the site adjacent to the railroad tracks and pipes of sufficient size (surrogate burrows) for burrowing owl were observed on site in debris piles along with other demolition debris (Sequoia 2019c). The site has recently been cleared of most structures and the pavement has largely been removed leaving bare ground and gravel which could provide marginal foraging habitat for this species, especially if there is a lapse in human activity on site. This species could occur as transient or dispersing individuals during the wintering or breeding season due to proximity to the SJC as well as the presence of small mammal burrows and burrow surrogates, which includes pipes and demolition debris. (Sequoia 2019c). Direct impacts to this species from project construction include loss of burrows, crushing of nests and eggs by construction equipment, and loss of individual birds if present on the project site. These would be significant impacts.

The applicant incorporated mitigation measures into the project design and proposed to implement "project design measures" (**APM BIO-2**), which included conducting pre-construction surveys during the nesting season and non-breeding period, establishing buffers to avoid disturbance of western burrowing owl, and preparing a site-specific plan if an effective no-activity zone cannot be established. **APM BIO-2** also would require that all construction personnel participate in an environmental awareness program designed to provide information and training regarding covered species.

APM BIO-2 would not reduce construction impacts to a less-than-significant level because it does not fully address what should be included in a robust environmental awareness program for employees**.** **APM BIO-2** did not specifically state that birds protected under the MBTA and California Fish and Game Code, which have the potential to occur on the project site, would be covered in the training. **APM BIO-2** also refers to "covered species", which typically is defined as species covered under a Habitat Conservation Plan (HCP) for incidental take. In addition, **APM BIO-2** did not state how the project applicant would document who has completed the training or provide instructions for employees to contact a qualified biologist should any sensitive biological resources be found during construction. **Mitigation Measure** (**MM**) **BIO-1**, which would supersede **APM BIO-2,** would include additional requirements to cover all birds protected under the MBTA and California Fish and Game Code, in addition to western burrowing owl, in the environmental sensitivity training as well as more details regarding the components of the training program. **MM BIO-1** would also provide clarification that all special-status species, including rare, threatened, endangered, and sensitive plant and wildlife species, potentially occurring on site would be covered by the training.

In addition, **APM BIO-2** would not reduce potential construction impacts to a less-than-significant level because it does not fully address measures required to avoid impacts to western burrowing owl. **APM BIO-2** did not include coordination with CDFW, the Trustee Agency for fish and wildlife

resources, on development of a site-specific plan to establish no-activity buffers. In addition, **APM BIO-2** did not state how the project applicant would mitigate for loss of occupied burrows if destroyed during construction of the proposed project or how the project applicant would address exclusion of owls from burrows on site during the non-breeding season. **MM BIO-2**, which would supersede **APM BIO-2**, would include additional requirements, developed based on coordination with CDFW (Garrison pers comm 2019a), including development of a site-specific plan to minimize effects on the reproductive success of the owls, development of a mitigation plan for loss of occupied burrowing owl burrows, and development of a Burrowing Owl Exclusion Plan for placement of one-way doors—all in coordination with CDFW—to fully address potential impacts to western burrowing owl.

Implementation of **MM BIO-1** and **MM BIO-2** discussed below and agreed to by the project applicant (Sequoia 2020a) would reduce potential impacts to special-status species, including nesting birds and western burrowing owl, resulting from implementation of the proposed project. Impacts would be less than significant with mitigation incorporated.

MM BIO-1 Environmental Sensitivity Training for Avoidance of Biological Resource Impacts. The following pre-construction and construction period measures shall be undertaken to avoid impacts to sensitive wildlife species:

- Prior to construction, employees and contractors performing construction activities will receive environmental sensitivity training from a qualified wildlife biologist. Training will include review of environmental laws and avoidance and minimization measures that must be followed by all personnel to reduce or avoid effects on special-status species, including birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, during construction activities. A brief presentation by a qualified wildlife biologist will explain potential wildlife concerns to contractors, their employees, and agency personnel involved in project construction. The training will include information on situations when it is necessary to contact a qualified biologist (e.g., should any sensitive biological resources such as an active nest be found during construction). Fact sheets conveying this information and an educational brochure containing color photographs of western burrowing owls will be prepared for distribution to the above-mentioned people and anyone else who may enter the project site. A record of all trained personnel will be kept on site, and a sticker indicating training completion will be worn on all worker hard hats.
- Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the special-status species, including birds protected under the MBTA and California Fish and Game Code, and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.

MM BIO-2. Western Burrowing Owl Avoidance and Minimization Measures (Supersedes APM BIO-2). The following pre-construction and construction period measures shall be undertaken to avoid impacts to western burrowing owl:

- A qualified wildlife biologist shall conduct preconstruction surveys of the entire project site, plus all accessible areas of suitable habitat within a 250-foot radius from the project footprint for burrowing owls prior to construction. Surveys shall follow the most recent California Department of Fish and Wildlife (CDFW) recommendations currently found in Appendix D of the 2012

California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CDFW 2012). The final survey shall be conducted within the 24-hour period prior to the initiation of project activities in any given area. Should these surveys identify burrowing owls on or near the project site, avoidance of disturbance to the burrow will be conducted as outlined below:

- If an active burrowing owl burrow (including burrow surrogates) is identified near a proposed work area, work will be conducted outside of the breeding season (February 1–August 31).
- If an active nest is identified near a proposed work area and work cannot be conducted outside of the breeding season, a qualified biologist will establish a no activity zone. The no activity zone will be large enough to avoid nest abandonment and will at minimum be a 250-foot radius from the burrow (including burrow surrogates).
- If burrowing owls are present within the construction footprint during the non-breeding period (September 1–January 31), a qualified biologist will establish a no-activity zone of at least 150 feet around the occupied burrow(s) (including burrow surrogates).
- The applicable buffer zone will be marked in the field with exclusion fencing and no construction activities, tree removal, or vegetation clearing shall occur within the buffer zone.
- If monitoring by a qualified biologist indicates that the owls are no longer nesting or the young owls are foraging independently, the buffer may be reduced prior to August 31, in consultation with CDFW.
- A qualified biologist will monitor the site consistent with the requirements described above to ensure that buffers are enforced and owls are not disturbed.
- If an effective no-activity zone cannot be established in either case, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, and the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls. The plan shall be approved by the city of Santa Clara in consultation with CDFW.
- If pre-construction surveys are conducted during the non-breeding season (September 1 through January 31) and burrowing owls are observed on the site, burrows may be removed only if the owls are properly passively relocated following CDFW guidelines. Passive relocation, using one-way doors, may only occur in accordance with an approved Burrowing Owl Exclusion Plan (BOEP). The plan shall be approved by the city of Santa Clara in consultation with CDFW.
- Loss of occupied burrowing owl burrows will be mitigated offsite at a 3:1 ratio. A mitigation plan shall be included as part of the BOEP and shall be approved by the city of Santa Clara in consultation with CDFW.

Nesting Birds

Tree removal associated with project implementation could result in direct destruction of active nests of protected birds and raptors protected if tree removal occurs during the nesting season (generally defined as February 15 to September 15). Project construction could also result in indirect disturbance of nesting birds on or near the project site causing nest abandonment by the adults and mortality of chicks and eggs. Destruction of active bird nests, nest abandonment and/or loss of reproductive effort

caused by disturbance are considered "take" by the CDFW, and therefore would be a significant impact.

The applicant incorporated mitigation measures into the project design and proposed to implement "project design measures" (**APM BIO-1**) which would attempt to conduct tree removal outside the nesting period, conduct pre-construction surveys if tree removal occurs during the nesting period, and establish buffers to avoid disturbance of nesting birds if active nests are detected in the trees proposed for removal. **APM-BIO-1** would not reduce construction impacts to a less-than-significant level because it only includes a requirement for pre-construction surveys for tree removal; however other construction activities, such as site clearing and grading, that are initiated during the breeding season have the potential to disturb nesting birds. In addition, **APM BIO-1** does not include requirements to consult with CDFW, the Trustee Agency for fish and wildlife resources, to determine the extent of a construction-free buffer zone to ensure that nests are not disturbed during project construction. **MM BIO-3**, which would supersede **APM BIO-1**, would include additional requirements, based on standard language applied to projects in CEQA documents prepared for the City of Santa Clara and recommendations from CDFW staff, to conduct nesting bird surveys prior to initiation of any type of construction activities, develop buffers based on pre-construction baseline monitoring of the nest, and for the ornithologist to consult with CDFW on the extent of construction-free buffer zone (Garrison pers comm 2019a). In addition, **MM BIO-3** specifies that tree removal shall not occur in any tree with an active nest until the ornithologist has determined that the young have fledged or the nest is no longer active due to predation or abandonment.

Implementation of **MM BIO-3** discussed below and agreed to by the project applicant (Sequoia 2020a) would reduce potential impacts to protected raptors and other migratory birds resulting from implementation of the proposed project. Impacts would be less than significant with mitigation incorporated.

MM BIO-3: Nesting Bird Avoidance and Minimization Measures. (**Supersedes APM BIO-1**)**.** In order to reduce impacts to nesting birds the following measures shall be implemented:

- Avoidance of Nesting Bird Season. Schedule construction activities, including tree removal, between September 1 and January 31 (inclusive) to avoid the nesting season (including for raptors). The nesting season for most birds, including most raptors, in the San Francisco Bay Area extends from February 1 through August 31.
- Pre-construction/Pre-disturbance Surveys for Nesting Birds. If it is not possible to schedule construction and tree removal between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests shall be disturbed during project implementation. This survey shall be completed no more than 7 days prior to the initiation of grading, tree removal, or other demolition or construction activities during the breeding season.
- During this survey, the ornithologist shall inspect all trees and other possible nesting habitats within and immediately adjacent to the construction area for nests.
- If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFW, shall determine the extent of a construction-free buffer zone to be established around the nest (typically 250 feet for raptors and 50 to 100 feet for other species) to ensure that nests of bird species protected by the MBTA or Fish and Game code shall not be disturbed during project construction.

- In order to determine the extent of the construction-free buffer zone, the ornithologist shall document pre-construction baseline monitoring of the nest to characterize "normal" bird behavior. The ornithologist shall monitor the nesting birds and shall increase the buffer if the ornithologist determines that the birds are showing signs of unusual or distressed behavior by project activities. Abnormal nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed towards project personnel, standing up from a brooding position, and flying away from the nest.
- If an active nest is found in a tree proposed for removal, tree removal shall be postponed until an ornithologist has determined that the young have fledged or the nest is no longer active due to predation or abandonment.
- A final report indicating the result of the survey and any designated buffer zones for nesting birds, including any protection measures, shall be submitted to the Director of Community Development prior to the start of ground disturbance, grading and/or tree removal.

Operation and Maintenance

LESS THAN SIGNIFICANT. Operation and maintenance activities, such as landscape and irrigation maintenance, are expected to result in the same level of human presence and disturbance as typical nearby landscape and irrigation maintenance activities. The proposed project would have 54, 2.25-MW diesel fired backup generators with maximum load 96.5 MW for the SDC building. Operation of the project's backup diesel generators would result in emissions of oxides of nitrogen (NOx). Nitrogen deposition is defined as the input of nitrogen oxide (NO_X) and ammonia (NH_3) derived pollutants, primarily nitric acid (HNO_3), from the atmosphere to the biosphere. The sources of these pollutants are primarily vehicle and industrial emissions, including power generation. Increased nitrogen deposition in nitrogen poor habitat allows the proliferation of non-native species which crowds out the native species (Fenn et al. 2003; Weiss 2006). Threats to sensitive species habitat from noxious weeds are exacerbated by nitrogen fertilization and the deposition of additional nitrogen in an already stressed ecosystem would be a potentially significant indirect impact.

Staff considered protected areas and designated critical habitat within the 6-mile radius around the proposed project in the analysis of nitrogen deposition from the proposed project. It has been staff's experience that by the time the plume has traveled this distance, in-plume concentrations become indistinguishable from background concentrations. Further, staff considered habitat modification to protected areas and designated critical habitat to be a potentially significant effect if these communities were known to be sensitive to nitrogen deposition. There is no designated or proposed critical habitat for federally-listed species within 6 miles of the project area. Northern coastal salt marsh located in the Guadalupe Slough near the San Francisco Bay Trail, is the only protected area, within 6 miles of the project, known to be sensitive to nitrogen deposition. Several special-status species are known to occur in this area of northern coastal salt marsh habitat (CNDDB 2019). Northern coastal salt marsh is also considered a sensitive natural community by the CDFW and included in the California Natural Diversity Database (CNDDB 2019).

One approach for quantifying nitrogen deposition is through critical load, which is defined as the input of a pollutant below which no detrimental ecological effects occur over the long-term. Salt marsh habitat tends to have a higher critical load than other ecosystems due to its open nutrient cycles that are less affected by atmospheric deposition than other nitrogen loading sources (Pardo et. al. 2011, pg. 3071). Critical load for early successional salt marsh has been estimated to be in the range of 30-40 kilograms nitrogen per hectare per year (kg N/ha/yr) (Bobbink et. al. 2010, pg. 21-22), and 50-100

kg N/ha/yr for intertidal wetlands and 63-400 kg N/ha/yr for intertidal salt marshes (Pardo et. al. 2011, pg. 3059). Staff used the conservative estimate of 30-40 kg N/ha/yr as the critical load for northern coastal salt marsh.

Impacts potentially could occur if the emissions from the proposed project in conjunction with baseline nitrogen deposition exceeded the critical load for the community. For a baseline nitrogen deposition estimate, staff used the Community Multiscale Air Quality (CMAQ) modeling system, which provides estimates of ozone, particulates, toxics, and acid deposition. Staff considered the most recent CMAQ-predicted value of 11.4 kg N/ha/yr from 2012 at northern coastal salt marsh habitat as the best available data to determine baseline nitrogen deposition (CMAQ 2019). Conservative modeling using AERMOD, performed by Energy Commission staff for similar facilities, estimate project contributions to existing nitrogen deposition to be between 0.01 and 0.03 kg N/ha/yr. The similar facilities include the McLaren Data Center (47, 2.75 MW diesel fired backup generators) and Laurelwood Data Center (56, 3.0-MW diesel fired backup generators). These facilities would be located at comparable distances (approximately 4 to 5 miles) from the northern coastal salt marsh habitat as the proposed project.

The project's estimated contribution (between 0.01 and 0.03 kg N/ha/yr) when added to the baseline nitrogen deposition value (11.4 kg N/ha/yr) at northern coastal salt marsh would be substantially below the critical load (30-40 kg N/ha/yr) for this habitat type. Operation of the proposed project would not result in a substantial adverse effect from nitrogen deposition, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status. Therefore, this impact would be less than significant.

Required Mitigation Measures: MM BIO-1, MM BIO-2, MM BIO-3

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

Construction

NO IMPACT. The project site is paved and unpaved, disturbed, previously developed land that is surrounded by light industrial and office development. The land cover is mostly bare ground or gravel after removal of the existing pavement. Vegetation is generally limited to the perimeter of the project site and consists of landscape trees and ruderal weedy species. There are no riparian habitats or other sensitive natural communities identified in local or regional plans, policies, and regulations or by the CDFW or USFWS within the project site. There would be no impact.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. As stated above, no direct impacts would occur during operation or maintenance of the proposed project. However, staff also considered indirect impacts from nitrogen deposition resulting from operation of the proposed project as a potential impact on sensitive natural communities. Northern coastal salt marsh is the only sensitive natural community known to occur within 6 miles of the proposed project.

As stated previously, indirect impacts could potentially occur if emissions from the proposed project along the with the baseline nitrogen deposition exceeded the critical load for the sensitive natural

community. Vegetation-specific critical loads for nitrogen deposition would not be exceeded at any location with northern coastal salt marsh. Therefore, operation of the proposed project would not result in a significant indirect impact to sensitive natural communities from nitrogen deposition. This impact would be less than significant.

Required Mitigation Measures: None.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

Construction, Operation and Maintenance

NO IMPACT. There are no state or federally protected wetlands within or adjacent to the project site. The closest aquatic feature to the project site is the Guadalupe River located approximately 0.6 mile east and separated from the site by a major roadway, De La Cruz Boulevard, and the SJC. There would be no impact during construction, operation, or maintenance of the proposed project.

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

Construction, Operation and Maintenance

NO IMPACT. There are no established wildlife corridors, such as rivers or streams, in the immediate project vicinity. The Guadalupe River, located approximately 0.6 mile east of the proposed project, is the closest corridor where movement or migration of native resident or migratory fish or wildlife species would likely occur. There are no known wildlife nursery sites, such as a rookery, fawning area, or fish spawning habitat, in the project area. Therefore, the project would have no impact during construction, operation, or maintenance.

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

Construction

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. As part of the project, the applicant proposes removal of 66 of the 72 trees documented as occurring on site or on a neighboring property overhanging into the project site (Sequoia 2019b and Sequoia 2019c). City of Santa Clara General Plan Conservation Policy 5.10.1-P4 protects all healthy cedars, redwoods, oaks, olives, bay laurel, and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way. The project proposes to remove several of the tree species cited in Policy 5.10.1-P4, which are in varying health condition. There are no trees to be removed that have a diameter greater than 36" at 48" above grade or diameter at breast height (dbh) or that would be classified as street trees. No heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan are present. All 72 trees are considered part of the urban forest under General Plan Policy 5.3.1-P10, which requires all removed trees, regardless of species, to be replaced at a minimum 2:1 ratio.

Conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance or tree replacement policies (for example, General Plan policies 5.10.1-P4 and 5.3.1-P10) would be a significant impact. General Plan Policy 5.3.1-P10 also calls for new development to provide street trees and conflict with this part of the policy would also be a significant impact. The City of Santa Clara does not have any further applicable tree protection policies, regulations, or ordinances. The following is a summary of the mitigation requirements for project-related impacts to existing trees:

- Four trees proposed for removal are protected species under Policy 5.10.1-P4 —two holly oak (*Quercus ilex*) (Tree ID 108 and 120) and two Brazilian pepper (*Schinus terebinthifolius*) (Tree ID 110 and 142). These trees are healthy, in fair to good health, and were recommended to be preserved in the applicant's arborist report. The replacement ratio for these trees is 2:1 with 36" box trees.
- Ten additional trees of species protected under General Plan Policy 5.10.1-P4 were recommended to be removed in the arborist report due to being in poor to fair health. These trees include two European olive (*Olea europaea*) (Tree ID 103 and 105), two holly oak (Tree ID 116 and 117), and six Brazilian pepper (Tree ID 148, 149, 150, 151, 152, and 154). Since these trees are part of the urban forest, they must be replaced per the requirements of General Plan Policy 5.3.1-P10. The replacement ratio for these trees is 2:1 with 24" box tree or 1:1 with 36" box or bigger size tree.
- Fifty-two additional trees proposed for removal must be replaced under General Plan Policy 5.3.1-P10 because the trees (regardless of species) are part of the urban forest. The replacement ratio for these trees is 2:1 with 24" box tree or 1:1 with 36" box or bigger size tree.
- Six trees that are not proposed for removal include four holly oak (Tree ID 101, 170, 171, 172), one Canary Island pine (Tree ID 141), and one Mexican fan palm (Tree ID 166). Existing tree protection fencing and Tree Protection Zones are required to be established for all trees to be retained.

Removal of 66 trees would be a significant impact without adequate replacement trees planted as part of the proposed project. In addition, street trees would also be required to be planted as part of the proposed project. New landscaping is proposed to be planted around the perimeter of the site, along the street frontage, and near the building. The project applicant is proposing 114 trees to be planted on and around the site with trees at 24" box size. Tree species are detailed in the proposed Landscape Construction Plan and include a mix of native and ornamental species (Sequoia 2019d). New trees are proposed to be planted along the street frontage of De La Cruz Boulevard to meet the requirements for street trees (Sequoia 2019b and Sequoia 2019d). In addition, existing tree protection fencing and Tree Protection Zones would be required to be established for all trees to be retained, as proposed on the Tree Removal and Protection Plan. The final Tree Removal and Protection Plan as well as the Landscape Construction Plan, including any potential off-site replacements, would be subject to review and approval by the City Community Development Department, and the project applicant would be required to receive authorization from the City prior to scheduling removal of City-protected trees.

The applicant did not propose adequate mitigation for impacts related to tree removal. The applicant has only proposed planting 114 trees on and around the site (Sequoia 2019d); however, at a 2:1 ratio, 132 trees would be required to be planted. The applicant stated that in addition to the 1:1 replacement on-site, the applicant would be required to work with the city of Santa Clara to achieve an acceptable replacement ratio either by increasing the replacement ratio on site, or by planting

additional replacement trees off site (Sequoia 2019d). However, mitigation has not been defined in sufficient detail for tree replacement and therefore would not measurably reduce impacts to less than significant, nor ensure compliance with local policies or ordinances during project implementation. In addition, the applicant stated that the City's Municipal Code 12.35.020 provides for the permitting process for removal of protected trees; however, this is not an appropriate permit for tree removal on the project site as it only applies to trees and shrubs growing in the streets or public places. Therefore, this permit would not apply to the project.

MM BIO-4 would provide detailed requirements for the replacement of trees removed as part of the project and is a standard mitigation measure recommended by the city of Santa Clara (Kerachian pers comm 2019). Implementation of **MM BIO-4** discussed below and agreed to by the project applicant (Sequoia 2020a) would reduce potential impacts to protected trees and the overall tree canopy in the city of Santa Clara resulting from implementation of the proposed project. Impacts would be less than significant with mitigation incorporated.

MM BIO-4: Prior to issuance of building permits, the applicant shall submit a Tree Replacement Plan to the City Arborist and Community Development Department for review and approval. The Plan shall provide for equivalent replacement of any tree removed from the project site, as follows:

- The project sponsor shall replace removed trees at a 2:1 ratio within the project site. If 2:1 replacement is not feasible because of site constraints, the project sponsor may instead replace trees at a 1:1 ratio within the project site with approval from the Community Development Director if the tree is larger in size and an appropriate species. Tree species and sizes shall be reviewed and approved, as applicable, by the City arborist.
- The 24-inch box of a replacement tree may be increased to either a 36- inch box or a 48-inch box to supplement the on-site tree planting plan. If trees are replaced at a 1:1 ratio, the replacement trees shall have a 36- inch box.
- If the removed tree is considered a protected tree it shall have a replacement ratio of 2:1 with a 36- inch box.
- If approved by the Community Development Director, an alternative site, within a 2-mile radius of the project site, shall be identified for any additional tree planting necessary to satisfy the requirement to achieve a 2:1 replacement ratio. Alternative sites may include local parks, schools, and/or street frontages.

Operation and Maintenance

NO IMPACT. Tree removal or other activities that conflict with any local policies or ordinances protecting biological resources are not proposed to occur during operation and maintenance. Therefore, no impact would occur during operation or maintenance of the proposed project.

Required Mitigation Measures: MM BIO-4

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or State habitat conservation plan?

Construction, Operation and Maintenance

NO IMPACT. The Santa Clara Valley Habitat Plan (SCVHP 2012) provides for the protection and recovery of resources for the majority of land in Santa Clara County, however the proposed project is not within the permitting area of this plan. There are no approved habitat conservation plans, natural community conservation plans, or other adopted plans that would apply to the proposed project. Therefore, there would be no impact during construction, operation, or maintenance of the proposed project.

5.4.3 References

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5.5 Cultural and Tribal Cultural Resources

This section describes the environmental and regulatory setting and discusses the impacts associated with the construction and operation of the Sequoia Backup Generating Facility and Sequoia Data Center, collectively "the project," with respect to cultural and tribal cultural resources.

CULTURAL RESOURCES Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

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

Environmental checklist established by CEQA Guidelines, Appendix G.

5.5.1 Setting

This section assesses the potential impacts of the proposed project on cultural and tribal cultural resources. The section considers four broad classes of cultural resources: prehistoric, ethnographic, historic-period, and tribal cultural resources. The next four paragraphs briefly describe these classes of resources. Afterward, the Cultural and Tribal Cultural Resources section presents the environmental setting pertinent to these resources:

- *Prehistoric, ethnographic, and historic contexts*—generally describes who lived in the project vicinity, the timing of their occupation, and what uses they made of the area
- *Methods of analysis*—establishes what kinds of physical traces (cultural and tribal cultural resources) past peoples might have left in the project area, given the project vicinity's prehistoric, ethnographic, and historic contexts
- *Results* following from those methods—identifies the specific resources present or expectable in the project area

- *Regulatory setting*—presents the criteria for identifying significant cultural and tribal cultural resources under the California Environmental Quality Act (CEQA) and other applicable authorities, as well as criteria for identifying significant impacts on these resources
- *Impacts*—identifies any impacts on cultural and tribal cultural resources, along with the severity of any such impacts
- *Mitigation measures*—proposes measures to avoid, minimize, rectify, reduce or eliminate, or compensate for identified impacts

Prehistoric archaeological resources are those materials relating to Native American occupation and use of a particular environment. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American activity. In California, the prehistoric period began more than 12,000 years ago and extended through the eighteenth century until A.D. 1769, when Europeans first settled in California.

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, or Asian immigrants. They may include traditional resource collecting areas, ceremonial sites, topographic features, value-imbued landscapes, cemeteries, shrines, or neighborhoods and structures. Ethnographic resources are variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites, structures, objects, and rural and urban landscapes assigned cultural significance by traditional users. The decision to call resources "ethnographic" depends on whether associated peoples perceive them as traditionally meaningful to their identity as a group and the survival of their lifeways.

Historic-period resources are those materials, archaeological and architectural, usually but not necessarily associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, structures, trail and road corridors, artifacts, or other evidence of historic human activity. Under federal and state requirements, historic period cultural resources must be 50 years or older to be considered of potential historic importance. A resource less than 50 years of age may be historically significant if the resource is of exceptional importance. The Office of Historic Preservation (OHP 1995, page 2) endorses recording and evaluating resources 45 years or older to accommodate a five-year lag in the planning process.

Tribal cultural resources are a category of historical resources recently introduced into CEQA by Assembly Bill 52 (Stats. 2014). Tribal cultural resources are resources that are any of the following: sites, features, places, cultural landscapes, sacred places, or objects that are included in or determined eligible to the California Register of Historical Resources (CRHR), or are included on a local register of historical resources as defined in Public Resources Code, section 5020.1(k). Tribal cultural resources can be prehistoric, ethnographic, or historic.

Prehistoric Context

The archaeological record in the Santa Clara Valley began about 9,000 years before present (B.P.)[3] with the Metcalf Creek Aspect, the local expression of the Millingstone cultural pattern. Archaeological deposits dating to this time contain milling slabs and handstones, and large wide-stemmed and leaf-shaped projectile points. Native people during this period were mobile foragers and burials were typically flexed and placed beneath millingstone cairns. (Milliken et al. 2007, page 114.)

[3] The term "B.P." (Before Present) is an international dating convention that refers to the year 1950 as the present.

This Early Holocene culture extended until the beginning of the Early Period (circa 5500 B.P.), which exhibits developments in groundstone technology (i.e., replacing millingstones with the mortar and pestle), less movement of entire communities, regional symbolic integration between cultural groups, and increased trade. Also referred to locally as the Sandhill Bluff Aspect, this cultural pattern lasted until circa 2500 B.P., when the Lower Middle Period began with a "major disruption in symbolic integration systems." (Milliken et al. 2007, page 115.) Archaeological assemblages from the Lower Middle Period include more olive snail-shell saucer beads and circular abalone shell ornaments (and the disappearance of the rectangular shell beads), as well as bone tools and whistles.

The Upper Middle Period began ca. 1520 B.P. with a disruption of the olive snail-shell bead trade network, abandonment of some village sites, and changes in shell bead manufacture. Some South Bay burials from this period were extended inhumations rather than flexed burials, and grave goods were lacking. (Milliken et al. 2007, page 116.)

The Late Period began ca. 900 B.P., with groups increasing intensifying the creation of wealth objects, as seen in burials. Smaller projectile points for use in the bow and arrow emerged during this period and some of the mortuary evidence suggests the introduction of cremation, at least among the wealthiest of individuals. (Milliken et al. 2007, page 117.)

Archaeological research in the project vicinity reveals a rich and lengthy archaeological record. In particular, archaeologists have found numerous buried Native American sites throughout the lower Santa Clara Valley. Rapid development of the valley covered numerous archaeological sites in pavement or with structures (Busby et al. 1996a, pages 2–4; Hylkema 1994, page 252; Parsons and KEMCO 1983, pages 18 and 35). Below even the archaeological sites capped by the veneer of recent building, the Guadalupe River and smaller streams (Saratoga and San Tomas Aquino creeks) buried generations of Native American sites under layers of silt and clay. As a result, the surface archaeological record of Santa Clara Valley represents only the last 2,000 years of human occupation. The remaining 7,000 years of native history lay anywhere from near surface up to 30 feet below the modern ground surface. (Busby et al. 1996a, pages 2–4; Busby et al. 1996b, page 2; Jones et al. 2007, page 130; Parsons and KEMCO 1983, pages 16, 25–26, 33; Ruby et al. 1992, pages 9, 12, 17–19.)

Ethnographic Context

The Costanoans are the Native Americans who inhabited the Bay Area since time immemorial. The Costanoan designation refers to those who spoke one of eight separate but related languages (Shipley 1978, pages 84, 89). The Costanoan languages are similar to Miwok, and are part of the Yok-Utian language family of the Penutian stock (Golla 2007, pages 75–76). Tamyen (Santa Clara Costanoan) was the language of the southern end of San Francisco Bay and lower Santa Clara Valley (Costanoans in the project vicinity spoke Tamyen). (Milliken et al. 2007, Figure 8.1; Shipley 1978, pages 84 and 89.)

Each village was a separate and politically autonomous tribelet, with about 200 people living within each. Tribelets were the basic unit of political organization, with chiefs, either women or men, descended from their patrilineal relative. In the late 1700s, there were two tribelets in close proximity to the proposed project site, San José Cupertino and Santa Clara; both are presumably Tamyen speakers. (Levy 1978, Figure 1.) Kroeber (1976, Figure 42) indicates that two settlements were located within a few miles of the project site on the Guadalupe River, Tamie-n near Santa Clara, and Ulis-tak farther north near the Bay.

Like most other Native Americans in California, acorns were the staple food of the Costanoan people in the Santa Clara region. Costanoans ate other nuts such as buckeye, California laurel, and hazelnuts. The

Costanoans set controlled fires to promote the growth of the nuts and seeds upon which they relied. The primary mammals taken by the Costanoan included the black-tailed deer, elk, antelope, grizzly bear, mountain lion, sea lion, and whale. Waterfowl, salmon, steelhead, and lampreys were also important components of the Costanoan diet. (Levy 1978, page 491.)

Thatched, domed houses were the most common type of structure for the Costanoans. Sweathouses along the banks of rivers were also constructed, in addition to dance enclosures and assembly houses. (Levy 1978, page 492.)

Bodies were either buried or cremated on the day of death. The community either buried the deceased's property with the body or destroyed their property. (Kroeber 1976, page 469; Levy 1978, page 490.)

Trade was important for the Costanoan groups, and their primary partners in trade were the Plains Miwok, Sierra Miwok, and Yokuts. The Costanoan provided coastal resources such as mussels, abalone shell, dried abalone, and salt to the Yokuts in exchange for piñon pine nuts. The Miwok obtained olive snail shells from the Costanoans. Warfare occurred between Costanoan tribelets as well as the Costanoans and the Esselen, Salinan, and Northern Valley Yokuts. (Davis 1961, page 19; Levy 1978, page 488.)

A common archaeological manifestation of a Costanoan village site is the shell mound deposits (Kroeber 1976, page 466). Mussels are the primary shells that constitute these mounds, in addition to other household wastes.

The Spanish established seven missions in Costanoan territory between 1770 and 1797. By 1810, the mission system subsumed the last Costanoan village. Missions in the Bay Area mixed together various language and cultural groups including the Esselen, Foothill Yokuts, Plains Miwok, Saclan Miwok, Lake Miwok, Coast Miwok, and Patwin. The mission closest to the proposed project area was Santa Clara de Asís, built in 1777. The mission is no longer extant but the area is still rich in archaeological manifestations from the mission period and before. (Levy 1978, page 486.)

Mission Santa Clara de Asís occupied two different sites prior to its establishment in its current location. The original mission location was where Norman Y. Mineta San Jose International Airport taxiways now exist. The second location was where Memorial Cross Park has been established at the northeast corner of De La Cruz Boulevard and Martin Avenue (Perzel et al. 2019, page 15). All three locations of the mission reflect the confluence of Native American and European American lives in the project area.

Historic Context

In order to inform an understanding of the potential significance of built environment resources near the project, a review of the major historical timeline markers for the project area provides context. This subsection offers a brief look at those events and trends in the history of the Santa Clara Valley region that provide that context, in particular for the project site:

- Spanish Mission Period
- Mexican Period
- American Period
    - Transportation and Railroads
    - Agriculture and Fruit Industry
    - Post World War II (WWII) and Silicon Valley

- Project Site History

Spanish/Mission Period (1769 to 1821)

The Spanish Period hosted several important developments, such as the establishment of Spanish Colonial military outposts (presidios), pueblos, and 21 missions throughout Alta California. Nearest to the location of the proposed project were the Santa Clara de Asís Mission (1777), El Pueblo de San José de Guadalupe (1777) and Mission (1797), and Santa Cruz Mission (1791). The Spanish Government also awarded land grants to soldiers and others and thus began the tradition of large land grants used for agriculture and livestock. Little remains of the cultural landscape that existed during this time aside from some roads that follow the same early transportation routes (Santa Clara 2012, pages 22–26).

Mexican Period (1821 to 1848)

Following Mexican independence from Spain in 1821, Mexican Governor Pio Pico granted lands to Mexican settlers, including the former lands of the missions, whose connection to the government was lost in the Decree of Secularization in 1834. The Mexican governor granted 43 ranchos in the Santa Clara Valley between 1802 and 1845. Local planning agencies lack detailed information on the location and integrity of these early California sites (Santa Clara 2012, pages 30–32). The project site does not appear to be located within the boundaries of the historic Spanish-Mexican Ranchos. On maps drawn in 1876, to the south of the project site is the city grid of Santa Clara, to the east is El Potrero de Santa Clara, to the north is Rancho Ulistac, and to the west are Saratoga Creek and the Enright Tract (Rambo 1968). Santa Clara's historic context statement laments that most traces of original haciendas, adobes, and other rancho structures are not discernible in the landscape today and few records exist (Santa Clara 2012, page 32).

American Period (1848 to Present)

California became the thirty-first state in the union in 1850. In 1851, Santa Clara College, now Santa Clara University, was founded on the site of the Santa Clara de Asís Mission. The incorporation of Santa Clara followed in 1852. In 1866, the city officially established a grid street system to accommodate anticipated growth. Today, this area is known as the Old Quad neighborhood. Early industries in the city included wheat production and flour milling, seed and fruit packing, and manufacturing. Leather tanning and wood products were two key industries of the city well into the twentieth century. Similarly, seed growing and fruit farming and packing (especially pears, cherries, apricots and prunes) were mainstays, contributing to the city's exports (Santa Clara 2010, page 3-2).

Transportation and Railroads. In 1869, the Western Pacific Railroad completed a rail line from San Jose to Niles, California, effectively connecting San Jose with the Transcontinental Railroad. This opened new markets for the agricultural and manufactured products of the entire Santa Clara Valley. In 1982, Western Pacific merged with Union Pacific Railroad (Santa Clara County 2012, page 44).

Senator James Fair, a multi-millionaire, envisioned a route from the east side of San Francisco Bay, south to San Jose, then on to Los Gatos and through the mountains to Felton, ultimately connecting to Santa Cruz. Senator Fair incorporated the South Pacific Coast Railroad in 1876 and immediately began building the segment from Dumbarton in the East Bay to Los Gatos, by way of Santa Clara and San Jose. Following that segment, the rail line passed through the Santa Cruz Mountains to connect with the narrow gauge railroad at Felton. The Southern Pacific acquired these rail lines in 1887 and eventually converted the narrow gauge lines to standard gauge (Lehmann 2000, pages 31–33).

The Santa Cruz Division of the Southern Pacific Railroad passed adjacent to the eastern edge of the downtown grid of Santa Clara and adjacent to the current project site (Santa Clara 2017; USGS 1899). A 1915 USGS topographic map shows the route of the entire Santa Cruz division from San Jose through the Santa Cruz Mountains to Santa Cruz (USGS 1915).

The first San Jose Airport was completed in 1949. Attracted by the increasing job market, the population of the Santa Clara Valley experienced phenomenal growth after 1950 (Santa Clara 2012, page 46). A modern airport terminal, known as Terminal C, opened in 1965. Designed by a local architect, Hollis Logue Jr., the San Jose Mercury News described it as a "palace of glass, concrete and steel" (SJMN 1965). It was certainly a design of its time, with Googie-inspired design elements at the cornice line, concrete columns, and glass walls. The San Jose Airport Terminal C was demolished and replaced by the current Norman Y. Mineta San Jose International Airport in 2010, and is known as Terminal B.

Santa Clara Valley Agriculture and Fruit Industry. Fruit orchards and vegetable farms dominated the Santa Clara Valley from the 1890s to the 1940s. Wheat and flour milling were the first major agricultural activities. In support of the fruit and vegetable industry, canning operations flourished in the northeastern portion of the county. Fruit packing companies were common in Santa Clara Valley in the first third of the 20th Century. Nearly half of the world's supply of fresh, dried, and canned fruit through the end of WWII originated and shipped from the valley. The agricultural base economy and its support operations were gradually displaced by expanding suburban development, light industrial and high-tech research and development operations by the 1970s (Fike 2016a, page 2).

Post WWII and Silicon Valley. Industrial growth expanded in Santa Clara significantly after WWII. The Owens-Corning plant on Lafayette Street was one of the first new industrial businesses to settle in the Santa Clara Valley and represents the shift toward industrialism in the valley after WWII. A 1948 aerial photograph shows the plant under construction along Lafayette Street with agricultural uses surrounding it (Santa Clara City Library 2019). The plant remains in that location today. Throughout the valley, post-war residential home developments slowly replaced the orchards and agricultural fields. Due to the increased pressure from housing, the City of Santa Clara grew from 6,500 residents in 1940 to 86,000 by 1970 (Fike 2016a, page 2). The landscape was forever transformed.

From 1960 to 1980, much of the industrial growth was in the electronics research and manufacturing sectors. The City of Santa Clara is home to Intel, Applied Materials, Sun Microsystems, Nvidia, National Semiconductor and other high technology companies (City of Santa Clara 2010, pages 3-3–6). More recently, Santa Clara has become home to numerous data centers supporting the operations of the high technology companies of the Silicon Valley. At least 12 existing or proposed data centers are within one mile of the proposed Sequoia Data Center. This represents yet another contextual shift in the history of the Santa Clara/Silicon Valley.

Project Site: 2600 De La Cruz Boulevard, Santa Clara. Industrial and commercial land uses surround the project site. The area immediately surrounding the project site was developed largely during the early 1950s and continues with development of data centers. The surrounding commercial and industrial operations are indicative of the shift that took place after WWII from agricultural-based businesses to light industrial and ultimately high-tech research and development facilities. While the project site has been largely cleared of the industrial paper products mill buildings and co-generation plant that previously existed, its history is tied to the adjacent parcel to the south at 2500 De La Cruz Boulevard. 2500 and 2600 De La Cruz Boulevard were initially one parcel, divided into two parcels in a parcel split in 2012.

The first building on the site was a paper manufacturing facility initially established by the Container Corporation of America in 1956. That use extended at 2600 De La Cruz until 2017. In August of 2019, the buildings at 2600 De La Cruz were largely demolished, leaving only the electric substation of the former co-generation plant, constructed in 1985 (Sequoia 2019a; Sequoia 2019b, Appendix L, pages 11–12), and a water storage tank dating to the late 1950s. The building remaining at 2500 De La Cruz is the home of One Workspace, a design company (Perzel et al. 2019, page 30).

Methods

Project Area of Analysis

The project area of analysis (PAA) defines the geographic area in which the proposed project has the potential to affect cultural or tribal cultural resources. Effects may be immediate, further removed in time, or cumulative. They may be physical, visual, audible, or olfactory in character. The PAA may or may not be one uninterrupted expanse. It could include the site of the proposed project (project site), the routes of requisite transmission lines and water and natural gas pipelines, and other offsite ancillary facilities, in addition to one or several discontiguous areas where the project could arguably affect cultural or tribal cultural resources.

The PAA comprises the proposed project site and all appurtenant, proposed improvements. The PAA has archaeological, ethnographic, and historic built environment components, as described in the following paragraphs.

The archaeological component of the PAA consists of all areas where the applicant proposes ground disturbance to construct the proposed project. This includes the proposed building sites, areas slated for concrete and hardscape removal, removal and replacement of 66 trees from the project site, areas to be graded, staging and laydown areas, storm water controls, and a new electrical distribution subsystem. The applicant proposes demolition and excavation to variable depths. Excavation across much of the PAA would reach 2–3 feet below current grade with a maximum depth of 5 feet. (Sequoia 2019a, pages 2-10, 2-12, 4.5-2, 4.7-6.) Excavation to install the concrete sand oil/water separators at each generator service yard would require excavation to about 8 feet below grade, although the tank basins would be excavated to 5.2 feet below grade (Corgan 2019).

For ethnographic resources, the PAA takes into account sacred sites, tribal cultural resources, traditional cultural properties (places), and larger areas such as ethnographic landscapes that can be vast and encompassing, including view sheds that contribute to the historical significance of such resources. The Native American Heritage Commission (NAHC) assists project-specific cultural resources consultants and agencies in identifying these resources, and consultation with Native Americans and other ethnic or community groups may contribute to defining the PAA. In the case of the proposed project, the immediate environs consist largely of office parks, industrial structures, and San José International Airport. Staff therefore treats the ethnographic component of the PAA as coterminous with the archaeological component.

The proposed project site consists primarily of pavement, hardscape, and modest landscape elements, much of which dates to the recent historic period. The historic built environment PAA for this project includes properties within a one-parcel buffer from the project site.

Literature Review

The literature review for this analysis consisted of a records search at the California Historical Resources Information System (CHRIS), review of the application for small power plant exemption, and examination of pertinent literature concerning cultural resources in the northern Santa Clara Valley.

On July 2, 2019, the applicant requested a records search from the Northwest Information Center (NWIC) of the CHRIS (Sequoia 2019a, pages 4.5-1, 4.18-2; Sequoia 2019b, Appendix I). The NWIC is the State of California's official repository of all cultural resource records, previous cultural resources studies, and historical information concerning cultural resources for 16 counties, including Santa Clara County. The records search area included the project site and a 0.5-mile radius. The records search included examination of the following:

- The NWIC's maps of known cultural resources and previous cultural resources studies
- National Register of Historic Places (NRHP)
- CRHR
- California Points of Historical Interest and California Historical Landmarks lists
- OHP's Archaeological Determinations of Eligibility
- OHP's Directory of Properties in the Historic Property Data File
- Historic maps dating to 1876 and 1961
- Other literature on cultural resources-related topics. (Sequoia 2019a, page 4.5-1; Sequoia 2019b, Appendix I; Perzel et al. 2019, page 17.)

CEC staff also examined historic maps and aerial photographs of the PAA and vicinity to identify cultural resources (Sequoia 2019b, Appendix L[4]; Anastasio 1988, Figure 5[5]; Edward Denny & Co. 1913; GLO 1866; USGS 1897, 1899, 1961, 1980a, 1980b). These sources depict the historic appearance of the PAA each decade from 1853 through 1980 (excepting the 1900s and 1920s).

In addition, staff consulted:

- the City of Santa Clara's General Plan 2010–2035, including its Historic Preservation and Resource Inventory (Santa Clara 2010)
- County of Santa Clara Historic Context Statement (Santa Clara County 2012)
- County of Santa Clara Heritage Resource Inventory (Santa Clara County 2015)

Staff also consulted its confidential cultural resources files, the NRHP, CRHR, Historic American Building Survey, Historic American Engineering Record, Historic American Landscape Survey, and other repositories of documentation of historical resources.

[4] This source contains historic topographic maps dated approximately 1889, 1897, 1899, 1953, 1961, 1968, and 1973. Historic aerial photographs in this source date to 1939, 1948, 1950, 1956, 1963, 1968, and 1974.

[5] This source contains a historic map dating to 1876.

Tribal Consultation

Circlepoint, on behalf of the applicant, contacted the NAHC in June 2019 to request a search of the Sacred Lands File and a list of tribes that might be interested in the proposed project (Sequoia 2019a, pages 4.5-2 and 4.18-1; Sequoia 2019b, Appendix J). The NAHC responded on June 21, 2019, and provided a list of six California Native American tribes to contact:

1. Amah Mutsun Tribal Band
2. Amah Mutsun Tribal Band of Mission San Juan Bautista
3. North Valley Yokuts Tribe
4. Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
5. The Ohlone Indian Tribe
6. Indian Canyon Mutsun Band of Costanoan Ohlone People (Sequoia 2019a, page 4.18-3.)

Circlepoint sent letters and electronic mail to these tribes on July 2, 2019 (Perzel et al. 2019, page 25, Appendix B).

CEQA requires lead agencies to consult with all California Native American tribes that have traditional and cultural affiliation with the geographic area of a project, and that have previously requested consultation. To invoke an agency's requirement to consult under CEQA, a tribe must first send the lead agency a written request for formal notification of any projects within the geographic area with which they are traditionally and culturally affiliated. (Pub. Resources Code, § 21080.3.1(b).) The CEC has not received any requests for formal notification from tribes that have traditional and cultural affiliation with the geographic area of the proposed project pursuant to the aforementioned section. Therefore, the CEC had no standing obligations under CEQA's formal tribal notification or consultation requirements.

However, consistent with the CEC's tribal consultation policy (CEC 2017), CEC staff contacted the NAHC on August 14, 2019, to request a search of the Sacred Lands File and a list of California Native American tribes that might be interested in the proposed project. To date, CEC staff has not received a response from the NAHC. Staff mailed initial consultation letters to the Amah Mutsun Tribal Band, Amah Mutsun Tribal Band of Mission San Juan Bautista, North Valley Yokuts Tribe, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, The Ohlone Indian Tribe, and Indian Canyon Mutsun Band of Costanoan on September 5, 2019. See the following subsection, "Results," for tribal responses and staff's follow-up.

Archaeological Survey

An archaeologist surveyed the project site on September 19, 2019, on behalf of the applicant. The archaeologist walked transects oriented north-to-south and spaced 49 feet apart across the graded portions of the project site, roughly 80 percent of the project site. In the remaining 20 percent, the area that previously served as a parking lot along De La Cruz Boulevard, the archaeologist walked transects spaced 16 feet apart, oriented east-to-west, and examined disturbances around the base of mature trees where subsurface soils were visible. The archaeologist looked for prehistoric artifacts (for example, flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (for example, standing exterior walls, postholes, foundations) or historic debris (for example, metal, glass, ceramics). (Perzel et al. 2019, page 26.)

Historic Architectural Survey

An architectural historian conducted a built environment survey on September 5, 2019 on behalf of the applicant. The survey included the proposed project site (2600 De La Cruz Boulevard) and the adjoining parcel at 2500 De La Cruz. The purpose of the survey was to identify and photograph any historic-era[6] built environment resources that the proposed project could affect. The survey included a windshield reconnaissance of the area surrounding the project site. (Perzel et al. 2019, page 26). Additionally, CEC cultural resources staff conducted an architectural field reconnaissance survey on December 11, 2019.

Results

Literature Review

The records search indicates that one previous cultural resources survey covered as much as 15 percent of the current project site, fronting on De La Cruz Boulevard (Sequoia 2019a, page 4.5-1; Sequoia 2019b Appendix I). The subject survey occurred in 1993 to assess potential impacts associated with a traffic signal interconnection and sidewalk project along De La Cruz Boulevard. The maps and survey description in the survey report are imprecise (Cartier 1993, pages 3, 7, 8), and the survey might have covered little or none of the current project site. In addition, Perzel et al. (2019, page 17) and a search of the CEC's files indicate that 52 previous cultural resources studies occurred within 0.5 mile of the project site (see Basin 2000; Byrd et al. 2017; CEC 2018; Galati 2019; Winter 1978).

The literature reviews identified 11 previously recorded cultural resources within approximately 0.5 mile of the PAA:

1. P-43-000433 (CA-SCL-430/H) (Perzel et al. 2019, Table 2)
2. 651 Mathew Street (Fike 2016a)
3. 725 Mathew Street (Fike 2016b)
4. Lafayette Street (Blosser and Hotchkiss 2002a)
5. P3, 810 Comstock Street (Farrell 2002a)
6. P-43-001080 (CA-SCL-000702) (Perzel et al. 2019, Table 2)
7. P-43-001731 Paragon Building, 2460 De La Cruz Boulevard (Perzel et al. 2019, Table 2)
8. P-43-003529, 815 Comstock Street. Santa Clara Public Works Building (Perzel et al. 2019, Table 2)
9. 2975 Lafayette Street, Pistol Range (Blosser and Hotchkiss 2002b)
10. P1. Concrete Foundation
11. P2. 2979 Lafayette Street (Farrell 2002ab)

The literature review also identified California State Historical Landmark No. 250 on the southeast corner of De La Cruz Boulevard and Martin Avenue. The site is also on the City of Santa Clara's Resource Inventory (Perzel et al. 2019, page 24).

[6] Properties 45 years or older (OHP 1995).

Tribal Consultation

The NAHC's June 21, 2019, search of the Sacred Lands File did not identify Native American cultural resources in the search area. Circlepoint's letters and emails to the six, aforementioned California Native American tribes yielded a response from The Ohlone Indian Tribe. The Ohlone Indian Tribe requested a copy of Circlepoint's literature search results. Circlepoint provided the tribe with a copy on July 15, 2019. (Sequoia 2019a, pages 4.5-2, 4.18-3; Sequoia 2019b, Appendix J.) The Ohlone Indian Tribe also informed Circlepoint that one of its members was the most likely descendant for a nearby project in 1990 (Perzel et al. 2019, Appendix B).

CEC staff's letters, emails, and phone calls to California Native American tribes yielded responses from two tribes. Amah Mutsun Tribal Band informed staff that it has no comment because the proposed project is outside of their territory. Indian Canyon Mutsun Band of Costanoan Ohlone People called CEC staff and stated that a Native American monitor and archaeologist should be on-site during construction. In addition, the Indian Canyon Mutsun Band requested formal consultation between the tribe and CEC pursuant to CEQA's consultation requirements and the guidelines published by the Governor's Office of Planning and Research (email dated September 17, 2019). CEC staff accepted the tribe's consultation request by email on October 11, 2019. A representative of the Indian Canyon Mutsun Band joined CEC staff and a Circlepoint archaeologist for a field review of the project site on December 13, 2019. The Indian Canyon Mutsun Band expressed concern about how cultural resources managers represent Ohlone people generally, and asked whether native monitors would be present during construction. CEC staff informed the representative that the applicant's project proposal included construction monitoring by qualified archaeologists and California Native Americans, and that CEC staff agreed that these are measures appropriate to the conditions on the project site. The Indian Canyon representative did not suggest the incorporation of additional measures.

Archaeological Survey

The applicant's archaeological survey revealed that most of the structures previously located on the property have been demolished and asphalt pavement removed, resulting in 80-percent ground visibility during the archaeological survey. The area that previously served as the parking lot for the property, roughly 20 percent of the project site along De La Cruz Boulevard, was not fully graded. The former parking lot appeared to have been grubbed after asphalt removal, exposing the upper foot of soil stratigraphy around the base of several trees. Although the majority of the project site was highly disturbed, the parking area appeared to retain largely intact soils. (Perzel et al. 2019, page 32.)

Inspection of exposed soils around the base of each tree did not identify archaeological materials. The soils were similar to those described at a nearby, recorded Native American burial (P-43-001080), comprising an upper layer of fill overlying a culturally sterile layer of black clay-silt with high organic content. Underneath the black clay silt is a layer of caliche. The caliche layer is the deepest visible layer on the current project site. Resource P-43-001080 lay just beneath the caliche layer in yellow alluvium. (Perzel et al. 2019, page 32.)

Throughout the project area, the archaeologist identified railroad ties associated with the rail spur that once traversed the property and historic building debris from the demolished structures. In disturbed soils in the parking lot area, the archaeologist identified two fragments of chert, two fragments of ceramic tile, and one possible groundstone fragment. Due to the condition of the tile fragments, disturbance, and the presence of historic building debris, the age of the ceramic tile is unclear. Given that the former parking lot appeared to be partially intact and historic and prehistoric artifacts were found on the ground surface,

the applicant's cultural resource consultants suggested that intact archaeological deposits might be present below the current ground surface. (Perzel et al. 2019, pages 32–33.)

On December 13, 2019, CEC Cultural Resources Unit staff conducted a site visit with representatives of Circlepoint and the Indian Canyon Mutsun Band of Costanoan Ohlone People. CEC staff requested the site visit to verify existing conditions at the project site and to better acquaint the Indian Canyon Mutsun Band with the proposed project. Conditions on the project site were consistent with the descriptions written by Perzel et al. (2019). The site visit comprised a brief review of the proposed project, an interview of the Circlepoint archaeologist regarding methods and observations of the archaeological survey, and a general (non-intensive) pedestrian reconnaissance of the project site. The attendees did not identify additional cultural resources during the site visit.

Historic Architectural Survey

The built environment survey and archival search conducted by the applicant's architectural historian identified two properties containing structures 45 years or older within the PAA. The two properties are 2500 and 2600 De La Cruz Boulevard. 2600 De La Cruz Boulevard (APN 230-03-105) is the site of the proposed project. 2500 De La Cruz Boulevard (APN 230-03-106) is immediately adjacent to the south. At the outset in the 1950s, both properties were developed on a single parcel (APN 230-03-100). A parcel split in 2012 yielded the two separate addresses and parcel numbers. However, their shared history is important to the historical evaluation of the properties. In that respect, the architectural historian treated them as a single resource for the purpose of survey and evaluation.

2500 and 2600 De La Cruz Boulevard

2500 and 2600 De La Cruz Boulevard were evaluated for their potential listing in the NRHP, CRHR, and the City of Santa Clara Historic Resource Inventory[7]. The August 2019 removal of the majority of the paper mill buildings and co-generating power plant on 2600 that were identified with the Container Corporation of America's operations from the 1950s until 2017 creates a loss of integrity to the period of significance, that is, the post-war industrialization of the Santa Clara Valley. Therefore, the property is ineligible for listing under CRHR Criterion 1 and the City of Santa Clara's Criterion for Historical or Cultural Significance (Perzel et al. 2019, page 31). Eligibility criteria can be found in the "Regulatory Setting" subsection below.

The Container Corporation of America's operation from the 1950s to 2012 did not produce any individuals with known associations to the site that are important in local, regional, state or national history. Therefore, the property is ineligible for listing under CRHR Criterion 2 and the City of Santa Clara's Criterion for Historical or Cultural Significance (Perzel et al. 2019, pages 31–32).

The project site buildings and structures have been mostly demolished to grade as of August 2019. The buildings and structures remaining on the project site and adjacent parcel date to the 1950s through the 1980s. A water tank (1956–1962) and an electrical substation (1980s) remain from the cogeneration plant (Perzel et al. 2019, page 27). The building on the adjacent parcel (2500 De La Cruz Boulevard) is representative of mid-century modern industrial buildings but does not present a particular style or design associated with the period. While it exhibits some architectural details at the entrance and along the façade in the form of continuous floor-to-ceiling fenestration in the entrance and office space, and some embellishment in the form of repetitive, unadorned pilasters along the primary and secondary warehouse elevations, these details do not rise to the level of exhibiting an identifiable style or design of importance

[7] The City of Santa Clara has developed its own Criteria for Local Significance (Santa Clara 2010).

to the period of significance. Recent modifications to the entrance and additions of glazing on the primary and secondary facades have altered the building, affecting its integrity to the period of its operation as a paper mill (1956 to 2012). Therefore, the property is ineligible for listing under CRHR Criterion 3 and the City of Santa Clara's Criterion for Architectural Significance.

Based upon the research and analysis completed for the architectural study, the built environment resources remaining on the proposed project site and adjacent related parcel do not have the potential to yield information important to history or prehistory and therefore are ineligible for listing under CRHR Criterion 4 or the City of Santa Clara's Criterion for Geographic Significance (Perzel et al. 2019, page 32).

Southern Pacific/Union Pacific Railroad

Staff identified an additional historic-era resource adjacent to the proposed project site, the Union Pacific/Southern Pacific Railroad tracks. This rail corridor dates to the 1870s (see discussion in "Transportation" above). The Santa Cruz Division of the Southern Pacific Railroad passed adjacent to the eastern edge of the downtown grid of Santa Clara and adjacent to the western edge of the current project site (Santa Clara 2017; USGS 1899). CEC staff previously evaluated this railroad segment for the McLaren project (17-SPPE-01) nearby on Mathew Street and recommended it ineligible for listing on the state or local registers.

The railroad predates the paper mill operations on the project site. The removal of the railroad spur serving the properties, as well as the demolition of the manufacturing facilities it served, degrades the integrity of the resource and its potential eligibility. Integrity comprises design, setting, materials, workmanship, feeling, association, and location. While the location of the railroad has not changed, several spurs have been removed within one mile of the project site (Google Maps 2019). Most railroads undergo maintenance and upgrades of facilities that generally change the design, materials, and workmanship over time. CEC staff noted a manufacturer's stamp of "Nippon 2016" on the rails adjacent to the project site while conducting an architectural field reconnaissance survey on December 11, 2019. The setting and association of this branch of the Southern Pacific Railroad has changed from its initial uses as a connector to the local railroad lines that eventually connected to the transcontinental railway system, servicing the agricultural industry of the Santa Clara Valley in the late 1800s to 1950s, and for passenger and freight service to Santa Cruz until the line through the mountains was abandoned in 1940. The railroad does not retain enough integrity to the period of significance, from acquisition of the South Pacific Coast Railroad to abandonment of the portion of the line through the Santa Cruz Mountains (1887 to 1940) to make it eligible for listing on the NRHP, CRHR, or local register. The lack of integrity, coupled with the fact that the railroad is not listed on the city's register nor is the surrounding area identified as one of the clusters of historical resources within the city's limits (Santa Clara 2010, Appendix 8.9.1; Santa Clara 2011, page 318), make it ineligible for listing under the CRHR and City of Santa Clara's significance criteria. Thus, the railroad does not qualify as a historical resource under CEQA. Therefore, the proposed project will not affect the railroad segment.

Archaeological Potential

The PAA is located in an area of high potential for near-surface archaeological finds and moderate potential for buried archaeology (Byrd et al. 2017, Figures 26–27). Two previously recorded, prehistoric archaeological sites are located within 0.5 mile of the PAA (P-43-000433 and P-43-001080). Archaeological site P-43-000433 contains surface artifacts (projectile points, debitage, fire-cracked rock, and possible groundstone tool fragments) near early sites of the Santa Clara mission. P-43-001080 is a buried

prehistoric site that contained at least 10 human burials, chert debitage, stone grinding slabs, and a handstone. (Perzel et al. 2019, page 23.)

Regulatory Background

Federal

No federal regulations related to cultural or tribal cultural resources apply to the project.

State

California Environmental Quality Act. Various laws apply to the evaluation and treatment of cultural resources. CEQA requires lead agencies to evaluate cultural resources by determining whether they meet several sets of specified criteria that make such resources eligible to the CRHR. Those cultural resources eligible to the CRHR are historical resources. The evaluation then influences the analysis of potential impacts to such historical resources and the mitigation that may be required to ameliorate any such impacts.

CEQA and the CEQA Guidelines define significant cultural resources under two regulatory definitions: historical resources and unique archaeological resources. A historical resource is defined as a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources", or "a resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code," or "any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the agency's determination is supported by substantial evidence in light of the whole record." (Cal. Code Regs., tit. 14, § 15064.5(a).) Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the National Register of Historic Places (NRHP) and California Registered Historical Landmarks from No. 770 onward (Pub. Resources Code, § 5024.1(d)).

CEQA generally considers a resource historically significant if it meets the criteria for listing in the CRHR. In addition to being at least 50 years old, a resource must meet one or more of the following four criteria (Pub. Resources Code, § 5024.1):

- Criterion 1, is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2, is associated with the lives of persons important in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4, has yielded, or may be likely to yield, information important in prehistory or history.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (Cal. Code Regs., tit. 14, § 4852(c)).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA requires the lead agency to make a determination as to whether the resource is a historical resource as defined in Public Resources Code, sections 5020.1(j) or 5024.1.

In addition to historical resources, archaeological artifacts, objects, or sites can meet CEQA's definition of a unique archaeological resource, even if the resource does not qualify as a historical resource (Cal. Code Regs., tit. 14, § 15064.5(c)(3)). Archaeological artifacts, objects, or sites qualify as unique archaeological resources if it is clearly demonstrable that, without merely adding to the current body of knowledge, there is a high probability that the resource meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person. (Pub. Resources Code, § 21083.2(g).)

To determine whether a proposed project may have a significant effect on the environment, staff analyzes the project's potential to cause a substantial adverse change in the significance of historical or unique archaeological resources. The magnitude of an impact depends on:

- the historical resource(s) affected;
- the specific historic significance of any potentially impacted historical resource(s);
- how the historical resource(s) significance is manifested physically and perceptually;
- appraisals of those aspects of any historical resource's integrity that figure importantly in the manifestation of the resource's historical significance; and
- how much the impact will change historical resource integrity appraisals.

Title 14, California Code of Regulations, section 15064.5(b) defines a "substantial adverse change" as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired."

California Native American Tribes, Lead Agency Tribal Consultation Responsibilities, and Tribal Cultural Resources. CEQA provides definitions for California Native American tribes, lead agency responsibilities to consult with California Native American tribes, and tribal cultural resources. A "California Native American tribe" is a "Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004" (Pub. Resources Code, § 21073). Lead agencies implementing CEQA are responsible to consult with California Native American tribes about tribal cultural resources within specific timeframes. If tribal cultural resources could be impacted by a CEQA project, lead agencies are to exhaust the consultation to points of agreement or termination.

Tribal cultural resources are either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the CRHR
   b. Included in a local register of historical resources as defined in the Public Resources Code, section 5020.1(k).

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in the Public Resources Code, section 5024.1(c). In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe. (Pub. Resources Code, § 21074(a).)

A cultural landscape that meets the criteria of Public Resources Code, section 21074(a), is a tribal cultural resource to the extent that the landscape is geographically defined in terms of its size and scope (Pub. Resources Code, § 21074(b)). Historical resources, unique archaeological resources, and non-unique archaeological resources, as defined at Public Resources Code, sections 21084.1, 21083.2(g), and 21083.2(h), may also be tribal cultural resources if they conform to the criteria of Public Resources Code, section 21074(a).

CEQA also states that a project with an impact that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code, § 21084.2).

City of Santa Clara General Plan. Section 5.6.3 of the City of Santa Clara's General Plan outlines the goals and policies related to archaeological and cultural resources. The applicable goals in this section of the General Plan encourage the protection and preservation of cultural resources, including archaeological and paleontological sites, and encourage appropriate mitigation in the event of discovery during construction.

Relevant policies require protecting historic resources through avoidance or reduction of potential impacts, using the Secretary of the Interior's Standards for the Treatment of Historic Properties, and using the city's established historic preservation program for ensuring resource evaluation, protection, and integrity (Santa Clara 2010).

Appendix 8.9 of the General Plan, the Historic Preservation and Resource Inventory, established criteria for local significance and included a list of recorded historic properties (Santa Clara 2010). In addition, the city has embedded in its Municipal Code a section on Historic Preservation (Title 18 Zoning, Chapter 18.106, Historic Preservation). The purpose of Chapter 18.106 is "to promote the identification, protection, enhancement and perpetuation of buildings, structures and properties within the City that reflect special elements of the City's social, economical, historical, architectural, engineering, archaeological, cultural, natural, or aesthetic heritage" (Santa Clara 2019). The chapter requires maintenance of a Historic Resource Inventory.

Appendix 8.9 of the General Plan also identifies significance criteria for local listings. The City of Santa Clara's City Council adopted the Criteria for Local Significance on April 20, 2004 and incorporated the criteria into the General Plan Appendix 8.9. Any building, site, or property in the city that is 50 years old or older and meets certain criteria of architectural, cultural, historical, geographical, or archaeological significance is potentially eligible. The Criteria for Local Significance established in General Plan Appendix 8.9 (Santa Clara 2010) are as follows:

Criterion for Historical or Cultural Significance - To be historically or culturally significant, a property must meet at least one of the following criteria:

1. The site, building or property has character, interest, integrity and reflects the heritage and cultural development of the city, region, state, or nation.
2. The property is associated with a historical event.

3. The property is associated with an important individual or group who contributed in a significant way to the political, social and/or cultural life of the community.
4. The property is associated with a significant industrial, institutional, commercial, agricultural, or transportation activity.
5. A building's direct association with broad patterns of local area history, including development and settlement patterns, early or important transportation routes or social, political, or economic trends and activities. Included is the recognition of urban street pattern and infrastructure.
6. A notable historical relationship between a site, building, or property's site and its immediate environment, including original native trees, topographical features, outbuildings or agricultural setting.

Criterion for Architectural Significance - To be architecturally significant, a property must meet at least one of the following criteria:

1. The property characterizes an architectural style associated with a particular era and/or ethnic group.
2. The property is identified with a particular architect, master builder, or craftsman.
3. The property is architecturally unique or innovative.
4. The property has a strong or unique relationship to other areas potentially eligible for preservation because of architectural significance.
5. The property has a visual symbolic meaning or appeal for the community.
6. A building's unique or uncommon building materials or its historically early or innovative method of construction or assembly.
7. A building's notable or special attributes of an aesthetic or functional nature. These may include massing, proportion, materials, details, fenestration, ornamentation, artwork, or functional layout.

Criterion for Geographic Significance - To be geographically significant, a property must meet at least one of the following criteria:

1. A neighborhood, group, or unique area directly associated with broad patterns of local area history.
2. A building's continuity and compatibility with adjacent buildings and/or visual contribution to a group of similar buildings.
3. An intact, historical landscape or landscape features associated with an existing building.
4. A notable use of landscaping design in conjunction with an existing building.

Criterion for Archaeological Significance - For the purposes of CEQA, an "important archaeological resource" is one which:

1. Is associated with an event or person of

   a. Recognized significance in California or American history, or

   b. Recognized scientific importance in prehistory.
2. Can provide information, which is both of demonstrable public interest, and useful in addressing scientifically consequential and reasonable or archaeological research questions;

3. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
4. Is at least 100 years old and possesses substantial stratigraphic integrity; or
5. Involves important research questions that historical research has shown can be answered only with archaeological methods.

5.5.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: The applicant proposes to implement the following project design measures (termed, Applicant Proposed Measures or APMs, in this analysis) as part of the project to avoid or reduce potential impacts to cultural and tribal cultural resources (Sequoia 2019a, pages 2-16, 2-17, 2-19, 4.5-3, 4.5-4; Sequoia 2019e, pages 3, 6).

APM CULT-1: A qualified archaeologist shall be on site to monitor grading and excavation of soil. The project applicant shall submit the name and qualifications of the selected archeologist to the Director of Community Development prior to the issuance of a grading permit. After monitoring the grading phase, the archaeologist shall make recommendations for further monitoring if it is determined that the site has or may have cultural resources. Recommendations for further monitoring shall be implemented during any remaining ground-disturbing activities. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring shall be required. A letter report summarizing the results of the initial monitoring during site grading and any recommendations for further monitoring shall be provided to the Director of Community Development prior to onset of building construction.

APM CULT-2: If buried archeological resources are encountered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped, the Director of Community Development shall be notified, and a qualified archaeologist shall examine the find and make appropriate recommendations. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring shall then be submitted to the Director of Community Development.

APM CULT-3: In the event that human remains are discovered during SDC [project] construction, all activity within a 50-foot radius of the site shall be halted. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

TRIBE-1: A Native American monitor shall be retained to monitor all project-related, ground-disturbing construction activities (e.g., boring, grading, excavation, drilling, trenching). The appropriate Native American monitor shall be selected based on consultation between the City and the NAHC or as a part of

AB 52 consultation (if requested).[8] Monitoring procedures and the role and responsibilities of the Native American monitor shall be outlined in a document submitted to the City prior to construction. In the event the Native American monitor identifies cultural or archeological resources, the monitor shall be given the authority to temporarily halt construction (if safe) within 50 feet of the discovery to investigate the find and contact the assigned on-site archeologist (if not present). The Native American monitor shall be provided an opportunity to participate in the documentation and evaluation of the find. If a Treatment Plan or Data Recovery Plan is prepared, the Native American monitor shall be provided an opportunity to review and provide input on the Plan.

Cultural Resources CEQA Checklist Questions

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Construction

LESS THAN SIGNIFICANT. No built environment resources meeting either CEQA's criteria for historical resources or Santa Clara's criteria for local significance have been identified within the PAA. The project description does not include any additional demolition of structures on the project site beyond that which has already taken place under permit from the City of Santa Clara. Therefore, there would not be any impacts to historical built environment resources. No archaeological or ethnographic resources meeting either CEQA's criteria for historical resources or Santa Clara's criteria for archaeological significance occupy the surface of the PAA. Previous studies and archaeological monitoring in the project vicinity, however, indicate that the PAA could harbor buried archaeological or ethnographic resources. The PAA is located near the first two Santa Clara mission sites, which included an Indian rancheria. Combined with the proximity of a large, surface archaeological site and several Native American burials, the likelihood of encountering buried cultural resources during construction is high. Twelve archaeological monitoring studies occurred near the PAA and eight of these studies identified historic and Native American archaeological sites from 2.0 to 8.2 feet below the modern ground surface (see Table 5.5-1). If such resources were to be damaged during construction of the proposed project, it would be considered a significant impact, particularly since virtually all archaeological sites 5,000 years or older occur only in buried contexts. The proposed project, however, includes four APMs (CULT-1–3 and TRIBE-1) that require direct observation of construction by qualified archaeologists and California Native Americans. APMs CULT-1–3 and TRIBE-1 also define the steps that archaeological and California Native American monitors would take to identify and reduce any impacts on inadvertently discovered historical resources. The presence of qualified archaeological and California Native American monitors during demolition and construction would ensure the early detection of buried historical resources, thus minimizing impacts. CEC staff concludes that the APMs included in the proposed project are adequate to reduce impacts without supplementation. Therefore, staff concludes that this impact is less than significant.

[8] In accordance with Section 21080.3.1 of the California Public Resources Code and AB 52, the City has provided a Notice of Opportunity to Native American tribes to request consultation for projects within the city. To date, the City has not received any requests from regional tribes to be included on the AB 52 list.

TABLE 5.5-1. RESULTS OF ARCHAEOLOGICAL MONITORING IN THE PROJECT VICINITY

Author/Year	NWIC #	Surface Sensitivity[1]	Buried Sensitivity[2]	Discoveries
Hylkema 1998	S-020327	Moderate	High	Historic Chinatown refuse, sewer standpipe, road bed; discoveries at 2.0–8.2 ft bgs
Busby 1999a	S-023110	Moderate	Moderate	Undisclosed historic archaeological material
Busby 1999b	S-023362	Moderate	Moderate	Undisclosed historic archaeological material
Busby 1999c	S-019072b	Moderate and high	Moderate and high	FAR and baked clay; historic refuse, animal bones, structural material (roofing), and streetcar tracks
Busby 2000	S-024980	Moderate and high	Moderate and high	Historic roofing tiles and four common bricks
Busby 2002a	S-028015	Moderate	Moderate	Undisclosed historic archaeological material
Busby 2002b	S-028016	Moderate	Moderate	Undisclosed historic archaeological material, 2–3 ft bgs
Holson et al. 2002	S-025173	Moderate–highest	Low–highest	Native American habitation debris, artifacts and human remains; historic structural remnants, railroad remnants, and artifacts; finds made at up to 4 ft bgs
SWCA 2006	S-033061	Moderate–highest	Moderate–highest	None
Brady 2015	S-046801	Moderate	Moderate	None. Excavation went up to 5 ft bgs
Hammerle 2015	S-047529a	Highest and high	Highest and high	None. Excavation was 4–5 ft bgs (native soils found below 33 inches)
D'Oro 2017	S-049685	Moderate	Moderate	Milled redwood, whiteware ceramic sherd, shard of clear glass, metal, 12 roof tile fragments, two animal bone fragments. Surface to 5 ft bgs

Notes and abbreviations: bgs = below ground surface; ft = foot, feet; FAR = fire-affected rock; NWIC = Northwest Information Center

1. Surface sensitivity per Byrd et al. (2017, Figure 26) and Whitaker (2016, Figure 5)
2. Buried sensitivity per Byrd et al. (2017, Figure 27)

Operation and Maintenance

NO IMPACT. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on historical resources are therefore not expectable during operation and maintenance.

Required Mitigation Measures: None.

b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5?

Construction

LESS THAN SIGNIFICANT. See staff's response to CEQA checklist question *a* above, which includes a discussion of historic, archaeological, and ethnographic resources. Implementation of APMs CULT-1–

3 and TRIBE-1 would keep any impacts on buried, unique archaeological resources at a less than significant level.

Operation and Maintenance

NO IMPACT. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on historical resources are therefore not expectable during operation and maintenance.

Required Mitigation Measures: None.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Construction

LESS THAN SIGNIFICANT. See staff's response to CEQA checklist question *a* above, which includes a discussion of historic, archaeological, and ethnographic resources. Implementation of APMs CULT-1–3 would keep any impacts on buried human remains at a less than significant level.

Operation and Maintenance

NO IMPACT. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on buried human remains are therefore not expectable during operation and maintenance.

Required Mitigation Measures: None.

Tribal Cultural Resources CEQA Checklist Questions

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 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)?

Construction

NO IMPACT. There will not be any impacts to tribal cultural resources listed or eligible for listing in the CRHR or other state registers, National Register of Historic Places (NRHP), or local register of historical resources.

Operation and Maintenance

NO IMPACT. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of historical resources are therefore not expectable during operation and maintenance.

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Construction

LESS THAN SIGNIFICANT. Although there are no known tribal cultural resources on or directly adjacent to the proposed site, ground disturbance associated with the proposed project could result in the exposure and destruction of buried, as-yet unknown archaeological resources that could qualify as tribal cultural resources. The proposed project, however, includes four APMs (CULT-1–3 and TRIBE-1) that require direct observation of construction by qualified archaeologists and California Native Americans. APMs CULT-1–3 and TRIBE-1 also define the steps that archaeological and California Native American monitors would take to identify and reduce any impacts on inadvertently discovered tribal cultural resources. The presence of qualified archaeological and California Native American monitors during demolition and construction would ensure the early detection of buried tribal cultural resources, thus minimizing impacts. CEC staff concludes that the APMs included in the proposed project are adequate to reduce impacts without supplementation. Therefore, staff concludes that this impact is less than significant.

Operation and Maintenance

NO IMPACT. Ground-disturbing activities are not part of the operational or maintenance profile of the proposed project. Impacts on tribal cultural resources listed or eligible for listing in the CRHR or other state registers, NRHP, or local register of historical resources are therefore not expectable during operation and maintenance.

Required Mitigation Measures: None.

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5.6 Energy and Energy Resources

This section discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC or project) with respect to energy. Hereinafter SDC and project are intended to include both the data center portion and the backup generation facility portion of the project. Analysis of impacts applies to project components that would consume energy, or conflict with, or obstruct a state or local plan for renewable energy or energy efficiency. In addition, this section includes staff's analysis of the project's potential impact on Energy Resources, as required by Public Resources Code section 25541 when considering a Small Power Plant Exemption.

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

Environmental checklist established by CEQA Guidelines, Appendix G

5.6.1 Setting

The Energy Commission makes findings as to whether energy use by a project would cause significant adverse impacts on the environment, as defined in the California Environmental Quality Act, Appendix F. If the Energy Commission finds that consumption of energy by a project would create a significant adverse impact, it must further determine if feasible mitigation measures implemented by the project would eliminate or minimize that impact.

The SDC would include 54 2.25-MW diesel-fired standby generators (gensets) that would be used to provide backup power supply to support an uninterruptible power supply exclusively for the project including backup electricity for a four-story administration building (Sequoia 2019a). The gensets would serve SDC only during times when electric service from Silicon Valley Power (SVP) is interrupted. The backup generators would be electrically isolated from the SVP electrical transmission grid with no means to deliver electricity offsite.

The 54 gensets would each be an MTU model 16V4000 DS2250 with a peak rated output capacity of 2.25 MW and a continuous steady-state output capacity of 1.91 MW, and fuel consumption of 163 gal/hour at full load (Sequoia 2019a). Staff has verified the output capacity of these generators from their product sheets (Sequoia 2019a - Appendix C). The maximum electrical load requirement of the SDC would be 96.5 MW, which includes the electrical power load of the Information Technology (IT) servers, the cooling load of the data center building as well as the administration building, in addition to the facility's ancillary loads. See **Section 4.0, Project Description** for further information. For the purposes of testing and maintenance, only one generator would operate at any given time.

Regulatory Background

Federal

Energy Star and Fuel Efficiency. At the federal level, energy standards set by the Environmental Protection Agency (EPA) apply to numerous consumer products and appliances. The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

State

California Energy Efficiency Standards for Residential and Nonresidential Buildings—California Green Building Code (2011), Title 24 Update (2014). The California Green Building Code applies to newly constructed buildings and requires installation of energy-efficient indoor infrastructure.

Senate Bill 100 (SB 100)—The 100 Percent Clean Energy Act of 2018. SB 100 declares that the Public Utilities Commission, California Energy Commission, and State Air Resources Board should plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. This requirement applies to SVP, which would be the primary source of electricity supply for SDC.

Local

City of Santa Clara Climate Action Plan. The city's Climate Action Plan (CAP) sets goals for the city to achieve its share of statewide emissions reductions for the 2020 timeframe established by the Global Warming Solution Act (Assembly Bill 32). The CAP was adopted on December 3, 2013 and it specifies the strategies and measures to be taken for a number of focus areas, one of which is energy efficiency. To achieve the goals set in the CAP, the city adopted some policies in its 2010-2035 General Plan as discussed below.

City of Santa Clara General Plan Land Use Policies—Santa Clara's 2010–2035 Master Plan. This plan provides a comprehensive view of the city's planned development to mid-century goals and policies which relate to energy and sustainability to guide land use development within the city. These goals and policies are promulgated by the Santa Clara General Plan 2010–2035 (Santa Clara 2010), addressing energy conservation, renewable power systems, and efficient use of fuel. The following goals and policies are relevant to the SDC:

- **Policy 5.10.3-P1:** promotes the use of renewable energy resources, conservation and recycling programs.
- **Policy 5.10.3-P3:** aims to reduce energy consumption through sustainable construction practices, materials and recycling.
- **Policy 5.10.3-P4:** the goal of this policy is to promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.
- **Policy 5.10.3-P6:** to provide incentives for development that meets certification requirements for energy efficient design.

For a more detailed discussion, refer to City of Santa Clara Climate Action Plan dated December 3, 2013: (http://santaclaraca.gov/home/showdocument?id=1017).

5.6.2 Environmental Impacts and Mitigation Measures

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

Construction

LESS THAN SIGNIFICANT IMPACT. Construction activities would consume nonrenewable energy resources, primarily fossil fuels (oil, gasoline, and diesel), for construction equipment and vehicles. It is anticipated that these nonrenewable energy resources would be used efficiently during construction activities and would not result in long-term significant depletion of these energy resources or permanently increase the project's reliance on them.

The project would implement measures to minimize the idling of construction equipment (see **Section 5.3**, **Air Quality**). This would ensure that fuel consumed during construction would not be wasted through unnecessary idling or operation of poorly maintained equipment. Additionally, the project would participate in the city's Construction and Demolition Debris Recycling Program by recycling or diverting at least 50 percent of materials generated for discards by the project in order to reduce the amount of demolition and construction waste going to the landfill. Additionally, as mitigation incorporated into the project, at least 75 percent of construction waste would be diverted and high-recycled content material would be used where feasible (Sequoia 2019a, Page 4.8-17). Diversion saves energy by reusing and recycling materials for other uses (instead of landfilling materials and using additional non-renewable resources).

Therefore, construction of the project would not have a significant adverse effect on local and regional energy supplies and would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The total number of hours of operation for reliability purposes (i.e.; readiness testing and maintenance) for the generators is limited to no more than 50 hours per generator annually (Sequoia 2019a, section 2.4). At this rate, the total quantities of diesel fuel used for all the generators operating at full load would be approximately 10,478 barrels per year (bbl/yr)[1]. Compared to California's diesel fuel supply of approximately 341,036,000 bbl/yr,[2] this constitutes a small fraction (0.003 percent) of available resources and is therefore insignificant. It is important to note that maintenance and readiness testing of the gensets are crucial to the project's viability. The most important data center criterion is reliability. Crucial services such as the 911, Offices of Emergency Management, and utilities infrastructure are increasingly using data centers for their operation. Reliability and data security requirements of a data center would be compromised by limiting or reducing fuel consumption for the purpose of maintenance and readiness testing. The use of nonrenewable fuel for the generators for readiness testing and maintenance would not be unnecessary, inefficient, or wasteful.

The standby generators would use nonrenewable resources (diesel and lubricating oils). However, the use of the standby generators for emergency purposes would be limited to times when there is an

[1] Calculated as: 163 gallons per hour x 50 hours per year x 54 generators = 440,100 gallons per year = 10,478 bbl/yr.

[2] This is the sum of the annual production of 141,771,000 bbl and available stocks of 199,266,000 bbl obtained from the Energy Commission's Weekly Fuels Watch Report for 2018 (latest annual report available).

interruption of SVP's electric service. Under emergency conditions, defined as the loss of electrical power to the data center, which are infrequent and short-duration events, the generators could operate and use nonrenewable resources, as necessary, to maintain data center operations. The MTU genset model selected for this project has an efficiency rating comparable to other commercially available diesel-fueled generators of similar generating capacity.

Power Usage Effectiveness (PUE) is a metric used to compare the efficiency of facilities that house computer servers. PUE is a common metric for determining how effectively a data center's infrastructure systems can deliver power to the computer systems it houses. It is not directly related to the backup generator facility where the standby gensets are housed. It is defined as the ratio of total facility energy draw (including all facility mechanical and electrical loads) to IT server power draw (PUE = total facility source energy (including the IT source energy)/IT source energy). For example, a PUE of 2 means that the data center must draw two watts of electricity for each watt of power consumed by the IT server equipment. While the PUE is always greater than 1, the closer it is to 1, the greater the portion of the power drawn by the facility that goes to the IT server equipment.

The PUE has been used as a guideline for assessing and comparing energy and power efficiencies associated with data centers since 2007 (ASHRAE 2016). It has to be noted that the PUE metric was designed to compare facilities of similar size and within similar climatic conditions. PUE factors started around 2.0, but values have since been migrating down to 1.25, or even slightly lower, demonstrating a significant improvement over the years. A facility with a PUE of 1.5-2.0 is considered "efficient", while one with a PUE of 1.2-1.5 is considered "very efficient". The average PUE for SDC would be 1.23, and at peak operation the PUE would be 1.43 (Sequoia 2019a, section 4.6). This peak operation PUE estimate is based on design assumptions and represents worst case; that is, the hottest day with all server bays occupied and all servers operating at 100 percent capacity.

Measure 2.3 of the CAP encourages completion of a feasibility study of energy efficient practices for new data center projects with an average rack power rating[3] of 15 kilowatts or more to achieve a PUE of 1.2 or lower. The project would have an average rack power rating range of 8 to 10 kilowatts (Sequoia 2019a, Page 4.8-17) so a feasibility study of energy efficient practices would not be required. The project would be consistent with the CAP.

Rack power rating is an indicator of the server rack's power density. The lower is the value, the higher the power density and also the more the information it processes per unit of electricity consumed, resulting in more efficient use of energy. The SDC's low rack power rating shows that it would use energy efficiently.

The SDC's buildings would have a "Cool Roof," using reflective surfaces to reduce heat gains (Sequoia 2019a, Page 4.6-13). Examples of other energy-efficient/energy-saving measures that may be incorporated into the project include the following:

- low-energy cooling systems such as high-efficiency air conditioners and an air economizer integrated into the central air handling system;
- limiting mechanical refrigeration needs and lowering the required refrigerant volume;
- transferring waste heat from the servers to occupied areas of the building;

[3] Average rack power rating is a measure of the power available for use on a rack used to store computer servers. The higher the value of kilowatts, the more energy use per square foot of building area in a data center.

- energy-efficient lighting system to reduce lighting power density by incorporating occupancy sensors and aggressive daylighting; and
- building insulation.

Due to the project's location and the intermittent and unpredictable nature of a data center's operational load requirements, in addition to the unpredictability of when the backup generators would have to run, the use of renewable generation sources (wind/hydroelectric/solar) on their own would not satisfy SDC's need for reliable standby generation. The space and resource requirements for 96.5 MWs of renewable power and their dependence on natural conditions (i.e., availability of wind or solar energy) make such applications infeasible for this project and site. Renewable generation resources, such as solar or wind, coupled with a battery installation, would require significantly more space than that used by the standby generators, and would not fit on the current project site. Current commercial fuel cells are generally limited to lower energy density gaseous fuels such as natural gas or hydrogen, with their inherent storage problems related to space and safety. Furthermore, gas-fired engines are too slow to start in such a short time as needed by the data center to prevent loss of data and also they are subject to fuel supply interruptions, therefore, they are not a suitable alternative for use by data centers.

The SDC's consumption of energy resources during operation would not be inefficient or wasteful. Project operation would not have a significant adverse effect on local or regional energy supplies and would not create a significant adverse impact on energy resources.

Required Mitigation Measures: None.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction, Operation and Maintenance

NO IMPACT. During operation, SDC would use both nonrenewable energy resources and renewable energy resources in SVP's portfolio of resources. As of December 31, 2017, the SVP power mix was composed of approximately 38 percent eligible renewable resources, 34 percent large hydroelectric, and 28 percent nonrenewable sources (SVP 2017). In addition, SVP's 2018 Integrated Resource Plan identified that it expects to exceed 50 percent eligible renewable resources in its portfolio by 2030 (SVP 2018). As SVP procures more renewable energy for its portfolio, less nonrenewable energy sources will be needed and therefore less nonrenewable power would be provided to SDC.

SDC would receive electricity from SVP, which is on track to meet the requirements of SB 100. SVP has committed to meeting California's Renewable Portfolio Standard through its 100-percent renewable energy program, the Santa Clara Green Power Program (Santa Clara 2018). For commercial customers, SVP offers several options for participation in green energy programs, including a carbon-free energy option (SVP 2018). Power usage by the project would be consistent with SB 100.

The project's quantities of diesel fuel is a significant departure from typical power generating facilities that use fossil fuels as their primary source of energy, as the SDC's gensets would operate only during testing and during emergencies when the primary source of energy to operate the project, electricity from SVP, is cut off. The project's use of diesel fuel would not obstruct SVP's ability to meet the requirements of SB 100.

The project would participate in the city's Construction and Demolition Debris Recycling Program and implement measures to promote walking, bicycling and transit use, thereby reducing motor vehicle use. Through the city's design review process, SDC would be required to comply with the California Green Building Code and the city's General Plan Land Use Policies related to energy—Santa Clara's 2010–2035 Master Plan, which are consistent with the EPA's Energy Star and Fuel Efficiency program.

Through energy efficient design and increased renewable electricity use, the project would neither conflict with, nor obstruct state or local plans for renewable energy or energy efficiency, and therefore would have no adverse impact on them.

5.6.3 References

ASHRAE 2016 – American Society of Heating, Refrigerating, and Air-conditioning Engineers ASHRAE Journal. Article: Supercomputers, Super Efficiency, pp. 38-39. Published in January 2016.

Santa Clara 2018 – City of Santa Clara (Santa Clara). Green Power Program, 2018. Available online at: http://www.siliconvalleypower.com/solar-and-green-power/santa-clara-green-power.

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SVP 2018 – Silicon Valley Power (SVP). 2018 Integrated Resource Plan for Silicon Valley Power. November 12, 2018. Available online at: http://www.siliconvalleypower.com/home/showdocument?id=62481.

SVP 2017 – Silicon Valley Power (SVP). 2017 Power Content Label. Available online at: http://www.siliconvalleypower.com/svp-and-community/about-svp/power-content-label.

Sequoia 2019a – Application for Small Power Plant Exemption: Sequoia Data Center, dated August 2019. (TN 229419-1). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

5.7 Geology and Soils

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to geology and soils.

GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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 geologic units 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 Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?*	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

*Geology and Soils question (d) reflects the current 2013 California Building Code (CBC), effective January 1, 2014, which is based on the International Building Code (2009).

Environmental checklist established by CEQA Guidelines, Appendix G.

5.7.1 Setting

Analysis of existing data included reviews of publicly available literature, maps, air photos, and documents presented with the application. An online database search was performed to identify previously reported paleontological resources near the project site. The geologic map review of the project area included maps published by the U.S. Geological Survey (Helley and Wesling 1989; Wesling and Helley 1989, and Helley et al. 1994). The literature reviewed included published and unpublished scientific papers. A paleontological record search of the University of California Museum of Paleontology, Berkeley online paleontological database was conducted for the disturbed project areas, including a 10-mile buffer zone surrounding the proposed data center (UCMP 2019).

Paleontological Sensitivity

The potential for paleontological resources to occur in the project area was evaluated using the federal Potential Fossil Yield Classification (PFYC) system developed by the Bureau of Land Management (BLM 2016). Because of its demonstrated usefulness as a resource management tool, the PFYC has been utilized for many years for projects across the country, regardless of land ownership. It is a predictive resource

management tool that classifies geologic units on their likelihood to contain paleontological resources on a scale of 1 (very low potential) to 5 (very high potential) or Unknown. This system is intended to aid in predicting, assessing, and mitigating impacts to paleontological resources. The PFYC ranking system is summarized in **Table 5.7-1**.

TABLE 5.7-1: POTENTIAL FOSSIL YIELD CLASSIFICATION

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary
1 Very Low Potential	Geologic units are not likely to contain recognizable paleontological resources.
	Units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units.
	Units are Precambrian in age.
	Management concern is usually negligible, and impact mitigation is unnecessary except in rare or isolated circumstances.
2 Low	Geologic units are not likely to contain paleontological resources.
	Field surveys have verified that significant paleontological resources are not present or are very rare.
	Units are generally younger than 10,000 years before present.
	Recent aeolian deposits.
	Sediments exhibit significant physical and chemical changes (i.e., diagenetic alteration) that make fossil preservation unlikely.
	Management concern is generally low, and impact mitigation is usually unnecessary except in occasional or isolated circumstances.
3 Moderate Potential	Sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence.
	Marine in origin with sporadic known occurrences of paleontological resources.
	Paleontological resources may occur intermittently, but these occurrences are widely scattered.
	The potential for authorized land use to impact a significant paleontological resource is known to be low-to-moderate.
	Management concerns are moderate. Management options could include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Opportunities may exist for hobby collecting. Surface-disturbing activities may require sufficient assessment to determine whether significant paleontological resources occur in the area of a proposed action and whether the action could affect the paleontological resources.
4 High Potential	Geologic units that are known to contain a high occurrence of paleontological resources.
	Significant paleontological resources have been documented but may vary in occurrence and predictability.
	Surface-disturbing activities may adversely affect paleontological resources.
	Rare or uncommon fossils, including invertebrate (such as soft body preservation) or unusual plant fossils, may be present.
	Illegal collecting activities may impact some areas.
	Management concern is moderate to high depending on the proposed action. A field survey by a qualified paleontologist is often needed to assess local conditions. On-site monitoring or spot-checking may be necessary during land disturbing activities. Avoidance of known paleontological resources may be necessary.
5 Very High Potential	Highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources.
	Significant paleontological resources have been documented and occur consistently.
	Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities.
	Unit is frequently the focus of illegal collecting activities.
	Management concern is high to very high. A field survey by a qualified paleontologist is almost always needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.

TABLE 5.7-1: POTENTIAL FOSSIL YIELD CLASSIFICATION	
BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary
U Unknown	Geologic units that cannot receive an informed PFYC assignment.
	Geological units may exhibit features or preservation conditions that suggest significant paleontological resources could be present, but little information about the actual paleontological resources of the unit or area is known.
	Geologic units represented on a map are based on lithologic character or basis of origin, but have not been studied in detail.
	Scientific literature does not exist or does not reveal the nature of paleontological resources.
	Reports of paleontological resources are anecdotal or have not been verified.
	Area or geologic unit is poorly or under-studied.
	BLM staff has not yet been able to assess the nature of the geologic unit.
	Until a provisional assignment is made, geologic units with unknown potential have medium to high management concerns. Field surveys are normally necessary, especially prior to authorizing a ground-disturbing activity.

Source: Summarized and modified from BLM 2016

Regional Geologic Setting

The proposed project is situated in the Southern Coastal Ranges geomorphic province (**Figure 5.7-1**). The division between the Northern and Southern Coastal Ranges is one of convenience. Both provinces contain many elongate ranges and narrow valleys that are approximately parallel to the coast, although the coast trends slightly northward more than the ridges and valleys, except at San Francisco Bay where a pronounced gap separates the two provinces (Norris and Webb 1990). The differences between the two provinces occur because the Northern Ranges lie east of the San Andreas Fault zone, whereas the Southern Ranges predominantly lie to the west (Norris and Webb 1990). The two Ranges have dissimilar basement rocks. The Northern Range and portions of the Southern Range east of the San Andreas Fault zone are underlain by strongly deformed Franciscan subduction complex rocks, and the areas west of the San Andreas Fault zone, in both the Northern and Southern Range, are underlain by a strongly deformed granitic-metamorphic complex known as the Salinian block. The basement rock beneath the project site, which lies east of the San Andreas Fault zone consists of Franciscan Complex rocks (Norris and Webb 1990).

Local Geology

Figure 5.7-2 depicts the surficial geology in the vicinity of the project. The project site is in the Santa Clara Valley, a relatively broad and level alluvial basin, bounded by the San Francisco Bay to the north, the Santa Cruz Mountains to the west and southwest, and the Diablo Mountain Range to the east and southeast. The Santa Clara Valley's basin contains alluvial deposits derived from the Diablo Range and the Santa Cruz Mountains. Alluvial deposits are interbedded with bay and lacustrine (lake) deposits in the north-central region. The valley sediments were deposited as a series of coalescing alluvial fans by streams that drain the adjacent mountains. These alluvial sediments make up the groundwater aquifers of the area.

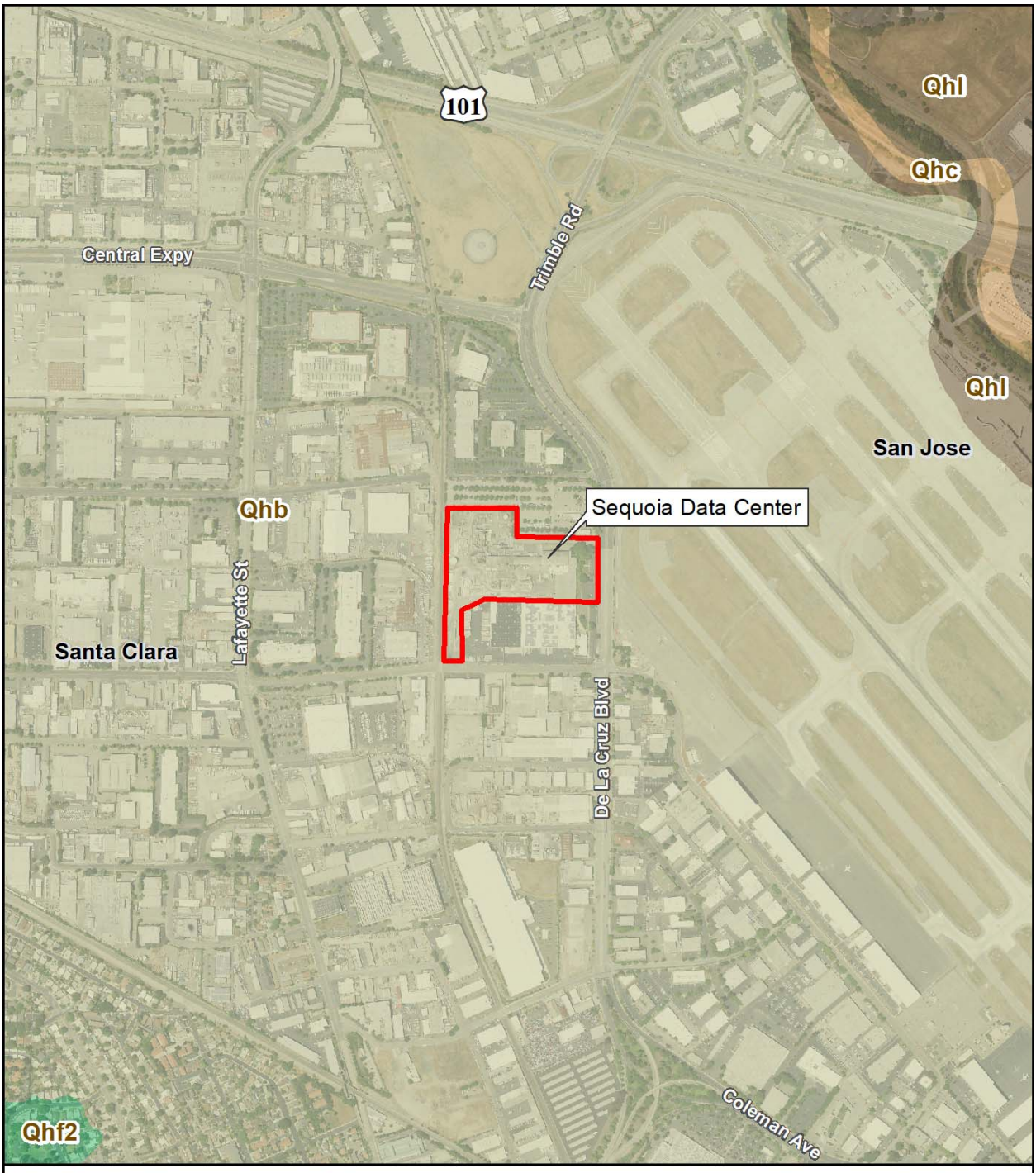
The majority of the project site is underlain by Holocene age (less than 11,000 years old) basin deposits (Qhb) (**Figure 5.7-2**). The basin deposits consist primarily of estuarine deposits of the Alameda Formation and younger alluvial fans. The uppermost layer of soil encountered at the site consists of roughly 4.5 feet of fill made up of lean clay with sand and clayey sand. Beneath the fill, there are alluvial soils including layers of clays with varying degrees of sand and fine to coarse gravel. Sands and gravels are generally medium dense in the upper 30-40 feet of the soil layers, while sands below this range tend to be dense to very dense (Sequoia 2019a).

Figure 5.7-1
Geomorphic Provinces

○ City/Town/Populated Place

E-Eureka
R-Redding
S-Sacramento
SF-San Francisco
M-Monterey
F-Fresno
B-Bakersfield
SB-Santa Barbara
LA-Los Angeles
PS-Palm Springs
N-Needles
K-Kelso
SD-San Diego

Sources: California Department of Conservation, California Geological Survey, 2002



Project Boundary

Geology

- Qhb: Floodbasin Deposits (Holocene)
- Qhc: Stream Channel Deposits (Holocene)
- Qhf2: Older Alluvial fan deposits (Holocene)
- Qhl: Natural Levee Deposits (Holocene)

0 1,000 2,000
Feet

Sources: USGS Open-File Report 98-795, NAIP Imagery 2016

Figure 5.7-2
Surficial Geology

In addition, these sediments have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources. However, these recent sediments overlie older, Pleistocene age sediments that have a high potential to contain paleontological resources. These older sediments, often found at depths of ten feet or more below the ground surface, have yielded the fossil remains of plants and extinct terrestrial Pleistocene vertebrates. The City of Santa Clara General Plan (Santa Clara 2010), on page 328, suggests that ground disturbing activities of ten feet or more have the potential to impact undiscovered paleontological resources in older Pleistocene sediments (Santa Clara 2010).

There are no unique geologic features on or adjacent to the project site. The topography of the project site is relatively flat with a slight downward slope to the northeast. The elevation across the site ranges from 41.5 feet (NAVD88) in the southwest portion of the site to 39 feet (NAVD88) in the northeast portion (Kleinfelder 2018). Erosion hazards are limited and there are no landslide hazards (**Figure 5.7-2**).

Groundwater

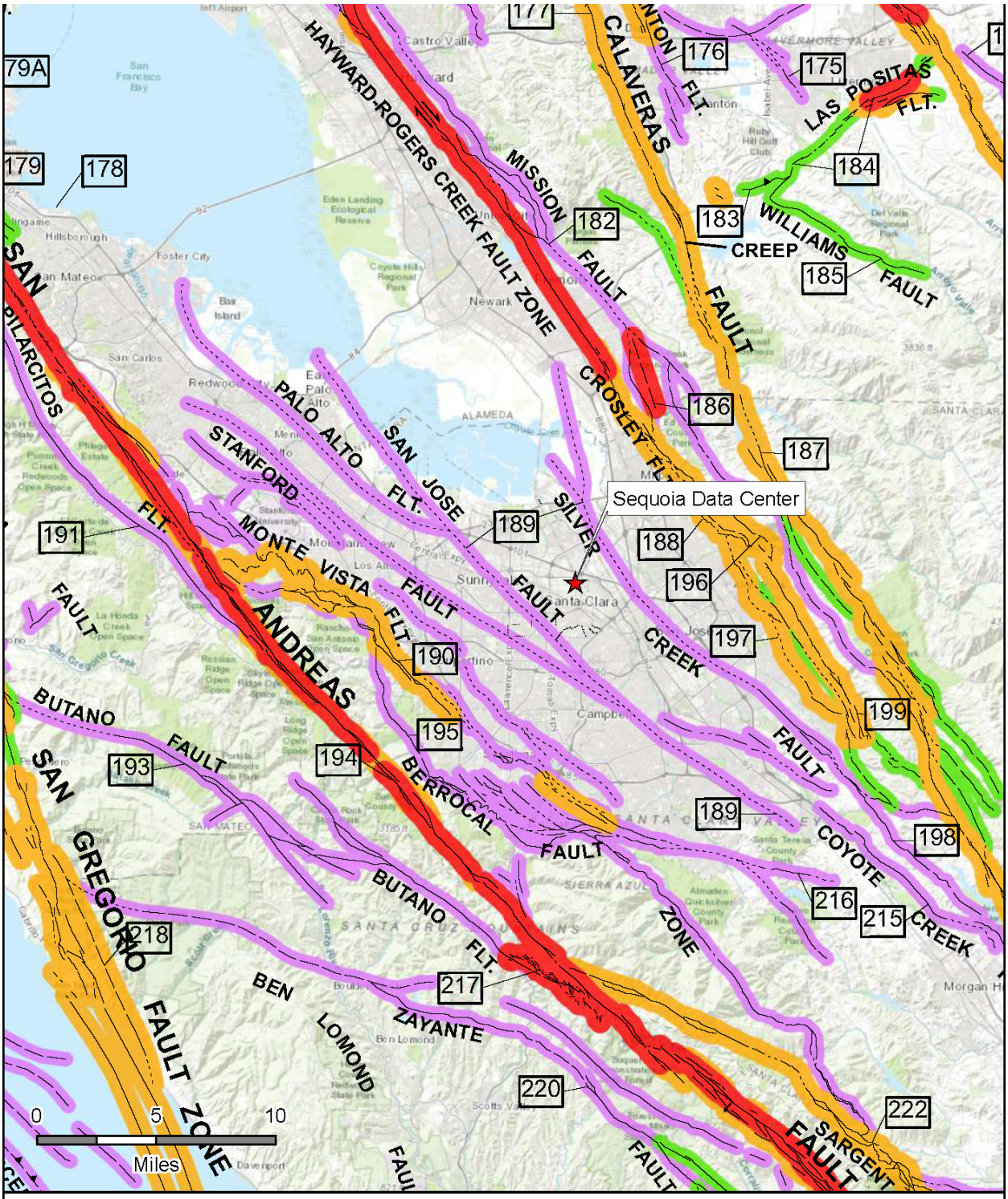
Ground water was encountered at depths ranging from approximately 10 to 10.5 feet below the current grade. Fluctuations in groundwater levels are common due to seasonal weather patterns, underground drainage patterns, regional fluctuations, and other factors (Sequoia 2019a).

Seismicity and Seismic Hazards

The significant earthquakes that occur in the Bay Area are generally associated with crustal movement along well-defined active fault zones of the San Andreas Fault system, which regionally trend in a northwesterly direction (**Figure 5.7-3**). Three of the major earthquake faults (the San Andreas Fault, the Hayward-Rogers Creek Fault, and the Calaveras Fault) that comprise the San Andreas Fault system extend through the Bay Area (CGS 2015). The Sequoia Data Center site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (known formerly as a Special Studies Zone), and there are no known active faults within the City limits of Santa Clara (Sequoia 2019a).

Figure 5.7-3 identifies the regional earthquake faults in the project vicinity. While seismologists cannot predict earthquake events, the U.S. Geological Survey's Working Group on California Earthquake Probabilities estimates there is a 72 percent chance of at least one magnitude 6.7 earthquake occurring in the Bay Area region between 2002 and 2032. Higher levels of shaking and damage would be expected for earthquakes occurring at closer distances. The faults considered capable of generating significant earthquakes in the area are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The three major faults in the region are the Calaveras Fault (approximately 9.1 miles east of the site), the San Andreas Fault (approximately 11.6 miles west of the site), and the Hayward-Rogers Creek Fault (approximately 5.8 miles east of the site) (CGS 2010). Structural design of facilities in California are required to incorporate design features to ensure public safety if a seismic event generates sufficient ground motion to impact the structural integrity of the facility in accordance with California Building Code (CBC 2019).

Loose unsaturated sandy soils can settle during strong seismic shaking. However, the soils encountered below the design groundwater level at the site are predominantly clays, clayey sand, silty clay, gravels, and poorly graded sands (Kleinfelder 2018). Therefore, the potential for significant differential seismic settlement affecting the proposed project is presumed low.



Fault Classification
- Historic
- Holocene
- Late Quaternary
- Quaternary

Figure 5.7-3
Regional Fault Map

Sources: California Department of Conservation 2010, ESRI, Jacobs 2019a

Soils

Figure 5.7-4 depicts the surficial soil units at and near the project site. Soil types in the area include clay in the low-lying central areas, loam and gravelly loam in the upper portions of the valley, and eroded rocky clay loam in the foothills. The soil at the site is classified as Urban Land by the U.S. Department of Agriculture (NRCS 2019). The average grade of the valley floor ranges from nearly horizontal to about two percent generally down to the northwest. Grades are steeper on the surrounding hillsides (Santa Clara 2011).

Two test borings were performed as part of the project-specific geotechnical report. One boring was completed to a depth of 120 feet and one boring to a depth of 48 feet. The uppermost layer of soil encountered at the site consists of roughly 4.5 feet of fill made up of lean clay with sand and clayey sand. Beneath the fill, there are alluvial soils including layers of clays with varying degrees of sand and fine to coarse gravel. Sands and gravels are generally medium dense in the upper 30-40 feet of the soil layers, while sands below this range tend to be dense to very dense. (Sequoia 2019b).

Expansive soil can undergo volume changes with changes in moisture content. Specifically, when wetted during the rainy season expansive soil tends to swell, and when dried during the summer months the material shrinks. However, expansive soil can be mitigated through removal or mixing with non-expansive soil. Moderately expansive clayey soils were encountered near the ground surface throughout the site (Kleinfelder 2018). Soil expansion potential was characterized via laboratory testing of the near-surface soils during the geotechnical investigation of the site. Grading operations would remove much of this surficial material. Excavations at the site would reach a maximum depth of 13-feet for utility trenches, and surficial material removed from the site would be replaced with fill imported to the site (Sequoia 2019a).

Liquefaction

During strong ground shaking, loose, saturated, cohesionless soils can experience a temporary loss of shear strength and act as a fluid. This phenomenon is known as liquefaction. Liquefaction depends on the depth to water, grain size distribution, relative soil density, degree of saturation, and intensity and duration of the earthquake (Youd et al. 2001). The potential hazard associated with liquefaction is seismically induced settlement. The site is mapped within a State of California Seismic Hazard Zone for liquefaction. Areas mapped for this hazard have been impacted historically by liquefaction or display geologic or groundwater conditions conducive to liquefaction. Ground water was encountered at depths ranging from approximately 10 to 10.5 feet below the current grade (Sequoia 2019a). Proposed structures would be designed and constructed to account for this in accordance with the California Building Code (CBC 2019).

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil displace laterally towards the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Generally, failure in this mode is analytically unpredictable because it is difficult to evaluate

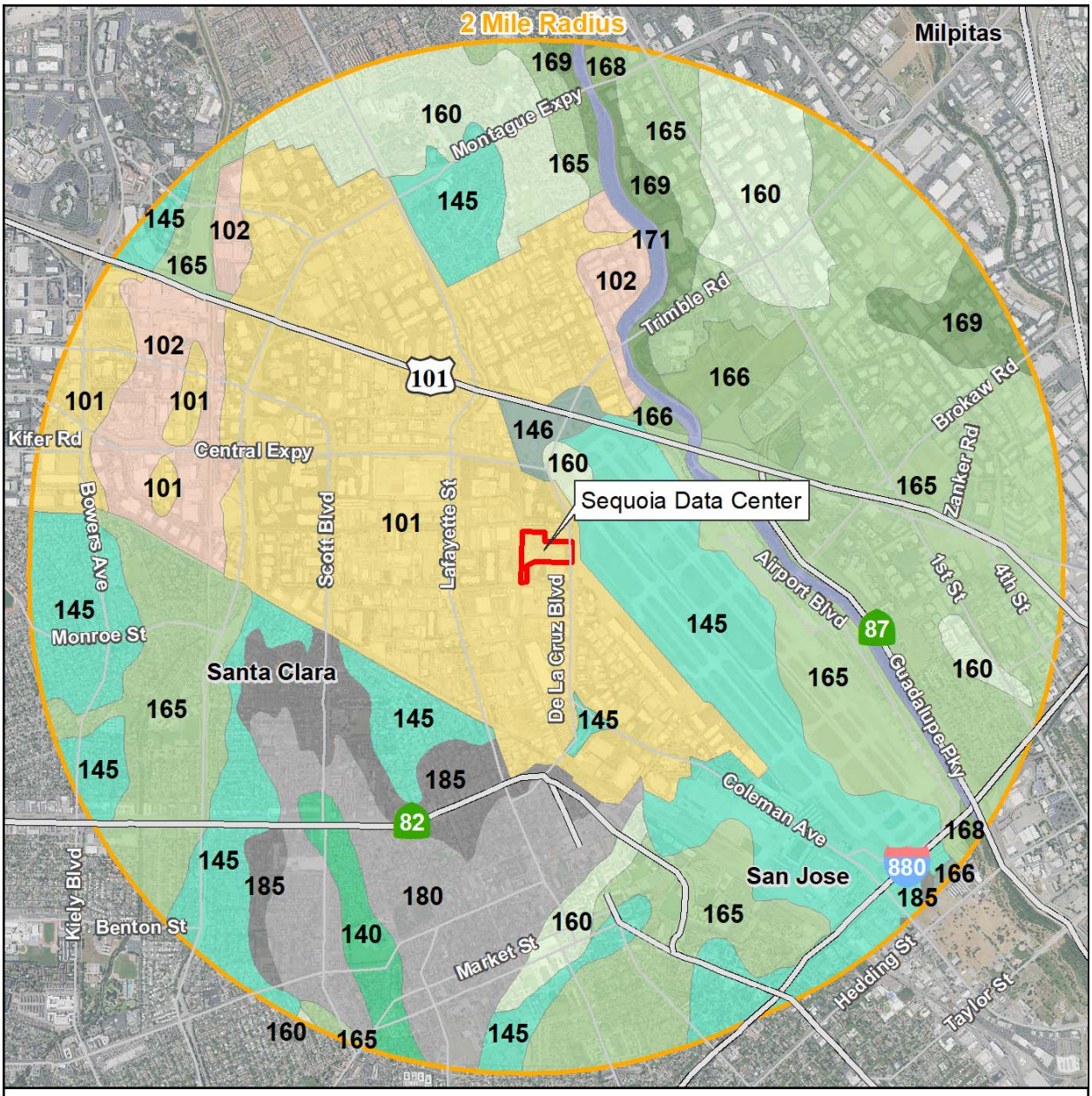


Figure 5.7-4
Surface Soil Map

where the first tension crack would occur. However, there are no stream channels on or adjacent to the site, therefore the project site would not be subject to lateral spreading (Sequoia 2019a).

Regulatory Background

The project would be required to obtain building permits that would be issued by the City of Santa Clara. The issuance of the building permits and oversight provided by the City of Santa Clara would ensure that the project complies with the applicable building codes.

Federal

There are no federal regulations related to geology and soils and paleontological resources that apply to this project.

State

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

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

California Building Standards Code. The California Building Standards Code (CBC) prescribes standards for constructing safer buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions, such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years; the current version is the 2016 CBC.

California Division of Occupational Safety and Health Regulations. Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

State Paleontological Laws, Ordinances, Regulations, and Standards. Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These are valued for the information they yield about the history of the earth and its past

ecological settings. The California Public Resources Code (Section 5097.5) specifies that unauthorized removal of a paleontological resource is a misdemeanor.

The California Environmental Quality Act (CEQA) encourages the protection of all aspects of the environment by requiring state and local agencies to prepare multidisciplinary analyses of the environmental impacts of a project and to make decisions based on the findings of those analyses. CEQA includes, in its definition of historical resources, any object or site that "has yielded, or may be likely to yield, information important in prehistory" (California Code Regulations, title 14, § 15064.5(a)(3)(D)), which is typically interpreted by professional scientists as including fossil materials and other paleontological resources. More specifically, destruction of a "unique paleontological resource or site or unique geologic feature" may be a significant impact under CEQA (CEQA Guidelines Appendix G.VII. (f)).

Local

Local Paleontological Regulations. Staff reviewed the City of Santa Clara General Plan (Santa Clara 2010)) for provisions relevant to paleontological resources. Section 5.6.3 of the general plan identifies protection of paleontological resources as a goal of the city and policies 5.6.3-P1 through P6 outline how the protection of paleontological resources would be achieved.

- 5.6.3-G1 Protection and preservation of cultural resources, as well as archaeological and paleontological sites.
- 5.6.3-G2 Appropriate mitigation if human remains, archaeological resources or paleontological resources are discovered during construction activities.
- 5.6.3-P1 Require that new development avoid or reduce potential impacts to archaeological, paleontological and cultural resources.
- 5.6.3-P2 Encourage salvage and preservation of scientifically valuable paleontological or archaeological materials.
- 5.6.3-P3 Consult with California Native American tribes prior to considering amendments to the City's General Plan.
- 5.6.3-P4 Require that a qualified paleontologist/archaeologist monitor all grading and/or excavation if there is a potential to affect archeological or paleontological resources, including sites within 500 feet of natural water courses and in the Old Quad neighborhood.
- 5.6.3-P5 In the event that archaeological/paleontological resources are discovered, require that work be suspended until the significance of the find and recommended actions are determined by a qualified archaeologist/paleontologist.
- 5.6.3-P6 In the event that human remains are discovered, work with the appropriate Native American representative and follow the procedures set forth in State law.

5.7.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures:

The applicant proposes to implement the following design measures (Applicant Proposed Measures or APM) as part of the project:

APM GEO-1: To reduce the risk of damage to the SDC and SBGF as a result of geologic conditions at and near the SDC site, all recommendations outlined in the site-specific geotechnical investigation performed by Kleinfelder in October 2018 will be incorporated into the SDC and SBGF. These measures have been designed and will be incorporated to reduce the risk of settlement, liquefaction, and damage from expansive soils to ensure that users of the project are not exposed to a significant safety risks as a result of the SDC and SBGF. These measures are listed in full in Appendix E (of the SPPE application). The mat slab foundation has been designed to CBC seismic standards.

APM GEO-2: A Worker Environmental Awareness Training Program will be implemented, which will provide training to construction personnel regarding proper procedures (including identification and notification) in the event fossil materials are encountered during construction.

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

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

Construction

NO IMPACT. The probability that construction of the proposed project would have an impact on the risk of loss, injury, or death involving rupture of an earthquake fault during construction is remote. The project site is located within the seismically active San Francisco Bay region, and the nearest historically active fault, the Hayward-Rogers Creek Fault, is approximately 6.1 miles from the project site (**Figure 5.7-3**). No active or potentially active faults are known to pass directly beneath the site. Several potentially active faults have been mapped outside of the general project area, the closest being the Silver Creek fault, which is mapped approximately 1.9 miles southwest of the proposed project (**Figure 5.7-3**). Due to the distance of faults from the site and the absence of known faults within or near the site, development of the project would not expose people or buildings to known risks of fault rupture (Sequoia 2019a). Given this, the impact would be less than significant.

Operation and Maintenance

NO IMPACT. The probability that operation or maintenance of the proposed project would have an impact on the risk of loss, injury, or death involving rupture of an earthquake fault during operation is remote. There are no mapped Alquist-Priolo Special Studies Zones for active faults crossing the project site (**Figure 5.7-3**). As described above, the zone of damage is limited to a relatively narrow area along either side of the fault. Therefore, no impacts related to fault rupture would occur.

ii) Strong seismic ground shaking?

Construction

LESS THAN SIGNIFICANT IMPACT. Earthquakes along several nearby active faults in the region could cause moderate to strong ground shaking at the site (Sequoia 2019a). The intensity of ground motion and the damage done by ground shaking would depend on the characteristics of the generating fault, distance to the fault and rupture zone, earthquake magnitude, earthquake duration, and site-specific geologic conditions. The design of the project, including the building foundations, would assess potential impacts of strong seismic ground shaking. Seismic hazards would be minimized by conformance to the seismic design criteria of the 2019 California Building Code (**APM GEO-1**). Furthermore, a project-specific geotechnical engineering report would be provided to the City Building Official for review and approval prior to issuance of a building permit. With implementation of the seismic design guidelines per the California Building Code (CBC 2019), as well as the anticipated project-specific recommendations in the final geotechnical engineering report (**APM GEO-1**), the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking, as the SDC and SBGF shall meet the design requirements of the current CBC.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. During operation and maintenance of the proposed project, the project facility would be subject to moderate to strong seismic ground shaking (Sequoia 2019a). However, with implementation of the seismic design guidelines per the California Building Code (CBC 2019), as well as the anticipated project-specific recommendations in the final geotechnical engineering report (**APM GEO-1**), the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking. Therefore, risks to people or structures from strong seismic ground-shaking would continue to be less than significant.

Required Mitigation Measures: None.

iii) Seismic-related ground failure, including liquefaction?

Construction

LESS THAN SIGNIFICANT IMPACT. The site is located within a state-designated Liquefaction Hazard Zone. Soil tests conducted for the site have indicated that several layers could potentially experience liquefaction. In general, these liquefiable layers occur sporadically in discontinuous layers located between roughly 15 and 25 feet below existing grade at the site. The likely consequence of potential liquefaction at the site would be settlement. Total ground surface settlements on the order of 1-2 inches may result from liquefaction or ground softening after a seismic event (Kleinfelder 2018).

As previously mentioned, the project would be constructed in compliance with the 2019 CBC, including all applicable seismic standards for structures (**APM GEO-1**). Compliance with the 2019 CBC reduces potential risks associated with settlement from seismically induced liquefaction. Additionally, mitigation has been incorporated into the design of the project to further reduce the risk of settlement from liquefaction. The mat slab foundation has been designed to CBC seismic standards. This mitigation measure is described in Project Description section above, and is summarized below (**APM GEO-1**):

To reduce the risk of damage to the project as a result of geologic conditions at and near the project site, all recommendations outlined in the site-specific geotechnical investigation performed by Kleinfelder in October 2018 will be incorporated into the project. These measures have been designed and will be incorporated to reduce the risk of settlement, liquefaction, and damage from expansive soils to ensure that users of the project are not exposed to a significant safety risk as a result of the project.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. During operation and maintenance of the proposed project the project facility would be subject to moderate to strong seismic ground shaking (Sequoia 2019a). However, with implementation of seismic design guidelines per the California Building Code (CBC 2019), as well as the anticipated project-specific recommendations in the final geotechnical engineering report (**APM GEO-1**), the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking, including ground failure, liquefaction, or seismically induced subsidence. Therefore, risks to people or structures from strong seismic ground-shaking would continue to be less than significant.

Required Mitigation Measures: None**.**

iv) Landslides?

Construction

NO IMPACT. There would be no impact from landslides. The proposed project is located on very mildly sloping terrain and is not located in any of the areas subject to landslides as identified in the City of Santa Clara General Plan (Santa Clara 2011). Grading of the substation expansion would not create steep slopes and construction of the proposed project would not cause a landslide.

Operation and Maintenance

NO IMPACT. Operation and maintenance activities would not materially change from existing activities and would not include construction or grading of new slopes. For these reasons, and because the project components are not located in areas subject to landslides as identified in the City of Santa Clara General Plan (Santa Clara 2010), no impact would occur.

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

Construction

LESS THAN SIGNIFICANT IMPACT. Construction activities associated with the project would temporarily increase sedimentation and erosion by exposing soils to wind and runoff until construction is complete and new vegetation is established (Sequoia 2019a). As discussed in **Section 5.10, Hydrology and Water Quality**, the project is subject to construction-related storm water permit requirements. Prior to ground-disturbing construction activity, the project must comply with the Construction General Permit, which includes filing a Notice of Intent with the State Water Resources Control Board. The project would be subject to the requirements of Provision C.3 of Santa Clara's National Pollutant Discharge Elimination System (NPDES) permit and would be required to comply with Santa Clara's BMPs for erosion and sedimentation control during the construction period, as outlined in the NPDES permit (Sequoia 2019a). When construction is complete, the project would file a Notice of

Termination with the San Francisco Bay RWQCB, documenting that all elements to the SWPPP have been implemented.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would be subject to a post-construction NPDES Permit and Provision C.3 requirements of Santa Clara's NPDES permit. BMP's for erosion and sedimentation control taken to comply with the NPDES permit would ensure the site would not include areas of exposed topsoil subject to erosion. Surface water runoff from the facility is not expected to impact soil erosion or cause the loss of topsoil during project operation. Occasional minor surface disturbance may continue to be required during maintenance activities but such disturbance would be temporary and small (Jacobs 2019a). Continuous operation and maintenance work would not result in increased erosion or topsoil loss and therefore, no significant impact associated with erosion or loss of topsoil would occur.

Required Mitigation Measures: None.

c. Would the project be located on geologic units 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?

Construction

LESS THAN SIGNIFICANT IMPACT. Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open face, such as the steep bank of a stream channel or slopes. The project site is located in a mapped liquefaction hazard zone. The site is not located within a landslide hazard zone, and geomorphology of the site is such that the site would not be subject to lateral spreading. There are no stream channels or other open faces on or adjacent to the site that would be subject to lateral spreading.

Based on the site-specific geotechnical report, subsurface conditions at the project site are generally stable with a low potential for minor settlement (up to 2 inches) (Sequoia 2019b). The project would be designed and constructed in accordance with standard engineering safety techniques and in conformance with the requirements of applicable, current California Building Code (CBC 2019) (**APM GEO-1**). The project would not change or exacerbate the geologic conditions of the project area and the project would not expose people or property, directly or indirectly, to unstable geologic or soil units.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Operation and maintenance activities would not materially change the surface runoff or geotechnical characteristics of the material beneath the project facilities. Thus, operation and maintenance activities would not introduce new soil stability hazards. Occasional minor surface disturbance may continue to be required during maintenance activities but such disturbance would be temporary and small. The project would not expose people or property, directly or indirectly, to unstable geologic or soil units.

Required Mitigation Measures: None.

d. Would the project be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?

Construction

LESS THAN SIGNIFICANT IMPACT. As discussed above in section **5.7.1 Setting**, expansive soil behavior is a condition where clay soils react to changes in moisture content by expanding or contracting. Poorly-drained soils have greater shrink-swell potential. This condition can be eliminated by ensuring slabs-on-grade have sufficient reinforcement and be supported on a layer of non-expansive soil, along with limiting moisture changes in the near-surface soils, among other design criteria.

Some of the soils encountered during geotechnical review were moderately expansive as defined in Section 1803.5.3 of the CBC (Kleinfelder 2018). The policies of the City of Santa Clara General Plan (Santa Clara 2010) have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the City. To avoid risks associated with expansive soils, foundation designs would be reviewed and approved by City engineers for compliance with the 2019 CBC general foundation design standards (**APM GEO-1**). (Sequoia 2019a). Thus, the project would not create substantial direct or indirect risks to life or property as the SDC and SBGF shall meet the design requirements of the current CBC.

Operation and Maintenance

NO IMPACT. Operation and maintenance activities would not change materially the surface runoff or geotechnical characteristics of the material beneath the project facilities. Thus, operation and maintenance activities would not introduce new soil stability hazards. Occasional minor surface disturbance may continue to be required during maintenance activities, but such disturbance would be temporary and small. The project would not expose people or property, directly or indirectly, to unstable geologic or soil units.

Required Mitigation Measures: None.

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

Construction

NO IMPACT. The project would connect to an existing city-provided sanitary sewer connection and would not require septic tanks (Sequoia 2019a). Therefore, there would be no impact to soils as a result of sanitary waste disposal from the project during construction.

Operation and Maintenance

NO IMPACT. The project would connect to an existing City-provided sanitary sewer connection and would not require septic tanks (Sequoia 2019a). Therefore, there would be no impact to soils as a result of sanitary waste disposal from the project during operation and maintenance.

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

Construction

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The level of paleontological sensitivity at the project site is considered to be moderate. The project site is located in the Santa Clara Valley, an area known to have scientifically significant but widespread or intermittent fossil discoveries. Surficial sediment has been mapped as Holocene (11,700 years before present) and paleontological evidence indicates that Pleistocene (2.6 million to 11,700 years before present) sediments may also be present at or near the surface. Five fossil sites have been found at or near the ground surface within two miles of the project site, especially along stream beds. However, the general area has been extensively developed over the last 50 years as part of the technology research and development area known as Silicon Valley. The site has already been disturbed by prior, modern human occupation including excavation to a depth of 4 or 5 feet and the placement of fill material (Sequoia 2019a).

The potential to disturb paleontological resources would occur during the construction activities requiring earth moving, such as grading, trenching for utilities, excavation for foundations, and installation of support structures where native soil would be disturbed. Based on the ground disturbance necessary to complete the project components, there is a limited potential for adverse impacts to scientifically significant paleontological resources from moderate sensitivity (PFYC 3). Ground disturbing activities of ten feet or more have the potential to impact undiscovered paleontological resources (Santa Clara 2010). As a project design feature, the project will implement a Worker Environmental Awareness Training Program (**APM GEO-2**), which will provide training to construction personnel regarding proper procedures (including identification and notification) in the event fossil materials are encountered during construction.

APM GEO-2 would not reduce construction impacts to a less-than-significant level because it does not fully address what needs to happen once an individual identified a paleontological resource during construction. It does not specifically state how the project applicant will identify a qualified paleontologist, and it does not provide detailed procedures for collection and preservation of significant paleontological resources identified during construction. **Mitigation Measure** (**MM**) **GEO-1**, which supplements **APM GEO-2**, includes additional requirements regarding identification of a qualified paleontologist and guidelines for the collection and preservation of any significant paleontological resources identified during construction.

Implementation of **APM GEO-2** and **MM GEO-1**, discussed below and agreed to by the project applicant (Sequoia 2020a). would ensure that staff working at the site would contact the appropriate technical expert, who would then be able to determine the significance of the paleontological resource, and properly salvage that resource. Therefore, the project's impact would be less than significant.

MM GEO-1: If a fossil is found and determined by the approved paleontologist to be significant and avoidance is not feasible, the qualified paleontologist shall develop and implement an excavation and salvage plan in accordance with Society of Vertebrate Paleontology standards. Construction work in these areas shall be halted or diverted to allow recovery of fossil remains in a timely manner. Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall then be deposited in a scientific institution with paleontological collections. A final Paleontological Mitigation Plan Report shall be prepared that outlines the results

of the mitigation program. The City shall be responsible for ensuring that the paleontologist's recommendations regarding treatment and reporting are implemented.

Operation and Maintenance

NO IMPACT. There is no potential to disturb paleontological resources during operations because there would be no earth-moving activities required for operations. Occasional minor surface disturbance may continue to be required during maintenance activities, but such disturbance would be temporary, small and most likely limited to disturbance of fill. There would be no impact to paleontological resources.

Required Mitigation Measures: MM GEO-1.

5.7.3 References

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5.8 Greenhouse Gas Emissions

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC) and the Sequoia Backup Generating Facility (SBGF, or project) with respect to greenhouse gas (GHG) emissions.

GREENHOUSE GAS EMISSIONS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Environmental checklist established California Environmental Quality Act (CEQA) Guidelines, Appendix G.

5.8.1 Setting

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of GHGs have a much broader, global impact. Global warming associated with the "greenhouse effect" is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal GHGs that contribute to global warming and climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), black carbon, and fluorinated gases (F-gases): hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

Each GHG has its own potency and effect upon the earth's energy balance, expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1. Specifically, the GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2. The larger the GWP, the more that a given gas warms the earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years.

For example, CH_4 has a GWP of 28 over 100 years from the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC 2013), which means that it has a global warming effect 28 times greater than CO_2 on an equal-mass basis. The F-gases are sometimes called high-GWP gases because, for a given amount of mass, they trap substantially more heat than CO_2. The GWPs for these gases can be in the thousands or tens of thousands. The carbon dioxide equivalent (CO_2e) for a source is obtained by multiplying each quantity of GHG by its GWP and then adding the results together to obtain a single, combined emission rate representing all GHGs in terms of CO_2e.

Regulatory Background

Federal

Endangerment Finding and Cause or Contribute Finding. In April 2007, the US Supreme Court held that GHG emissions are pollutants within the meaning of the Clean Air Act (CAA). In reaching its decision, the Court also acknowledged that climate change results, in part, from anthropogenic causes (*Massachusetts et al. v. Environmental Protection Agency*, 549 U.S. 497 [2007]). The Supreme Court's ruling paved the way for the regulation of GHG emissions by the US EPA under the CAA.

In response to this Supreme Court decision, on December 7, 2009, the US EPA Administrator signed two distinct findings regarding GHGs under the CAA, section 202(a):

- Endangerment Finding: That the current and projected concentrations of the GHGs in the atmosphere threaten the public health and welfare of current and future generations; and
- Cause or Contribute Finding: That the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

US EPA has also enacted regulations for GHG reporting, the phase-out and banning of high global warming potential chemicals, and stationary GHG emissions source permitting. However, the project, as it is currently proposed, would not be subject to any of these federal regulations.

State

Global Warming Solutions Act of 2006. In 2006, the California State Legislature enacted the Global Warming Solutions Act of 2006, or Assembly Bill (AB) 32, which provides the framework for regulating GHG emissions in California. This law requires the ARB to design and implement emission limits, regulations, and other measures such that statewide GHG emissions are reduced in a technologically feasible and cost-effective manner to 1990 levels by 2020. The statewide 2020 emissions limit is shown under **AB 32 Scoping Plan**.

AB 32 Scoping Plan. Part of ARB's direction under AB 32 was to develop a Scoping Plan that contains the main strategies California will use to reduce GHG emissions that cause climate change. ARB first approved the AB 32 Scoping Plan in 2008 and released its first update in 2014. The Scoping Plan includes a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program. In December 2007, ARB set the statewide 2020 emissions limit, defined as reducing emissions to 1990 levels, at 427 million metric tons of CO_2e ($MMTCO_2e$). The May 2014 First Update to the Climate Change Scoping Plan adjusted the 1990 emissions estimate and the statewide 2020 emissions limit goal to 431 $MMTCO_2e$ (ARB 2014).

Regulation for the Mandatory Reporting of Greenhouse Gas Emissions. One key regulation resulting from AB 32 was ARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, which came into effect in January 2009. It requires annual GHG emissions reporting from electric power entities, fuel suppliers, CO_2 suppliers, petroleum and natural gas system operators, and industrial facilities that emit 10,000 $MTCO_2e$/yr from stationary combustion and/or process sources. The project would not be impacted by this regulation because its stationary combustion GHG emissions are expected to be below the reporting threshold of 10,000 $MTCO_2e$/yr.

Executive Order B-30-15. On April 29, 2015, Governor Brown issued Executive Order B-30-15, directing state agencies to implement measures to reduce GHG emissions 40 percent below their 1990 levels by 2030 and to achieve the previously-stated goal of an 80 percent GHG reduction by 2050.

Renewable Energy Programs. In 2002, California initially established its Renewables Portfolio Standard, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. State energy agencies recommended accelerating that goal, and California Executive Order S-14-08 (November 2008) required California utilities to reach the 33 percent renewable electricity goal by 2020, consistent with the AB 32 Scoping Plan. In April 2011, Senate Bill 2 of the First Extraordinary Session (SB X1-2) was signed into law. SB X1-2 expressly applies the new 33 percent Renewables Portfolio

Standard by December 31, 2020, to all retail sellers of electricity and establishes renewable energy standards for interim years prior to 2020. On October 7, 2015, SB 350 was signed into law, establishing new clean energy, clean air and greenhouse gas reduction goals for 2030 and beyond. SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. SB 100, signed into law on September 10, 2018, advances the RPS deadlines to 50 percent renewable resources by December 31, 2026, and 60 percent by December 31, 2030. In addition, SB 100 establishes policy that renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity by December 31, 2045.

Mobile Source Strategy. In May 2016, ARB prepared the Mobile Source Strategy, which addresses the current and proposed programs for reducing all mobile source emissions including GHG emissions. The Mobile Source Strategy identifies programs that the state and federal government have or will adopt, which further the goals of the Scoping Plan. Some programs provide incentives to facilitate increased purchase of new, lower emission light-, medium-, and heavy-duty vehicles to aid the state in achieving emission reduction goals. Other programs such as the On-Road, Low-NOx and Zero-Emission Technology Program require vehicle manufacturers to offer engines that reduce NOx emissions 90 percent from current levels. This will have a co-benefit for reducing GHG emissions depending on how this goal is met (ARB 2016). These programs calling for more stringent emissions limits are required by state and federal law and monitored by ARB or U.S. EPA.

Senate Bill 32 and Assembly Bill 197. On September 8, 2016, SB 32, codified as Section 38566 of the Health and Safety Code, was enacted. It extends California's commitment to reduce GHG emissions by requiring the state to reduce statewide GHG emissions by 40 percent below 1990 levels by 2030. A companion bill, AB 197, assures that the state's implementation of its climate change policies is transparent and equitable, with the benefits reaching disadvantaged communities. In response, ARB updated the AB 32 Scoping Plan in November 2017 to establish a path that will get California to its 2030 target (ARB 2017a).

Short-Lived Climate Pollutant Reduction Strategy. In an effort to best support reduction of GHG emissions consistent with AB 32, ARB released the Short-Lived Climate Pollutant (SLCP) Reduction Strategy in March 2017. This plan, required by SB-605 (the Small Business Procurement and Contract Act), establishes targets for statewide reductions in SLCP emissions of 40 percent below 2013 levels by 2030 for methane and hydrofluorocarbons and 50 percent below 2013 levels by 2030 for anthropogenic black carbon (ARB 2017b). The SLCP Reduction Strategy was integrated into the 2017 update to ARB's Scoping Plan.

Regional

2017 Bay Area Clean Air Plan. The BAAQMD adopted the 2017 Bay Area Clean Air Plan on April 19, 2017 (BAAQMD 2017a). It provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue its progress toward attaining all state and federal ambient air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets.

BAAQMD CEQA guidelines. BAAQMD publishes CEQA guidelines to assist lead agencies in evaluating a project's impacts on air quality (BAAQMD 2017b). This 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 a project would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The BAAQMD CEQA Guidelines also outline a methodology for estimating GHG emissions.

Plan Bay Area 2040. Under the requirements of SB 375, all metropolitan regions in California must complete a Sustainable Communities Strategy (SCS) as part of a Regional Transportation Plan. In the Bay Area, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) are jointly responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by ARB. In July 2017, the MTC and ABAG approved Plan Bay Area 2040, which is a strategic update to the previous plan approved in July 2013. The Bay Area GHG reduction targets established by ARB in September 2010 include a seven percent reduction in GHG emissions per capita from passenger vehicles by 2020 compared to 2005 emissions. Similarly, Plan Bay Area 2040 includes a target to reduce GHG emissions per capita from passenger vehicles 15 percent by 2035 compared to 2005 emissions (MTC & ABAG 2017).

Local

City of Santa Clara General Plan. The City of Santa Clara (City) General Plan includes policies that address the reduction of GHG emissions during the planning horizon of the General Plan. Goals and policies that address sustainability (see Appendix 8.13: Sustainability Goals and Policies Matrix in the Santa Clara General Plan) are aimed at reducing the city's contribution to GHG emissions. As described below, the development of a comprehensive GHG emissions reduction strategy for the city is also included in the Santa Clara General Plan.

City of Santa Clara Climate Action Plan. The City has a comprehensive GHG emissions reduction strategy, referred to as the City's Climate Action Plan (CAP), to achieve its share of statewide emissions reductions for the 2020 timeframe established by AB 32. The City's CAP was adopted on December 3, 2013, and specifies the strategies and measures to be taken for a number of focus areas (for example, coal-free and large renewables, energy efficiency, water conservation, transportation and land use, waste reduction) city-wide to achieve the overall emission reduction target. The City's CAP also includes an adaptive management process that can incorporate new technology and respond when goals are not being met.

A key reduction measure that is being undertaken by the City under the CAP is in the Coal-Free and Large Renewables focus area. The City operates Silicon Valley Power (SVP), a publicly owned utility that provides electricity for the community of Santa Clara, including the project site. Since nearly half (48 percent) of Santa Clara's GHG emissions result from electricity use, removing GHG-intensive sources of electricity generation (such as coal) is a major focus area in the City's CAP for achieving the City's GHG reduction goals (City of Santa Clara 2013). This measure is being undertaken by SVP.

CEQA requires lead agencies to address the consistency of individual projects requiring discretionary approvals with reduction measures in the 2013 CAP and goals and policies in the Santa Clara General Plan designed to reduce GHG emissions. Compliance with appropriate measures in the City's CAP would ensure an individual project's consistency with an adopted GHG reduction plan.

Existing Conditions

California is a substantial contributor to global GHG emissions. The total gross California GHG emissions in 2016 were 429.4 $MMTCO_2e$ (ARB 2018). The largest source of GHG emissions in California is transportation, followed by industrial activities and electricity generation in state and out of state (ARB 2018). In 2016, total gross US greenhouse gas emissions were 6,511.3 $MMTCO_2e$ (US EPA 2018).

The City prepares an annual report to assess progress towards meeting the GHG reduction targets established in the 2013 CAP and recommend next steps to help the City meet its targets. The City tracks changes in community-wide GHG emissions since 2008, which is the City's jurisdictional baseline year for GHG emissions inventory. The CAP 2018 Annual Report provides the City's GHG emissions inventory in 2016, which is the most recent GHG emissions inventory for the City. **Table 5.8-1** presents the City's 2016 GHG emissions inventory (City of Santa Clara 2018). The Commercial and Industrial sector comprised 61 percent (1.080 $MMTCO_2e$) of total emissions in Santa Clara. Transportation and Mobile Sources comprised 29 percent (0.5060 $MMTCO_2e$) of total emissions in Santa Clara. Residential sources emitted 8 percent (0.1329 $MMTCO_2e$), Solid Waste emitted 1 percent (0.0257 $MMTCO_2e$) and Water & Wastewater emitted 1 percent (0.0243 $MMTCO_2e$) of total emissions (City of Santa Clara 2018).

TABLE 5.8-1 CITY OF SANTA CLARA 2016 GHG EMISSIONS INVENTORY

Sector	Carbon dioxide emissions ($MMTCO_2e$)
Commercial Energy	1.080
Residential Energy	0.1329
Transportation & Mobile Sources	0.5060
Solid Waste	0.0257
Water & Wastewater	0.0243
Total Emissions	1.769

Source: City of Santa Clara 2018. Note, source displays value in $MTCO_2e$, staff converted to $MMTCO_2e$ to be consistent with the State and Federal emission units.

5.8.2 Environmental Impacts and Mitigation Measures

Methodology

The applicant estimated GHG emissions for both construction and operation. Construction GHG emissions from the project are a result of construction equipment and onsite and offsite vehicle trips, such as material haul trucks, worker commutes, and delivery vehicles. The applicant estimated the GHG emissions using construction equipment fuel consumption using the California Emissions Estimator Model (CalEEMod®). CalEEMod® was developed by Ramboll (then known as Ramboll Environ) in collaboration with the California Air Pollution Control Officers Association for use in developing emission inventories suitable for CEQA analysis. Sources of construction criteria air pollutant and toxic air contaminates (TACs) emissions are exhaust from off-road equipment and on-road vehicles and ROG emissions from architectural coating and paving activities. Criteria air pollutants and TAC emissions from off-road equipment were based on the equipment inventory, equipment specifications, their daily usage and construction-phasing schedule based on CalEEMod® defaults. CalEEMod® defaults are based on the project's land use area for each type (Sequoia 2019b, Appendix F, section 2.1).

GHG emissions from the SDC and SBGF are a result of combustion from readiness testing and maintenance of the standby emergency generators, offsite vehicle trips for worker commutes and

material deliveries, and facility upkeep (such as architectural coatings, consumer product use, landscaping, water use, waste generation, natural gas use for comfort heating, and electricity use). The applicant estimated emergency generator emissions from readiness testing and maintenance using emission factors from US EPA's Final Mandatory Reporting of Greenhouse Gases Rule, as presented in 40 CFR 98.33. The applicant estimated vehicle emissions, which include vendor delivery vehicles fuel economy, along with worker vehicle idling factors by using CalEEMod (Sequoia 2019b, Appendix F, section 2.2.3). Facility upkeep emissions were also calculated using CalEEMod, based on the square footage of the buildings to be constructed, paved areas, and project-specific electricity use. It should be noted that in CalEEMod, the applicant assumed the total area of the buildings to be 702,114 square feet per the application (Sequoia 2019a).

Applicant Proposed Measures: The applicant proposes to implement the following project design measures for Greenhouse Gas Emissions (termed Applicant Proposed Measures, or APMs, in this analysis) as part of the project to reduce potential impacts of construction related Greenhouse Gas Emissions (Sequoia 2019e). The BAAQMD's CEQA Guidelines do not have an adopted Threshold of Significance for construction-related GHG emissions. Instead, the BAAQMD CEQA Guidelines encourage incorporation of all best management practices (BMPs) that are feasible and possible to reduce GHG emissions during construction and operation. To reduce GHG impacts, the applicant proposes to incorporate the BAAQMD's recommended "basic construction mitigation measures" (which are BMPs), that also include on-road vehicle/off-road equipment engine emissions reduction measures as project design features.

Construction [SDC and SBGF]

APM GHG-1: BAAQMD construction-period BMPs would be implemented to reduce GHG emissions during construction, as feasible and applicable. BMPs may include use of alternative-fueled (for example, biodiesel or electric) construction vehicles and equipment for at least 15 percent of the fleet, use of at least 10 percent of local building materials, and recycling or reusing at least 50 percent of construction waste.

APM GHG-2: SDC and SBGF would divert at least 75 percent of construction waste from landfill disposal and would use high-recycled content materials. This measure would exceed the City's Construction and Demolition Debris Recycling Program requirement of recycling or diverting at least 50 percent of waste materials generated during construction, from landfill disposal.

APM GHG-3: As a condition of approval, SDC and SBGF construction would follow BAAQMD construction BMPs including limiting idling times to 5 minutes or less and limiting vehicle speeds to 15 miles per hour or less.

Project Operation

APM GHG-4: To reduce GHG emissions and the use of energy related to building operations, the SDC chillers would be installed with variable frequency drives to provide efficient operation [**SDC only**].

APM GHG-5: Water use reduction measures are also be incorporated in the building design, including the use of air-cooled chillers. Development standards for water conservation would be applied to increase efficiency in indoor and outdoor water use areas. Furthermore, SDC and SBGF would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24 baseline

standard requirements for energy efficiency, based on the 2019 Energy Efficiency Standards requirements, and CALGreen. For SDC and SBGF, these measures would include:

- Water efficient landscaping that is drought tolerant and low maintenance, consisting of native and regionally appropriate trees, shrubs, and groundcover to minimize irrigation requirements
- Use of air-cooled chillers that do not consume water annually

APM GHG-6: If required by the City as a design review condition, solar panels would be installed at the SDC. **[SDC only]**

APM GHG-7: SDC would include bicycle and pedestrian amenities consistent with the City's requirements. **[SDC only]**

APM GHG-8: SDC would include electrical vehicle charging stations. **[SDC only]**

APM GHG-9: SDC would use lighting control to reduce energy usage for new exterior lighting and air-side economization for building cooling. Water efficient landscaping and ultra-low flow plumbing fixtures in the proposed building would limit water consumption. In addition, SDC would have a "Cool Roof", using reflective surfaces to reduce heat gains. Water-side economizers would be used to cool data center loads. **[SDC only]**

APM GHG-10: SDC has a Power Usage Effectiveness of 1.23 and an average rack power rating range of 8 to 10 kilowatts. **[SDC only]**

These project design measures outlined above have been determined by staff to be sufficient, and would reduce GHG emissions even further than emissions levels that were analyzed by staff. Energy Commission staff does not recommend any additional GHG mitigation measures.

Significance Criteria

BAAQMD CEQA Guidelines include recommended thresholds for use in determining whether projects would have significant adverse environmental impacts. For commercial/industrial land use development projects, BAAQMD has adopted a numeric threshold of 1,100 $MTCO_2e/yr$ and a qualitative threshold of complying with a qualified greenhouse gas reduction strategy; and for stationary-source projects, the numeric threshold is 10,000 $MTCO_2e/yr$. Land use development projects include residential, commercial, industrial, and public land uses and facilities, whereas stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and require a local air district permit to operate (BAAQMD 2017b). Given that the project would include standby emergency generators requiring BAAQMD permits to operate, the significance threshold for stationary-source projects would be applicable to the project's stationary source emissions.

The BAAQMD threshold of 10,000 $MTCO_2e/yr$ is consistent with stationary source thresholds adopted by other air quality management districts throughout the state. According to BAAQMD CEQA guidelines (BAAQMD 2017b), the 10,000 $MTCO_2e/yr$ threshold will capture 95 percent of the stationary source sector GHG emissions in the Bay Area. The five percent of emissions that are from stationary source projects below the 10,000 $MTCO_2e/yr$ threshold account for a small portion of the Bay Area's total GHG emissions from stationary sources and these emissions come from very small projects. Such small stationary source projects would not significantly add to the global problem of climate change, and they would not hinder

the Bay Area's ability to reach the AB 32 goal in any significant way, even when considered cumulatively (BAAQMD 2017b).

New permit applications to BAAQMD for stationary sources that comply with the quantitative threshold of 10,000 $MTCO_2e$/yr would not be "cumulatively considerable" because they also would not hinder the state's ability to solve the cumulative greenhouse gas emissions problem pursuant to AB 32. The AB 32 Scoping Plan measures, including the cap-and-trade program, provide for necessary emissions reductions from the stationary source sector to achieve AB 32 2020 goals (BAAQMD 2017b).

GHG impacts from the project's standby emergency generators would be considered to have a less-than-significant impact if emissions are below the BAAQMD's threshold of 10,000 $MTCO_2e$/yr. Other project-related emissions from mobile sources, area sources, energy use and water use, would not be included for comparison to this threshold, based on guidance in the BAAQMD's CEQA Guidelines (BAAQMD 2017b). GHG impacts from all other project-related emission sources would be considered to have a less-than-significant impact if the project is consistent with the Santa Clara CAP and applicable regulatory programs and policies adopted by ARB or other California agencies.

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

Construction

LESS THAN SIGNIFICANT IMPACT. Construction of the project would result in GHG emissions generated by onsite and offsite vehicle trips (material haul truck, worker commute, and delivery vehicle trips) and operation of construction equipment. The applicant estimated that these sources would generate approximately 1,395 $MTCO_2e$ during the 18-month construction period (Sequoia 2019b, Appendix F, Table 3, and Sequoia 2019f). The applicant's estimates are based on GWPs of 25 and 298 for CH_4 and N_2O respectively, which are from the IPCC Fourth Assessment Report (AR4 [IPCC 2007]), which for these type of emissions sources is marginally more conservative than using the more recent IPCC AR5 (IPCC 2013) recommended GWPs for CH_4 and N_2O. Currently, most agencies in the United States, including US EPA, are still accepting and using the GWPs from AR4 as the basis for GHG carbon equivalent emission calculations.

Because construction emissions would cease once construction is complete, they are considered short-term. The BAAQMD CEQA guidelines do not identify a GHG emission threshold for construction-related emissions. Instead, BAAQMD recommends that GHG emissions from construction be quantified and disclosed. BAAQMD further recommends incorporation of Best Management Practices (BMPs) to reduce GHG emissions during construction, as feasible and applicable. BMPs may include use of alternative-fueled (for example, biodiesel or electric) construction vehicles and equipment for at least 15 percent of the fleet, use of at least 10 percent of local building materials, and recycling or reusing at least 50 percent of construction waste (BAAQMD 2017b).

Readiness Testing and Maintenance

LESS THAN SIGNIFICANT IMPACT. GHG emissions from project operation would consist of emissions from operation of the standby emergency generators (readiness testing and maintenance), offsite vendor vehicle trips for fuel deliveries, offsite vehicle trips for worker commutes and material deliveries, and facility upkeep, including architectural coatings, consumer product use, landscaping, water use, waste generation, natural gas use for comfort heating, and electricity use.

Project Stationary Emission Sources. The Bay Area Air Quality Management District (BAAQMD)'s Authority to Construct and the California Air Resources Board's (CARB) Airborne Toxic Control Measures (ATCM) limits each engine to no more than 50 hours of operation annually for reliability purposes (i.e., testing and maintenance). However, readiness testing and maintenance of each engine rarely exceeds the applicant's experience 10 hours annually. **Table 5.8-2** shows the maximum potential annual GHG emission estimates for the standby emergency generators readiness testing and maintenance.

Table 5.8-2 shows that the estimated average annual GHG emissions from the project's stationary sources, the standby emergency generators, for the permitted readiness testing and maintenance are well below the BAAQMD GHG emissions significance threshold for stationary sources. The applicant has estimated the total hours of readiness testing and maintenance would be around 10 hours annually, but they are pursuing a permit for up to 50 hours per year, based on ATCM limits. The annual average GHG emissions for all such operation are expected to be well below the BAAQMD GHG emissions significance threshold for stationary sources.

If all 54 standby emergency generators were operated at full load for the full 50 hours per year for readiness testing and maintenance, the standby emergency generators would consume 10,478[1] barrels per year (bbl/year) of diesel fuel. The proposed consumption of diesel fuel by the generators for this level of operation would be approximately 0.003[2] percent of the total California capacity without any emergency operations. This is an insignificant increase in statewide diesel fuel consumption.

TABLE 5.8-2 GREENHOUSE GAS EMISSIONS FROM STATIONARY SOURCES DURING PROJECT OPERATION[a]

Source	Maximum Annual Emissions ($MTCO_2e$/year)
Standby Emergency Generators – Testing and Maintenance	4,301
BAAQMD Threshold	10,000
Exceeds Threshold?	No

Sources: BAAQMD 2017b, Sequoia 2019b, Appendix F, Table 7.
a operation indicates readiness testing and maintenance

SVP Electricity Generation. Electricity for SDC would be provided by SVP. The City currently has ownership interest, or has purchase agreements, for about 1,268 megawatts (MW) of electricity (SVP 2019a). This capacity far exceeds the City's current peak electricity demand of approximately 526 MW for 2018 (SVP 2019b). No new generation capacity is necessary to meet the capacity requirements of new construction or redeveloped facilities within the City to meet the near or projected future demand.

SVP follows the state's preferred loading order in procuring new energy resources. First, the current load (customer) is encouraged to participate in energy efficiency programs to reduce their usage, thus freeing up existing resources (and any related emissions) for new load (electricity demand). In addition, the City, working together with SVP, encourages the use of renewable resources and clean distributed generation, and has seen a significant increase in its applications for large and small

[1] Calculated as: 163 gallons per hour x 50 hours per year x 54 generators = 440,100 gallons per year / 42 gallons per bbl = 10,478 bbl/yr.
[2] Calculated as follows, based on the California Energy Commission's 2018 Weekly Fuels Watch Report: 10,478 bbl/yr / 341,036,000 bbl/yr = 0.003 percent. Report is available at https://www.energy.ca.gov/almanac/petroleum_data/fuels_watch/, accessed December 2019.

rooftop photovoltaics. Demand displaced by customer-based renewable projects is also available to meet new load requests.

SVP seeks to meet its RPS goal through the addition of new renewable resources. SVP has a lower GHG emission rate than the statewide California power mix because it uses a much higher portion of renewable sources. A comparison of SVP's and the statewide power mix is shown in **Table 5.8-3**.

SVP's carbon intensity factor for 2017 was determined to be 430 pounds (0.195 metric tons) of CO_2e per MWh (City of Santa Clara 2018). SVP's carbon intensity factor for electricity generation will continue to change as SVP's power mix continues to reduce the percentage of electricity produced by coal-fired power plants and increase the use of renewable resources. As noted above, the City and SVP have committed to be coal-free and increased large renewables power generation as a part of the City's CAP.

Data Center Electricity Usage. The primary function of the data center is to house computer servers, which require electricity and cooling up to 24 hours a day to operate. The projected maximum demand for the entire data center is 99 MW. On an annual basis, the data center would consume up to the maximum electrical usage of 867,240[3] MWh per year. SVP's power mix, with its 2017 estimate of 430 pounds of CO_2e per MWh, has a much lower average GHG emissions factor than the California statewide average emissions factor of 1,004 pounds of CO_2e per MWh or the PG&E average emissions factor value of 644 pounds of CO_2e per MWh that are provided in CalEEMod.

SDC and SBGF Mobile Emission Sources. There are an estimated 695 vehicle trips per day, which include diesel fuel deliveries, which would occur on average. The applicant also estimated 25 employees would be arriving and departing from the site over each 24-hour period, with approximately 50 trips generated by regular employees per day. (Sequoia 2019c, Response to Data Request 92).

TABLE 5.8-3 COMPARISON OF SVP AND STATEWIDE POWER MIX[4]

Energy Resources	2017 SVP Power Mix	2017 California Power Mix
Renewable (Biomass, Geothermal, Eligible Hydroelectric, Solar, and Wind)	38%	29%
Coal	9%	4%
Large Hydroelectric	34%	15%
Natural Gas	16%	34%
Nuclear	0%	9%
Other	0%	< 1%
Unspecified sources of power (not traceable to specific sources)	3%	9%
Total	100%	100%

Source: CEC 2017

[3] Calculated as 99 MW x 8,760 hours per year of operation.

[4] CEC 2017, Power Source Disclosure, 2017 Power Content Label https://www.energy.ca.gov/programs-and-topics/programs/power-source-disclosure, accessed on December 2019

SDC and SBGF Water Consumption and Waste Generation. Water consumption results in indirect emissions from electricity usage for water conveyance and wastewater treatment. Recycled water would be utilized where feasible, based on availability from the City. Daily operations at the data center would generate waste, which results in fugitive GHG emissions during waste decomposition.

The SDC's maximum annual water demand is currently estimated to be approximately 4.82 acre-feet per year (1.57 million gallons), which includes employee, humidification system, and landscaping water needs (Sequoia 2019a). The applicant proposes to use air-cooled chillers for cooling with a total annual potable water demand of around five (5) acre-feet per year.

The applicant used CalEEMod to determine the indirect GHG emission from water use; indirect water use GHG emissions total 330 $MTCO_2e$/yr (Sequoia 2019c) as shown in **Table 5.8-4**. The historic water use at the site is not available, the proposed SDC's annual water use of just under five (5) acre-feet would likely constitute a substantial reduction in water use compared to typical historic consumption by previous industrial and commercial uses at the site. GHG emissions are based on a water consumption estimate and no credit has been taken for the reduction in historic property water use.

Summary of GHG Emissions. GHG emissions from stationary combustion sources (standby emergency generator readiness testing and maintenance) are presented in **Table 5.8-2** above. GHG emissions from energy use, mobile and area sources, water use, and waste generation (i.e., project operation) are provided in **Table 5.8-4**.

As shown in **Table 5.8-4**, operation of the SDC is estimated to generate 88,646 $MTCO_2e$/yr from maximum possible electricity use and other non-stationary sources. This emissions estimate does not include efficiency measures that would be pursued as part of the project, nor does it reflect implementation of state and local measures to reduce GHG emissions, for example, SB 350 and SB 100 that would continue the ongoing substantial reductions in GHG emissions from electricity generation.

TABLE 5.8-4. GHG EMISSIONS FROM ENERGY USE, MOBILE SOURCES, AREA SOURCES, WATER USE, AND WASTE GENERATION DURING PROJECT OPERATION—SDC ONLY

Source	Annual Emissions ($MTCO_2e$/year)
Energy Use [a]	83,006
Mobile Sources [b]	4,049
Area Sources [c]	0.016
Water Use [d]	329
Waste Generation	438
Cooling System R-134a Leakage [e]	824
Total [e]	88,646

Sources: Sequoia 2019b, Appendix F, and Energy Commission staff analysis

[a] Energy use emissions include indirect emissions from electricity and direct emissions from natural gas use for comfort heating. The electricity based indirect emissions were corrected to use the SVP 2017 GHG emissions factor of 430 pounds of CO_2e/MWh.

[b] Mobile source emissions include emissions from worker commute and vendor trips.

[c] Area source emissions include emissions from architectural coatings, consumer products, and landscaping.

[d] Water use indirect GHG emissions were corrected to use the current 1.57 million gallon annual use estimate.

[e] Estimate based on an applicant estimate of approximately 11,583 lb CO_2 leakage x 54 engines = 625,482 pounds of R-134a in the cooling system and industry standard leak rate of two percent per year (Sequoia 2019c), and an AR4 GWP of 1,430 for R-134a (IPCC 2007). The regulatory leakage rate limit would be a leakage rate of 10 percent per year, which would increase the maximum allowable GHG annual emissions to 4,122 $MTCO_2e$.

The SDC and SBGF would comply with all applicable City and state green building measures, including Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency, based on the 2016 Energy Efficiency Standards requirements, Title 20 Appliance Efficiency Regulations, and the 2016 California Green Building Standards Code, commonly referred to as CALGreen (California Code of Regulations, Part 11). In addition, the project would include nine clean air parking spaces with electrical vehicle charging stations (Sequoia 2019a, Section 4.17). Water use reduction measures would also be incorporated in the building design, including the use of air-cooled chillers to eliminate water consumption for cooling purposes (Sequoia 2019a, Table 4.8-6).

Conclusion

LESS THAN SIGNIFICANT IMPACT. The SBGF's annual GHG emissions would be 1,395 $MTCO_2e$ averaged over the 18-month construction period as noted earlier. Post-construction, emissions from the emergency generators during readiness testing and maintenance are estimated to be 4,301 $MTCO_2e$/year as shown in **Table 5.8-2.** The annual GHG emissions for the 18-month construction period and the operational emissions from readiness testing and maintenance would be well below the BAAQMD significance thresholds of 10,000 $MTCO_2e$/yr. Therefore, the project's GHG emissions would not have a significant direct or indirect impact on the environment.

The GHG significance thresholds were established considering GHG emission reduction goals of AB 32, EO S-3-05, GHG emission reduction strategies in the Scoping Plan, and regional GHG reduction goals. The GHG emissions that would be generated by the project would not be a "cumulatively considerable" contribution under CEQA because they would conform with all applicable plans, policies, and regulations adopted for the purpose of GHG reductions; so, the maximum operation for SDC's non-stationary source GHG emissions (88,646 $MTCO_2e$/yr) are determined to have less than significant impacts. During construction, SDC and SBGF would implement **APM GHG-1** through **APM GHG-3** to further minimize GHG emissions of the project. After construction, SDC and SBGF would implement **APM GHG-4** through **APM GHG-10** to further minimize GHG emissions of the project.

Required Mitigation Measures: None.

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

Construction

LESS THAN SIGNIFICANT IMPACT. The project's minimal short-term construction GHG emissions would not interfere with the state's ability to achieve long-term GHG emissions reduction goals. The vehicles used during construction of the project are required to comply with the applicable GHG reduction programs for mobile sources. The project would conform to relevant programs and recommended actions detailed in the AB 32 Scoping Plan and Mobile Source Strategy. Similarly, the project components would not conflict with regulations adopted to achieve the goals of the Scoping Plan.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The CAP, which is part of the Santa Clara General Plan, identifies a series of GHG emissions reduction measures to be implemented by development projects that would allow the City to achieve its GHG reduction goals in 2020. The measures center around seven focus areas: coal-free and large renewables, energy efficiency, water conservation, waste reduction, off-road equipment, transportation and land use, and urban heat island effect. The CAP includes measures

applicable to City government and existing and new development projects in the City. Discussion of the project's conformance with the applicable reduction measures for new development in the CAP are provided below.

Energy Efficiency Measures. Power Usage Effectiveness (PUE) is a metric used to compare the efficiency of facilities that house computer servers. PUE is defined as the ratio of total facility energy use to Information Technology (IT) (i.e., server) power draw (for example, PUE = Total Facility Source Energy/IT Source Energy). A PUE of two means that the data center or laboratory must draw two watts of electricity for each one watt of power consumed by the IT/server equipment. It is equal to the total energy consumption of a data center (for all fuels) divided by the energy consumption used for the IT equipment. The ideal PUE is 1.0, where all power drawn by the facility goes to the IT infrastructure. With implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the average PUE would be 1.23 at SDC (Sequoia 2019a, page 4.8-16).

Measure 2.3 of the CAP calls for completion of a feasibility study of energy efficient practices for new data center projects with an average rack power rating[5] of 15 kilowatts or more to achieve a PUE of 1.2 or lower. The project would have an average rack power rating range of 8 to 10 kilowatts. This would be below the criteria in Measure 2.3, such that a formal feasibility study of energy efficient practices is not required. Please see **Section 5.6, Energy and Energy Resources** of this Initial Study, for additional discussion of the PUE and energy efficiency.

Water Conservation Measures. Measure 3.1, Urban Water Management Plan targets, calls for a reduction in per capita water use to meet Urban Water Management Plan targets by 2020. Development standards for water conservation would be applied to increase efficiency in indoor and outdoor water use areas. Furthermore, the project would comply with all applicable City and state water conservation (indoor and outdoor) measures, including Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency, based on the 2016 Energy Efficiency Standards requirements, and CALGreen. For the project, these measures would include:

- Water efficient landscaping with low-usage plant material to minimize irrigation requirements
- Use of air-cooled chillers that do not consume water annually.

Transportation and Land Use Measures. Measure 6.1, Transportation Demand Management program, requires new development located in the city's transportation districts to implement a transportation demand management (TDM) program to reduce drive-alone trips. The applicant would develop a TDM program as required by the City of Santa Clara during design review process (Sequoia 2019a).

Measure 6.3, Electric Vehicle Parking, recommends the City of Santa Clara to revise parking standards for new multi-family residential and nonresidential development to allow that a minimum of one parking space, and a recommended level of five (5) percent of all new parking spaces, be designated for electric vehicle charging. The project would include nine (9) clean air parking spaces with electrical vehicle charging stations (Sequoia 2019a, Section 4.7). The project would have approximately 140 total parking spaces at full buildout (Sequoia 2019a, Section 2.5.3); the percentage of the electrical vehicle parking spots with the current design level of nine electrical vehicle parking spots would

[5] Average rack power rating is a measure of the power available for use on a rack used to store computer servers. The higher the value of kilowatts, the greater power density per rack and generally more energy use per square foot of building area in a data center.

exceed 5 percent. However, the final number of electrical vehicle spaces that would be provided by the project will be determined in consultation with the City of Santa Clara (Sequoia 2019a).

Urban Heat Island Effect. Measure 7.2, Urban Cooling, requires new parking lots to be surfaced with low-albedo materials to reduce heat gain, provided it is consistent with the Building Code. The SDC is being designed to achieve Leadership in Energy and Environmental Design (LEED) standards. The applicant would install all energy efficiency requirements, including the applicable parking lot surface, as specified by the City of Santa Clara during the design review process (Sequoia 2019a).

Applicable General Plan Policies. The City adopted the Santa Clara General Plan to accommodate planned housing and employment growth through 2035. As part of the City's General Plan Update in 2011, new policies were adopted that address the reduction of GHG emissions during the planning horizon of the Santa Clara General Plan. In addition to the reduction measures in the CAP, the Santa Clara General Plan includes goals and policies to address sustainability aimed at reducing the City's contribution to GHG emissions. For the project, implementation of policies that increase energy efficiency or reduce energy use would effectively reduce indirect GHG emissions associated with energy generation. The consistency of the project with the applicable land use, air quality, energy, and water policies in the Santa Clara General Plan is analyzed in **Table 5.8-5**. As shown, the project would be consistent with the applicable sustainability policies in the Santa Clara General Plan.

The project owner will apply for building permits from the City of Santa Clara. The project owner will incorporate measures specified by the City of Santa Clara during the design review process to ensure compliance with applicable laws, ordinances, regulations, and standards. Conformance with the applicable design codes and policies will be enforced by the City of Santa Clara (Sequoia 2019c).

TABLE 5.8-5 PROJECT CONSISTENCY WITH SANTA CLARA GENERAL PLAN SUSTAINABILITY POLICIES

Emission Reduction Policies	Project Consistency
Land Use Policies	
Encourage new developments proposed within a reasonable distance of an existing or proposed recycled water distribution system to utilize recycled water for landscape irrigation, industrial processes, cooling and other appropriate uses to reduce water use consistent with the CAP.	Consistent. The SDC would employ air-cooled chillers to eliminate water consumption for cooling purposes.
Encourage Transportation Demand Management strategies and the provision of bicycle and pedestrian amenities in all new development in order to decrease use of the single-occupant automobile and reduce vehicle miles traveled.	Consistent. The SDC would include bicycle and pedestrian amenities consistent with the City's requirements.
Air Quality Policies	
Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.	Consistent. The SDC would include nine electrical vehicle charging stations that would serve nine electrical vehicle parking spots (Sequoia 2019a).
Encourage measures to reduce greenhouse gas emissions to reach 30 percent below 1990 levels by 2020.	Consistent. The SDC would satisfy the GHG reduction policy as specified by the City during the design review process. The project construction measures would reduce GHG emissions during the construction period. Operation of the project would be energy-efficient by design, utilizing a cooling system that allows passive cooling and reduces electrical consumption.

TABLE 5.8-5 PROJECT CONSISTENCY WITH SANTA CLARA GENERAL PLAN SUSTAINABILITY POLICIES

Emission Reduction Policies	Project Consistency
Energy Policies	
Promote the use of renewable energy resources, conservation, and recycling programs.	Consistent. The SDC is being designed to achieve LEED standards consistent with current Title 24 requirements of the California Building Code and local green building regulations to reduce energy, water, air, and GHG impacts of the development. The project would use lighting control to reduce energy usage for new exterior lighting and air-side economization[6] for building cooling. Water efficient landscaping would limit water consumption. In addition, the project would have a "Cool Roof", using reflective surfaces to reduce heat gains. Water-side economizers would be used to cool data center loads. The project would include installation of drought-tolerant plants to minimize water use and water-effect landscaping would be provided. Water conservation and energy efficiency measures included in SDC would reduce GHG emissions associated with the generation of electricity. Additionally, the SDC would divert at least 75 percent of construction waste and use high-recycled content material where feasible.
Encourage new development to incorporate sustainable building design, site planning, and construction, including encouraging solar opportunities.	
Reduce energy consumption through sustainable construction practices, materials, and recycling.	
Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.	
Water Use Policies	
Maximize the use of recycled water for construction, maintenance, irrigation, and other appropriate applications.	Consistent. The potential availability of recycled water is still being determined by the City of Santa Clara. Once the City has completed its review and assuming recycled water is determined to be "available" as defined by the California Water Code, it would be used by the project, consistent with applicable law (Sequoia 2019a).
Require installation of native and low-water consumption plant species when landscaping new development and public space to reduce water usage.	Consistent. The SDC would include installation of drought tolerant plants to minimize water use and water-efficient landscaping would be provided (Sequoia 2019a).

Source: Sequoia 2019a

Bay Area 2017 Clean Air Plan. The Bay Area 2017 Clean Air Plan (BAAQMD 2017a) includes performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce GHG emissions to 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The SDC is being designed to achieve LEED standards to reduce energy, water, air, and GHG impacts of the development. Due to the relatively high electrical demand of the SDC, energy efficiency measures are included in the design and operation of the onsite electrical and mechanical systems. The project owner would incorporate additional energy efficiency measures specified by the City of Santa Clara during the design review process to ensure compliance with applicable energy efficiency laws, ordinances, regulations, and standards (Sequoia 2019a). This would be consistent with the general purpose of Energy and Climate Measure-1 – Energy Efficiency in the 2017 Bay Area Clean Air Plan.

Plan Bay Area 2040/California SB 375. Under the requirements of SB 375, the MTC and ABAG developed a SCS with the adopted Plan Bay Area 2040 to achieve the Bay Area's regional GHG

[6] An air-side economizer brings outside air into a building and distributes it to the servers.

reduction target. Plan Bay Area 2040 sets a 15 percent GHG emissions reduction per capita target from passenger vehicles by 2035 when compared to the project 2005 emissions. However, these emission reduction targets are intended for land use and transportation strategies only. The project would generate an average of 74 total daily vehicle trips, including vendors and employee trips, which is expected to be similar to vehicle counts associated with the site's existing land use. Due to the limited number of employees and visitors at the project site, particularly when compared to the site's existing land use, the project would have less-than-significant traffic impacts during operation. Thus, the project would not contribute to a substantial increase in passenger vehicle travel within the region.

California SB 100. SB 100 advances the RPS renewable resources requirement to 50 percent by 2026 and 60 percent by 2030. It also requires renewable energy resources and zero-carbon resources to supply 100 percent of all retail sales of electricity by 2045. The project's GHG emissions are predominantly from electricity usage. This project could significantly reduce GHG emissions by purchasing all of its electricity from Santa Clara Green Power, which is available through SVP. The project could further reduce its GHG impacts by installing solar panels over parking spaces and any roof area not being used for the adiabatic condenser cooling system or other equipment, consistent with a City of Santa Clara design review condition, should one be issued (Sequoia 2019a).

AB 32 Scoping Plan. The vast majority of the project's GHG emissions would result from energy use. Multiple AB 32 Scoping Plan measures address GHG emissions from energy use. For example, the Cap-and-Trade Program, through the regulation of upstream electricity producers, would account for GHG emissions from the project and require emissions from covered sectors to be reduced by the amount needed to achieve AB 32's 2030 goal.

Conclusion

With implementation of the efficiency measures to be implemented with the project, in combination with the green power mix used by SVP, GHG emissions related to the project would not conflict with the Santa Clara CAP or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Furthermore, the project's stationary sources would not conflict with the Bay Area 2017 Clean Air Plan because their GHG emissions would be less than BAAQMD's threshold of 10,000 $MTCO_2e$/yr, including both readiness testing and maintenance.

Required Mitigation Measures: None.

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5.9 Hazards and Hazardous Materials

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC or project) with respect to hazards and hazardous materials.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

5.9.1 Setting

Hazardous Waste and Substances Sites

The project owner hired Ramboll US Corporation (Ramboll) to conduct a Phase 1 Environmental Site Assessment (ESA) and to determine the location of hazardous wastes and hazardous material release sites within 0.25 mile of the project. The analysis provided by Ramboll included within the Phase 1 Environmental Site Assessment a search through Environmental Data Resources, Inc (EDR) proprietary database related to generation, storage, handling, transportation, treatment of wastes, and the remediation of contaminated soil and groundwater sites. Ramboll's search included searches of the State Water Resources Control Board's (SWRCB), GeoTracker database, and the California Department of Toxic Substance Control's (DTSC) EnviroStor database.

The site was used for agricultural purposes until the late 1930s. It is likely that agricultural chemicals such as pesticides, herbicides, and fertilizers were used on the site. The site was undeveloped land until redevelopment occurred with the current facility as a paper mill in the late 1950s. A primary mill building

was located on site in addition to chemical storage tanks, containers, and mill machinery. The site continuously operated as a paper mill until 2017.

Past environmental work at the site included the removal of twelve underground storage tanks used to store solvents and fuel. Eleven of the tanks were removed in the 1980s and 1990s with regulatory oversight, apart from one gasoline underground storage tank that was abandoned in place. Investigations, remediation, and monitoring were conducted from the 1980s until 2000. The Santa Clara Water Valley District (SCWVD) in concurrence with the San Francisco Regional Water Quality Control Board issued a closure for the releases from the underground storage tanks (Sequoia 2019b). This was based on the SCWVD's conclusion that the remaining contamination did not represent a significant threat to groundwater due to the stable or decreasing trends and distribution of petroleum hydrocarbon concentrations in groundwater.

Ramboll conducted a limited subsurface investigation in December 2017 that included nine groundwater-sampling locations and five soil vapor samples at the site to evaluate the current subsurface conditions at prior underground storage tank locations and other areas. The results of the investigation included detections of petroleum hydrocarbons and fuel-related volatile organic compounds (VOCs) generally localized to the former underground storage tank locations and mill areas. The concentrations are predominantly below those measured at the time of the underground storage tank closure in 2000. Soil vapor detections included fuel-related VOCs and chlorinated solvents. However, all of the detections were below the most stringent (i.e., residential land use) screening criteria published by the U.S. Environmental Protection Agency and the California Environmental Protection Agency for evaluation of vapor intrusion risks.

Airports

The Norman Y. Mineta San Jose International Airport, a public airport, is located approximately 100 feet east of the proposed project and has two runways that exceed 3,200 feet in length (Air Nav 2019). The Santa Clara County Comprehensive Land Use Plan (CLUP) shows that the project falls within the Inner Safety Zone (ISZ) and is located within the Turning Safety Zone (TSZ) as well. The ISZ represents the approach and departure corridors that have the second highest level of exposure to potential aircraft accidents. The TSZ represents the approach and departure areas that have the third highest level of exposure to potential aircraft accidents. The project's Federal Aviation Regulations (FAR) Part 77 (obstruction) surface is 162 feet above mean sea level (AMSL), as identified in Figure 6 of the Comprehensive Land Use Plan for San Jose International Airport (SCCALUC 2016).

Schools

There are no schools within 0.25 mile of the project site. The closest schools are the Granada Islamic Elementary School, which is approximately 0.90 miles northwest of SDC, and the Scott Lane Elementary School that is approximately 0.95 miles southwest from the project site.

Emergency Evacuation Routes

The Santa Clara Local Hazard Mitigation Plan (Santa Clara County 2017) identifies hazards and provides a risk assessment for the potential natural hazards that could impact the county. The plans do not identify any designated evacuation routes near the project site.

Wildfire Hazards

The California Department of Forestry and Fire Protection (Cal Fire) identifies and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors. The maps identify this information as a series of Fire Hazard Severity Zones, which are progressively ranked in severity as un-zoned, moderate, high, and very high. State responsibility areas (SRAs) are locations where the State of California is responsible for wildland fire protection. Local responsibility areas (LRAs) are locations where the responding agency is the local county or city. The new SDC would be located within Santa Clara County.

The Cal Fire maps for Santa Clara County (CalFire 2007) indicate that the project site is located in an LRA. Within the LRA, the project site falls within an un-zoned Fire Hazard Severity Zone that indicates that the project site has a less than moderate susceptibility to wildland fires. For more information on wildfire hazards, see **Section 5.19, Wildfire**.

Regulatory Background

Hazardous substances are defined by federal and state regulations that aim to protect public health and the environment. Hazardous materials are those that have certain chemical, physical, or infectious properties. Hazardous substances are defined in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 101(14), and also in Title 22, California Code of Regulations, section 66260.10 and California Health & Safety Code section 25501, which defines a "hazardous material" as:

> a material listed in paragraph (2) that, because of its 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, or a material specified in an ordinance adopted pursuant to paragraph (3).

For this analysis, soil that is excavated from a site containing hazardous materials would be considered to be a hazardous waste if it exceeded specific Title 22, California Code of Regulations criteria, criteria defined in CERCLA, or other relevant federal regulations. (See Definition of Hazardous Waste, Title 22 Cal. Code Regs., § 66261.3.) Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials occurs; remediation may also be required if certain other activities occur. Even if soils or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies with jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

Federal

Resource Conservation and Recovery Act. The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

Comprehensive Environmental Response, Compensation, and Liability Act. Congress enacted the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), including the Superfund program, on December 11, 1980. This law provided broad federal authority to respond directly

to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan. The National Contingency Plan provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Department of Transportation. The United States Department of Transportation is the primary federal agency responsible for regulating the proper handling and storage of hazardous materials during transportation (49 C.F.R. §§ 171-177 and 350-399).

Federal Aviation Administration. Title 14, Part 77.9 of the Code of Federal Regulations requires Federal Aviation Administration (FAA) notification for any construction or alteration of navigable airspace exceeding 200 feet above ground level (AGL). It also requires notification for construction or alterations within 20,000 feet of an airport with a runway more than 3,200 feet in length if the height of the construction or alteration exceeds a slope of 100 to 1 extending outward and upward from the nearest point of the nearest runway of the airport. If a project's height exceeds 200 feet or exceeds the 100:1 surface, the project applicant must submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

State

California Environmental Protection Agency. The California Environmental Protection Agency (CalEPA),created in 1991, unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board (CARB), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), Integrated Waste Management Board, DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies under the CalEPA "umbrella" provide protection of human health and the environment and ensure the coordinated deployment of state resources. Their mission is to restore, protect and enhance the environment, to ensure public health, environmental quality, and economic vitality.

The California Hazardous Waste Control Law. CalEPA administers the California Hazardous Waste Control Law to regulate hazardous wastes. The Hazardous Waste Control Law lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

Department of Toxic Substances Control. DTSC is a department within CalEPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Occupational Safety and Health Administration. California Occupational Safety and Health Administration (Cal OSHA) is the primary agency responsible for worker safety related to the handling and use of chemicals in the workplace. Cal OSHA standards are generally more stringent than federal

regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (Title 8, Cal. Code Regs., §§ 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

Department of California Highway Patrol. Department of California Highway Patrol is the primary agency responsible for enforcing the regulations related to the transport of hazardous materials on California roads and highways (Title 13, Cal. Code Regs., §§ 1160-1167).

Local

Santa Clara County Operational Area Hazard Mitigation Plan. The plan includes a risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimates the potential frequency and magnitude of disasters, and assesses potential losses to life and property. The plan also includes developed mitigation goals and objectives as part of a strategy for mitigating hazard-related losses.

5.9.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Measures:

HAZ-1: If contaminated soils from agricultural or industrial use are unexpectedly encountered during any construction activities, work in the area shall be temporarily halted and the corresponding jurisdiction (the City) shall coordinate with the contractor and the Alameda County Environmental Health Department to determine appropriate treatment and removal of contaminated soils.

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

Construction

LESS THAN SIGNIFICANT IMPACT. During the construction phase of the project, the only hazardous materials used would be paints, cleaners, solvents, gasoline, motor oil, welding gases, and lubricants. When not in use, any hazardous material would be stored in designated construction staging areas in compliance with local, state, and federal requirements. Any impacts resulting from spills or other accidental releases of these materials would be limited to the site due to the small quantities involved and their infrequent use, hence reduced chances of release. Temporary containment berms would also be used to help contain any spills during the construction of the project.

During construction, all 54 diesel generator fuel tanks would have to be filled. The transportation of the diesel fuel to the site would take several tanker truck trips. Diesel fuel has a long history of being routinely transported and used as a common motor fuel. It is appropriate to rely upon the extensive regulatory program that applies to the shipment of hazardous materials on California highways and roads to ensure safe handling in general transportation (see Federal Hazardous Materials Transportation Law 49 USC § 5101 et seq., DOT regulations 49 C.F.R. subpart H, §§ 172–700, and California Department of Motor Vehicles (DMV) regulations on hazardous cargo). Thus, the transportation of diesel fuel would pose a less than significant risk to the surrounding public.

Therefore, the routine transport, use or disposal of hazardous materials would have a less than significant impact to the public or the environment.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. During the operational phase of the project, diesel fuel would be stored on-site but the generators would only be filled to 95 percent capacity of its tank. The diesel fuel would be used during emergencies, testing, and maintenance. Each generator would be run once a month for 30 minutes with no load on the engine. The no load test would require the tanks to be refilled to 95 percent capacity approximately every three to five months. Each generator would also be required to run for a total of four hours per year, under maximum load, for yearly testing purposes.

Projects with diesel-fired back up generators would use standard practice for fuel quality and maintenance of stored diesel fuel. Standard practice includes that each engine would have a dual fuel filter system and that the fuel would be replenished after testing. The fuel water separators (a three bank system) would be the primary fuel filter. The secondary fuel filter, installed just before the fuel would be injected into the engine, would filter the fuel down to particles less five microns in size. Routine replacement of the engine dual fuel filters would reduce any effects of fuel degradation on engine components and operation. Commercial diesel fuels also contain biocides that prevent microbial growth and additives that help to stabilize the fuel for several months. Additionally, the diesel fuel would be replenished with fresh fuel after each month's testing procedures. With the above listed safety features and precautions, the risk to the off-site public or environment through the routine transport, use or disposal of hazardous materials would have a less than significant impact.

Required Mitigation Measures: None.

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

Construction

LESS THAN SIGNIFICANT IMPACT. As described under the discussion for impact *criterion a.*, project construction would require the limited use of hazardous materials, such as fuels, lubricants, and solvents. The storage and use of hazardous materials during construction could result in the accidental release of small quantities of hazardous materials typically associated with minor spills or leaks. However, as discussed in impact *criterion a.*, hazardous materials would be stored, handled, and used in accordance with applicable regulations. Personnel would be required to follow instructions on health and safety precautions and procedures to follow in the event of a release of hazardous materials. All equipment and materials storage would be routinely inspected for leaks. Records would be maintained for documenting compliance with the storage and handling of hazardous materials. For the above reasons, the project impacts would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would not create a significant hazard to the public or environment due to an accidental release of a hazardous material. Although a substantial quantity of diesel fuel would be stored on-site, its storage would be split among many separate tanks, with a portion of it stored in the double-walled belly tank beneath each generator, effectively limiting a worse case spill to the quantity held within one tank. Each tank is capable of holding 6,800 gallons of diesel fuel.

Each generator's integrated fuel tank would be of a double-walled high integrity design. The interstitial space between the inner and outer walls of each tank would be continuously monitored electronically for the presence of leaks through the inner wall. The monitoring system would be electronically linked to an alarm system in the security office that would alert personnel if a leak were detected in any of the inner tanks. Additionally, the fuel tanks would be placed into a subsurface pit that would limit the migration of any spilled diesel.

Deliveries of diesel fuel by tanker truck during the project's operation would be scheduled on an as-needed basis. Diesel tanker trucks would use wheel chocks to prevent the truck from moving before complete disconnection of the transfer lines. An emergency pump shut-off would be available in case a pump hose breaks during the fueling. In addition, a temporary spill catch basin would be located at the fill port of each belly tank during refilling.

Required Mitigation Measures: None.

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

Construction

NO IMPACT. There are no schools located or proposed within 0.25 mile of the project site. In addition, there are no hazardous materials that would be emitted from the site at rates capable of creating offsite impacts. Therefore, there would be no impact.

Operation and Maintenance

NO IMPACT. There are no schools located or proposed within 0.25 mile of the project site. Therefore, no impact from the operation or maintenance of the project would occur.

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

Construction

LESS THAN SIGNIFICANT IMPACT. According to a review of the Envirostor and GeoTracker databases, the project site does not have any known, open cases on the hazardous materials sites compiled pursuant to Government Code section 65962.5. Ramboll's limited subsurface investigation conducted during the Phase 1 Environmental Site Assessment found low levels of fuel-related VOCs and chlorinated solvents. However, all of the detections were below the most stringent (i.e., residential land use) screening criteria published by the U.S. Environmental Protection Agency and the California Environmental Protection Agency for evaluation of vapor intrusion risks.

Ground disturbing activities associated with the demolition of existing buildings, the removal of underground utilities, and construction of the project would have the potential to encounter contaminated soil. The contaminated soil could contain residual pesticides and herbicides from agricultural use or fuel-related VOCs and chlorinated solvents from industrial use. With the implementation of the Applicant Proposed Mitigation **HAZ-1**, if contaminated soils are found, the project would halt construction and the soil would be treated in place or removed to an appropriate

disposal facility. Therefore, the construction of the project would create a less than significant impact to the public or the environment.

Operation and Maintenance

NO IMPACT. Operation and maintenance activities would not involve excavation activities and would therefore have no impact.

Required Mitigation Measures: None.

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?

Construction

LESS THAN SIGNIFICANT IMPACT. The project site is located approximately 100 feet west of the Norman Y. Mineta San Jose International Airport. The FAA establishes a maximum structure height of 162 feet AMSL at the project site (SCCALUC 2016). Even when accounting for the 43.95-foot AMSL finished floor elevation of the project site, the SDC, at 105 feet AGL and therefore 148.95 feet AMSL, would not exceed the FAA's obstruction surface of 162 AMSL. The project applicant submitted an FAA obstruction analysis with also shows that the project would not exceed any FAA obstruction surfaces. (Sequoia 2019f). Cary Greene, the airport planner for San Jose, reviewed the provided analysis from the project applicant and concurred with the applicant's conclusions from the FAA obstruction analysis (CEC 2019c).

The project site is still subject to Title 14, Part 77.9 of the Code of Federal Regulations, Construction or Alteration Requiring Notice. With a maximum project height of 105 feet AGL, the project would exceed the FAA notification 100:1 surface threshold of 12 feet at the project site. As a result, the project applicant would need to submit Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA. The project applicant has provided a copy of the submitted FAA Notification (Sequoia 2019f). Because the project's tallest structure would be far below the project site's FAR Part 77 (obstruction) surface of 162 feet AMSL, as identified in Figure 6 of the Comprehensive Land Use Plan for San Jose International Airport and below the more detailed obstruction surfaces identified in the applicant's FAA obstruction analysis (Sequoia 2019f), staff anticipates the FAA would issue a Determination of No Hazard (SCCALUC 2016). Therefore, staff anticipates that the project would not pose a safety hazard and would have a less than significant impact.

The project site also falls within the ISZ and TSZ zones. The CLUP's policy S-4 requires that the above ground storage of fuel or other hazardous materials shall be prohibited in the ISZ and the TSZ zones. However, the SDC fuel tanks would be lowered four feet seven inches below grade into a concrete pit. The Santa Clara County Airport Land Use Commission evaluated the proposed SDC and made a finding of consistency with the CLUP's policy S-4 at its regularly scheduled meeting on November 20, 2019 (ALUC). With the finding of consistency from the ALUC for the CLUP's policy S-4, SDC would be in compliance with the Santa Clara CLUP. Further discussion on the CLUP's consistency can be found in **Section 5.11, Land Use** and **Section 5.17, Transportation**.

The project would be required to submit Form 7460-1, Notice of Proposed Construction of Alteration to the FAA where staff anticipates the FAA would issue a Determination of No Hazard. In addition,

SDC would be compatible with the ISZ and TSZ zones from the Santa Clara CLUP. Therefore, the project would not pose a safety hazard and would have a less than significant impact. Project construction would not result in excessive noise impacts for people residing or working in the project area, as described in a more detailed analysis in **Section 5.13, Noise**.

Operation and Maintenance

NO IMPACT. Operation and maintenance activities for the project site would be similar to those for a similarly sized industrial building and would not have an impact on people working or residing in the area. In addition, the thermal plume generated by the project would not pose a safety hazard to any aircraft near the Norman Y. Mineta San Jose International Airport. Detailed analysis of potential thermal plume impacts is contained in **Section 5.17, Transportation**.

Required Mitigation Measures: None.

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

Construction

NO IMPACT. A review of the Santa Clara County Operational Area Hazard Mitigation Plan for the project revealed no specific mapping or delineation of emergency evacuation or access routes. The plans identified that the area police, fire department, and other emergency services would implement their emergency response or evacuation plans according to their communications protocols and hazard mitigation programs. The project site is not identified on any emergency evacuation or access routes. In addition, the construction would not require any road closures since the work would all be done onsite. During project construction, there would be no impact to an adopted response plan or emergency evacuation plan.

Operation and Maintenance

NO IMPACT. After construction, no lane closures would be needed, and no impact to a response plan or emergency evacuation plan would occur.

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

Construction

NO IMPACT. The project site is located in Santa Clara County. It is located within an un-zoned Fire Hazard Severity Zone, within a LRA, indicating that the project site has a less than moderate susceptibility to wildland fires. The project site is not adjacent to wildlands. Buildings bound the project to the north, west and south. The airport bounds the project on the east side. Although equipment and vehicles used during construction, as well as welding activities, have the potential to ignite dry vegetation, the project is located within an urban area surrounded by industrial and commercial zones that have very limited dry vegetation. In addition, the project is located within an un-zoned fire hazard area. Therefore, there would be no impact from wildland fires resulting from construction activities related to the project.

Operation and Maintenance

NO IMPACT. The project site is located within an un-zoned Fire Hazard Severity Zone and therefore, there would be no impact from wildland fires.

5.9.3 References

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CEC 2019c – Report of Conversation with Cary Greene, Airport Planner, City of San Jose Airport Department, dated December 20, 2019. (TN 231326).

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SCCALUC 2016 – Santa Clara County Airport Land Use Commission (SCCALUC). 2016. *Mineta San Jose International Airport Comprehensive Land Use Plan for Santa Clara County*. Available online at: https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_SJC_CLUP.pdf. Accessed on: October 15, 2019.

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Sequoia 2019f – Applicant responses to Data Request Set 3. (TN 231257). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

SWRCB 2018 – State Water Resources Control Board (SWRCB). GeoTracker Database. Available online at: http://geotracker.waterboards.ca.gov. Accessed on: December 18, 2019.

5.10 Hydrology and Water Quality

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC or project) with respect to hydrology and water quality.

HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Violate 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 offsite;	☐	☐	☒	☐
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 storm water 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?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G

5.10.1 Setting

Storm Drainage and Water Quality

The project would be constructed in the city of Santa Clara, within the Guadalupe watershed. The Guadalupe watershed drains to the San Francisco Bay, located a few miles northwest of the proposed project site. The site is located west of the Guadalupe River and east of San Tomas Aquino Creek. Storm water from the project site drains into the City of Santa Clara's storm water drain system, which discharges to San Tomas Aquino Creek and ultimately the San Francisco Bay.

The water quality of San Tomas Aquino Creek and other creeks is influenced by pollutants contained in storm water runoff. Storm water runoff from urban areas typically contains conventional pollutants such as sediment, metals, pesticides, herbicides, oil, grease, asbestos, lead, and animal wastes.

The site is currently a vacant lot, but was previously occupied by a paperboard mill, an electrical cogeneration facility, and a warehouse. The site is mostly impervious.

Groundwater

The Santa Clara Valley groundwater basin is divided into four interconnected subbasins that border the southern San Francisco Bay. The proposed project would be located in the Santa Clara Subbasin, which extends across the Santa Clara Valley in the region south of San Francisco Bay.

Fluctuations in rainfall, changing drainage patterns, and other hydrologic factors can influence groundwater levels. Based on the Seismic Hazard Zone Report 051 prepared by the Department of Conservation for the San Jose West 7.5-Minute Quadrangle, the historic shallowest observed depth to groundwater in the general site area was about 10 feet below ground surface (bgs) (CGS 2002). According to the SPPE application the depth to groundwater beneath the project site is typically 10 to 10.5 below bgs.

Flooding

The average elevation of the existing project site is approximately 40 feet above the 1988 North American Vertical Datum (NAVD88) (USGS 2015). According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) 06085C0227H, effective May 18, 2009, the project site is located within Zone X. Zone X is defined as areas of 0.2 percent annual chance of flood (or a 500-year flood), areas of one percent chance of annual flood with average depths of less than one foot, or with drainage areas less than one square mile, and areas protected by levees from one percent annual chance of flood. The site is located near the Guadalupe River and San Tomas Aquino Creek.

Also, the project site is not within an area mapped as vulnerable to sea level rise in the National Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2019).

Regulatory Background

Federal

Clean Water Act and California's Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and its nine RWQCBs are responsible for the regulation and enforcement of the water quality protection requirements of the federal Clean Water Act (CWA) and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). The National Pollutant Discharge Elimination System (NPDES) is the permitting program that allows point source dischargers to comply with the CWA and Porter-Cologne laws. This regulatory framework protects the beneficial uses of the state's surface and groundwater resources for public benefit and environmental protection. Protection of water quality could be achieved by ensuring the proposed project complies with applicable NPDES permits from the SWRCB or the San Francisco Bay RWQCB.

Under Section 303(d) of the CWA, states are required to identify impaired surface water bodies and develop total maximum daily loads (TMDLs) for contaminants of concern. The TMDL is the quantity of pollutant that can be assimilated by a water body without violating water quality standards. Listing of a water body as impaired does not necessarily suggest that the water body cannot support the beneficial uses; rather, the intent is to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for future water quality degradation. San Tomas Aquino Creek, west of the project site, is currently listed on the United States Environmental Protection Agency's Section 303(d) Listed Waters for California for trash.

The San Francisco Bay RWQCB issued a Municipal Regional Storm Water NPDES Permit (Permit Number CAS612008) that requires the city of Santa Clara to implement a storm water quality protection program.

This regional permit applies to 77 Bay Area municipalities, including the city of Santa Clara. Under the provisions of the Municipal NPDES permit, redevelopment projects that disturb more than 10,000 square feet are required to design and construct storm water treatment controls to treat post-construction storm water runoff. The permit requires the post-construction runoff from qualifying projects to be treated by using Low Impact Development (LID) treatment controls, such as biotreatment facilities. The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) assists co-permittees, such as the city of Santa Clara, in the implementation of the provisions of the Municipal NPDES permit. In addition to water quality controls, the Municipal NPDES permit requires all new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks. Projects may be deemed exempt from the permit requirements if they do not meet the size threshold, drain into tidally influenced areas or directly into the Bay, drain into hardened channels, or are infill projects in subwatersheds or catchment areas that are at least 65 percent impervious (per the City of Santa Clara Hydromodification Management Applicability Map). The project site is located in a catchment area with imperviousness greater than 65 percent; thus, the project site is not subject to the SCVURPPP hydromodification requirements.

Federal Emergency Management Agency Flood Insurance Program. The magnitude of flood used nationwide as the standard for floodplain management is a flood having a probability of occurrence of one percent in any given year. This flood is also known as the 100-year flood, or base flood. The Federal Insurance Rate Map (FIRM) is the official map created and distributed by Federal Emergency Management Agency (FEMA) for the National Flood Insurance Program that shows areas subject to inundation by the base flood for participating communities. FIRMs contain flood risk information based on historic, meteorologic, hydrologic, and hydraulic data, as well as open-space conditions, flood control works, and development.

As stated above, the proposed project site is located in Zone X and therefore protected from the one percent annual chance flood.

State

State Sustainable Groundwater Management Act. The 2014 Sustainable Groundwater Management Act (SGMA) requires local public agencies and Groundwater Sustainability Agencies (GSAs) in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability.

The Santa Clara Valley Water District (SCVWD) is the exclusive GSA for the Santa Clara Valley groundwater Subbasin, which contains the proposed project. SCVWD developed a groundwater management plan for the Santa Clara and Llagas Subbasins that is intended to be functionally equivalent to a GSP.

Local

City of Santa Clara Code, Prevention of Flood Damage. Chapter 15.45 of the Santa Clara City Code requires that buildings' lowest floor be constructed at least as high as the base flood elevation.

5.10.2 Environmental Impacts and Mitigation Measures

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The proposed project would disturb about 12 acres of land and would be subject to construction-related storm water permit requirements of California's NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) administered by the SWRCB. Prior to any ground-disturbing construction activity, the applicant must comply with the Construction General Permit, which includes preparation of a Storm Water Pollution Prevention Plan (SWPPP). With implementation of the construction SWPPP, redevelopment of the site would not cause a substantial degradation in the quality, or an increase in the rate or volume, of storm water runoff from the site during construction. In addition, the Municipal NPDES permit, as well as the SCVURPPP, requires that redevelopment not result in a substantial net increase in storm water flow exiting the project site during operation. As a result, runoff from the project site would not be expected to exceed the capacity of the local drainage system or to significantly contribute to the degradation of storm water runoff quality.

The project is expected to excavate soil at the existing site to a maximum depth of 13 feet below grade. It is therefore possible the project would encounter groundwater and that dewatering would be necessary during construction. If dewatering is necessary, and the discharge is found to be contaminated, the project owner would likely be required to obtain coverage under the VOC and Fuel General Permit (San Francisco RWQCB *General Order No. R2-2017-0048 NPDES Permit No. CAG912002*). Discharge of uncontaminated water from the dewatering operation to waters of the US within the San Francisco RWQCB's jurisdiction is a permitted activity under the Construction General Permit.

Thus, the project would not be expected to violate water quality standards or waste discharge requirements during construction and operation, and impacts would be less than significant.

Required Mitigation Measures: None.

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Since the project would be located in an area served with imported surface water from the San Francisco Public Utilities Commission (SFPUC), the water supply to the project would not likely be from a groundwater source. The city's UWMP for 2015 shows that the city has sufficient supply to meet the project's demand of 5 AFY in normal and single dry year scenarios. However, the UWMP shows that the city would have a deficit in a multiple dry year scenario that

assumes supply from SFPUC would be interrupted. Under this scenario, the city's supply from SFPUC might be interrupted if certain conditions specified in the interruptible contract between the city and SFPUC are met (UWMP 2016). If supply from SFPUC is interrupted, the city would have to replace the demand using groundwater or water supplied by SCVWD.

According to the UWMP, the groundwater basin has been managed successfully to prevent overdraft conditions. In case of a water supply shortage, the city has adopted water conservation policies to reduce demand such that available supplies are sufficient to meet demand (UWMP 2016). As discussed in **Section 5.18, Utilities and Service Systems**, the project does not meet the definition of a "project" for the purposes of preparing a Water Supply Assessment (WSA) by the water supplier. The project applicant has provided a copy of a memorandum issued by the city of Santa Clara, which concluded that the proposed project does not meet the definition of a "project" and therefore a WSA does not need to be prepared (Sequoia 2019b, Appendix M). The project's impact on groundwater supplies or recharge during construction and operation would therefore be less than significant.

Required Mitigation Measures: None.

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

i. Result in substantial erosion or siltation on- or off-site;

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The existing site is nearly covered with impervious surfaces and includes storm water collection and disposal facilities throughout the parcel. The proposed project would result in a reduction in impervious areas (by replacing some of the existing impervious areas with pervious ones for landscaping) and would also include a new storm water collection system that would incorporate source control and treatment best management practices (BMPs). These BMPs would reduce the overall runoff into the city's collection system and also reduce erosion and sedimentation impacts. This post-construction design would therefore not be expected to result in increased runoff (rate or volume) from the site. The storm water design is expected to comply with the SCVURPPP as well. Therefore, impacts would be less than significant.

Required Mitigation Measures: None.

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Surface runoff would be controlled as described in section (c)(i) above. Therefore, impacts would be less than significant.

Required Mitigation Measures: None.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The proposed project would result in a reduction in impervious areas and would also include a new storm water collection system that includes drainage swales to reduce the overall runoff into the city's collection system. The discharge of polluted runoff would be expected to be similarly reduced. Therefore, impacts would be less than significant.

Required Mitigation Measures: None.

iv. Impede or redirect flood flows?

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Though the site is located near the Guadalupe River and San Tomas Aquino Creek, these waterways do not pose a likely flood risk. According to the FEMA FIRM 06085C0227H, effective May 18, 2009, the project site is located within Zone X. Zone X is defined as areas of 0.2 percent annual chance of flood, areas of one percent chance of annual flood with average depths of less than one foot, or with drainage areas less than one square mile, and areas protected by levees from one percent annual chance of flood. The project site is also not within an area mapped as vulnerable to sea level rise in the National Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2019). The project site is not within an area mapped as vulnerable to sea level rise in the National Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2019).

The proposed project also would not be expected to add significantly to the existing potential of the site to impede flood flows. The proposed project would have significant structures, like the existing site did, that would similarly impede or redirect flood flows. Therefore, no net change in obstruction is expected from the proposed project and the impacts would be less than significant.

Required Mitigation Measures: None.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Though the site is located near the Guadalupe River and San Tomas Aquino Creek, these waterways do not pose a likely flood risk. The project site is located within Zone X. Also, the project site is not within an area mapped as vulnerable to sea level rise in the National Oceanic and Atmospheric Administration's Digital Coast, Sea Level Rise Viewer (NOAA 2019).

The project site is within the inundation zones of two upstream reservoirs. Lexington Reservoir and James J. Lenihan Dam are located on Los Gatos Creek approximately 15 miles upstream. The Lenihan Dam Flood Inundation Map shows that dam failure would result in flooding at the project site.

The project site is not located near a large body of water, the ocean, or steep slopes. Due to the location of the proposed project site, it would not be subject to inundation by seiche, tsunami, or mudflow.

In the unlikely event of a flood, release of on-site pollutants would be prevented by the SWPPP, Worker Environmental Training, a Spill Prevention, Control, and Countermeasure Plan, a Hazardous Materials Business Plan, and through an emergency spill response program. All of these measures would work together to help keep potential pollutants properly contained. Therefore, the impacts would be less than significant.

Required Mitigation Measures: None.

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the local water quality control plan. The project would comply with the Basin Plan by implementing the requirements of the Construction General Permit, as described in section (a) above, and through the preparation of a construction SWPPP. This impact would be less than significant.

SCVWD developed a groundwater management plan for the Santa Clara and Llagas Subbasins that is intended to be functionally equivalent to a GSP. The information contained in the SCVWD groundwater management plan is used to inform the city of Santa Clara's UWMP about groundwater supplies. Therefore, it is reasonable to rely on the UWMP to evaluate how a proposed project would impact the implementation of the sustainable groundwater management plan. The city's UWMP for 2015 shows that it has sufficient supply to meet the project's demand of 5 AFY in normal and single dry year scenarios. However, the UWMP also shows that the city would have a deficit in a multiple dry year scenario that assumes that supply from SFPUC would be interrupted. Under this scenario, the city's supply from SFPUC might be interrupted if certain conditions specified in the interruptible contract between the city and SFPUC are met (UWMP 2016). If supply from SFPUC is interrupted the city would have to replace the demand using groundwater or supply water from SCVWD.

According to the UWMP, the groundwater basin has been managed successfully to prevent overdraft conditions. In case of a water supply shortage, the city has adopted water conservation policies to reduce demand such that available supplies are sufficient to meet demand (UWMP 2016). The proposed project would therefore not be expected to impede the implementation of the SCVWD's groundwater management plan. This impact would be less than significant.

Required Mitigation Measures: None.

5.10.3 References

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Sequoia 2019b – Application for Small Power Plant Exemption: Sequoia Data Center, Appendices A-N, dated August, 2019. (TN 229419-2/3/4). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

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5.11 Land Use and Planning

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to land use and planning.

LAND USE PLANNING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

5.11.1 Setting

The approximately 15-acre project site is in an area of the City of Santa Clara (City) that is developed with various industrial and commercial uses. Except for miscellaneous infrastructure, the project site is vacant, with portions paved and unpaved. The Union Pacific Railroad tracks border the west side of the site. De La Cruz Boulevard is a major, six-lane roadway bordering the site to the east. The Norman Y. Mineta San Jose International Airport is located directly across De La Cruz Boulevard to the east. A workplace environment design firm, One Workplace, occupies a warehouse space on the adjacent property south of the project site at 2500 De La Cruz Boulevard.

In February 2019, the applicant purchased the approximately 8-acre adjacent parcel north of the project site at 2750 De La Cruz Boulevard. Enterprise Rental Car Agency and its parking area are located on the property, and according to the applicant, the property is subject to a long-term lease. In October 2019, staff submitted a data request to the applicant asking for information on any plans it might have to develop a data center campus that would include the adjacent northern parcel (see TN 230145). The applicant's data response states that potential future development of the northern parcel will depend on several factors and that no current plan or schedule exists for a data center campus (Sequoia 2019d).

Regulatory Background

Federal

No federal regulations relating to land use and planning apply to the project.

State

No state regulations relating to land use and planning apply to the project.

Local

Comprehensive Land Use Plan, Norman Y. Mineta San Jose International Airport. The Santa Clara County Airport Land Use Commission (ALUC) adopted the Comprehensive Land Use Plan (CLUP) for the San Jose International Airport in 2011; the ALUC approved minor amendments to the CLUP in 2016. The purpose of the CLUP is to safeguard the welfare of the inhabitants in the airport vicinity and ensure that new land uses do not affect airport operations. The project site is located within the designated Airport Influence Area (AIA), which is a "composite of the areas surrounding the Airport that are affected by noise, height, and safety considerations." "The AIA is defined as a…boundary around the airport within which all actions,

regulations and permits must be evaluated by local agencies to determine how the Airport Comprehensive Land Use Plan policies may impact the proposed development" (Santa Clara County 2016).

The Santa Clara County CLUP identifies general compatibility policies that apply to ALUC consistency review, including the following:

- **Policy G-5** – Where legally allowed, dedication of an avigation easement to the City of San Jose shall be required to be offered as a condition of approval on all projects located within an Airport Influence Area, other than reconstruction projects as defined in paragraph 4.3.7 [of the CLUP]. All such easements shall be similar to that shown as Exhibit 1 in Appendix A [of the CLUP].
- **Policy G-6** – Any proposed uses that may cause a hazard to aircraft in flight are not permitted within the AIA. Such uses include electrical interference, high intensity lighting, attraction of birds (certain agricultural uses, sanitary landfills), and activities that may produce smoke, dust, or glare. This policy requires the height at maturity of newly planted trees to be considered to avoid future penetration of the Federal Aviation Administration (FAA) Federal Aviation Regulations (FAR) Part 77 surfaces.
- **Policy G-7** – All new exterior lighting or large video displays within the AIA shall be designed so as to create no interference with aircraft operations. Such lighting shall be constructed and located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting shall be arrayed in such a manner that it cannot be mistaken for airport approach or runway lights by pilots.

Policies concerning height compatibility include the following:

- **Policy H-1** – Any structure or object that penetrates the FAR Part 77, *Objects Affecting Navigable Airspace*, (FAR Part 77) surfaces as illustrated in Figure 6 [of the CLUP], is presumed to be a hazard to air navigation and will be considered an incompatible land use, except in the following circumstance. If the structure or object is above the FAR Part 77 surface, the proponent may submit the project data to the FAA for evaluation and air navigation hazard determination, in which case the FAA's determination shall prevail.
- **Policy H-2** – Any project that may exceed a FAR Part 77 surface must notify the FAA as required by FAR Part 77, Subpart B on FAA Form 7460-1, *Notice of Proposed Construction or Alteration*. (Notification to the FAA under FAR Part 77, Subpart B, is required even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the FARs).

The objective of safety compatibility is to minimize the risks associated with potential aircraft accidents. Safety impacts are evaluated according to the Airport Safety Zones shown in Figure 7 of the CLUP; the project site is located within the Inner Safety Zone and Turning Safety Zone. Safety compatibility includes a policy concerning fuel and hazardous materials storage:

- **Policy S-4** – Storage of fuel or other hazardous materials shall be prohibited in the Runway Protection Zone. *Above ground storage of fuel or other hazardous materials shall be prohibited in the Inner Safety Zone and Turning Safety Zone* [emphasis added]. In the Sideline Safety Zones and Outer Safety Zones, storage of fuel or other hazardous materials not associated with aircraft use should be discouraged.

City of Santa Clara 2010–2035 General Plan. The project site is in an area of contiguous properties designated Heavy Industrial, as shown on the Land Use Diagrams for the General Plan's three planning phases. The Heavy Industrial designation "allows primary manufacturing, refining and similar activities. It also accommodates warehousing and distribution, as well as data centers" (Santa Clara 2010). "Because

uses in the designation may be noxious or include hazardous materials," the Heavy Industrial designation prohibits places of assembly and land uses predominantly serving children and the elderly or other sensitive populations, as well as entertainment uses (for example, clubs, theaters, and sports venues). The maximum floor area ratio (FAR) is 0.45.

The General Plan Land Use Diagrams show that the surrounding area includes properties with land use designations of Light Industrial, Public/Quasi Public, and Low Intensity Office/R&D. The nearest areas with residential land use designations are close to a mile southwest of the project site.

Section 5.3.5 of the General Plan contains goals and policies pertaining to industrial development, including a policy on conformance with building height requirements as it pertains to the FAA:

- **5.3.5-P7** – Require building heights to conform to the requirements of the Federal Aviation Administration, where applicable.

Section 5.10.5 of the General Plan contains goals and policies on safety, including airport hazards and airspace protection. Policies concerning projects located in the AIA include the following:

- **5.10.5-P29** – Continue to refer proposed projects located within the Airport Influence Area to the Airport Land Use Commission.
- **5.10.5-P30** – Review the location and design of development within Airport Land Use Commission jurisdiction for compatibility with the Airport Land Use Compatibility Plan.
- **5.10.5-P31** – Discourage schools, hospitals, sensitive uses and critical infrastructure, such as power plants, electric substations and communications facilities, from locating within specified safety zones for the Airport as designated in the Airport Comprehensive Land Use Plan.
- **5.10.5-P32** – Encourage all new projects within the Airport Influence Area to dedicate an avigation easement.
- **5.10.5-P33** – Limit the height of structures in accordance with the Federal Aviation Administration Federal Aviation Regulations, FAR Part 77 criteria.

City of Santa Clara Zoning Code. The project site is in the MH, Heavy Industrial zoning district; permitted uses include "[a]ny manufacturing, processing, assembling, research, wholesale, or storage uses that, in the opinion of the Planning Commission, shall not be objectionable by reason of the production of offensive noise, smoke, odor, dust, noxious gases, vibrations, glare, heat, fire hazards, industrial wastes, or handling of explosives or dangerous materials" (Santa Clara 2019a, § 18.50.030, subd. (b)).

Maximum permitted building height in the MH zoning district is 70 feet. The City's Zoning Code defines height of buildings as the vertical distance from the adjacent ground elevation "to the highest point of the coping of a flat roof…" (Santa Clara 2019a, §§ 18.06.010, subd. (h)(1); 18.50.070). The Zoning Administrator has the authority to permit a "minor modification" to the building height regulation so long as the increase does not exceed 25 percent of the zoning district's permitted maximum height (Santa Clara 2019a, § 18.90.020, subd. (a)). The height of mechanical equipment and any accompanying screening is subject to approval by the Architectural Committee (Santa Clara 2019a, § 18.50.140, subd. (f)). Each lot must have a street side front yard of not less than 15 feet in depth (Santa Clara 2019a, § 18.50.080).

5.11.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: None.

a. Would the project physically divide an established community?

Construction, Operation and Maintenance

NO IMPACT. The project would be constructed and operated on a single parcel of land. The site was previously developed for an industrial use, and the project would involve construction and operation of a new industrial use on the same site. The parcel boundaries would remain the same. No changes are proposed involving construction of new off-site facilities that could physically divide the community. Therefore, project construction, operation and maintenance activities would not physically divide an established community, and no impact would occur.

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Staff evaluated the potential for the proposed project to significantly impact operations at the Norman Y. Mineta San Jose International Airport, including creating conditions that would be hazardous to aircraft. An aviation group performed an obstruction analysis for the project on behalf of the applicant using FAA methods for assessing aircraft safety hazards; the analysis produced an obstruction analysis drawing and calculations showing that the project structures would not penetrate or obstruct any FAA Part 77 surfaces (Sequoia 2019f). The applicant filed Form 7460-1, Notice of Proposed Construction or Alteration, with the FAA and anticipates receiving a Determination of No Hazard consistent with the conclusions from the obstruction analysis. Additionally, Cary Greene, Airport Planner, at the City of San Jose Airport Department reviewed the applicant's obstruction analysis and agreed with the applicant that the FAA would likely issue the requisite Determination of No Hazard (CEC 2019c). (Sections **5.9 Hazards and Hazardous Materials** and **5.17 Transportation** of this document provide details on staff's review and analysis of FAA obstruction surfaces.) The Santa Clara County ALUC evaluated the proposed project and made a finding of consistency with the CLUP at its regularly scheduled meeting on October 23, 2019 (ALUC 2019). Staff evaluated General Plan policies concerning airport hazards and airspace protection and concluded that the project would be consistent with those policies. As discussed in the subsections that follow, construction, operation and maintenance of the project would not conflict with land use plans or policies such that significant environmental impacts would occur, and the overall impact is less than significant.

Comprehensive Land Use Plan, Norman Y. Mineta San Jose International Airport. The Santa Clara County CLUP includes a general compatibility policy addressing dedication of an avigation easement to the City of San Jose as a condition of approval for projects located within an AIA (see **Policy G-5**, listed above under the subsection, "Regulatory Background"). As the permitting agency for the proposed project, the City of Santa Clara would ensure consistency with **Policy G-5** by requiring dedication of an avigation easement to the City of San Jose.

Policy G-6 does not permit uses within the AIA that may cause a hazard to aircraft in flight (for example, uses that could cause electrical interference; high intensity lighting; or other uses that may

produce smoke, dust, or glare). The proposed project would not involve use of any unlicensed high current, high frequency systems capable of interfering with flight operations, nor would it create smoke or dust or involve uses that could attract birds. The project's diesel generators and chillers would discharge thermal plumes, but not at vertical velocities that would be expected to cause hazards to aircraft in flight, as discussed in section **5.17 Transportation**. The proposed species of new trees to be planted detailed in the "Landscape and Tree Removal Plans" include a mix of native and ornamental species that typically reach heights at maturity ranging from 8 to 70 feet, which would be considerably less than the maximum structure height of 105 feet (Sequoia 2019d). Therefore, the project is consistent with **Policy G-6** from the Santa Clara County CLUP.

Policy G-7 requires exterior lighting to be constructed and located to fully control off-site glare. As discussed in section **5.1 Aesthetics** of this initial study, outdoor lighting would be directed or shielded to ensure the project would not create a new source of substantial light or glare. Therefore, the project is consistent with **Policy G-7**.

Policies **H-1** and **H-2** specify requirements to ensure that structures do not pose hazards to air navigation. The obstruction analysis prepared by the applicant's consultant concludes that project structures would not penetrate or obstruct any FAA Part 77 surfaces, and as discussed in section **5.17 Transportation**, staff anticipates the FAA will issue a Determination of No Hazard. The project is consistent with the two CLUP policies concerning requirements for height compatibility.

Policy S-4 prohibits above ground storage of fuel or other hazardous materials in the Inner Safety Zone and Turning Safety Zone. To ensure compliance with this CLUP policy, the applicant revised the project description to install all of the fuel tanks in a recessed concrete pit with the top of the tanks matching adjacent grade (Sequoia 2019f). The ALUC found the proposed project to be consistent with the CLUP (ALUC 2019). (See also section **5.9 Hazards and Hazardous Materials** of this initial study for an analysis of the proposed project's consistency with the CLUP.) With this change, the project is consistent with **Policy S-4**.

City of Santa Clara 2010–2035 General Plan. The project site is in an area with the General Plan land use designation of Heavy Industrial, which "allows primary manufacturing, refining and similar activities. It also accommodates warehousing and distribution, as well as data centers" (Santa Clara 2010). The proposed project is consistent with the description of uses allowed in areas with this land use designation.

Floor area ratio (FAR) is a tool for local governments to predict and limit the intensity of land uses and their resulting environmental impacts. The FAR of a development is the total square footage of a building(s) on a lot divided by the total lot area. A project with a higher than allowed FAR could cause environmental impacts relating to increased vehicle miles travelled, or VMT. The project's building square footage is 703,450 square feet (sq. ft.). The lot area is 14.959 acres, or 651,614 sq. ft. Using those values, staff calculated FAR to be 1.08, which exceeds the General Plan's maximum FAR of 0.45 for the Heavy Industrial land use designation. However, data centers invariably have low employment densities despite their large size, and the proposed project would not increase the number of employees and associated VMT to a level that could cause impacts unanticipated by the General Plan. (See also section **5.17 Transportation** of this initial study for an analysis of VMT.) Although the project's FAR exceeds the maximum FAR of 0.45, the project would not cause environmental impacts typically associated with a project with similar square footage but with a relatively high employment density (such as a conventional office building project). Therefore, the impact is less than significant.

Sections 5.3.5 and 5.10.5 of the General Plan contain several policies with directives concerning airport hazards and airspace protection. (See the policies listed above for the *City of Santa Clara 2010–2035 General Plan* under the subsection, "Regulatory Background.") These policies essentially duplicate the content or intent of policies contained in the Santa Clara County CLUP, and as described above, the Santa Clara County ALUC evaluated the proposed project and made a finding of consistency with the CLUP (ALUC 2019). Therefore, the project is consistent with General Plan policies like those contained in the Santa Clara County CLUP.

City of Santa Clara Zoning Code. The Zoning Code grants the City staff Zoning Administrator the authority to permit minor modifications of height, area, and yard regulations. A "minor modification" cannot be greater than 25 percent of the dimensions of an area, space, or height, or other requirement provided for in the Zoning Code (Santa Clara 2019a, § 18.90.020, subd. (a)). The Zoning Code also provides that where a proposed alteration or variation exceeds 25 percent of any requirement, the modification is deemed to be a variance, which requires approval by the Planning Commission at a noticed public hearing (Santa Clara 2019a, §§ 18.90.020, subd. (a)(5); 18.108.030). The project site arrangement provides setback areas on all sides of the project site that exceed minimum yard depths specified in the Zoning Code.

Maximum permitted building height in the MH zoning district is 70 feet (Santa Clara 2019a, § 18.50.070). The data center building would have a typical height of 85 feet from adjacent grade to the top of the main parapet. The applicant is requesting a minor modification of the maximum building height regulation from the City to allow the building height increase from 70 feet to 85 feet. The proposed building height would be a 17.6 percent exceedance, which is below the 25 percent limit the Zoning Administrator can grant as a minor modification to the regulation, rather than deeming it a variance from the regulation requiring Planning Commission approval. Thus, if the Zoning Administrator grants the minor modification to the regulation, the project would be in conformance and no conflict would occur. The applicant submitted a formal planning application to the City of Santa Clara on September 24, 2019, which was scheduled for preliminary review of completeness and compliance with City standards at the City's joint Project Clearance Committee hearing on October 29, 2019 (TN 230348; Santa Clara 2019b). A copy of the planning application is reproduced in the applicant's responses to staff's data requests docketed on October 25, 2019 (TN 230353).

The height of exposed mechanical equipment and any accompanying screening is subject to approval by the City's Architectural Committee (Santa Clara 2019a, § 18.50.140, subd. (f)). The height to the top of screening would be 99 feet from adjacent grade. A stair and freight elevator tower at the southeast corner of the building would be taller than the rest of the building to allow roof access for maintenance of HVAC equipment; the parapet of this building element would be at 105 feet from adjacent grade. The City's Special Height Regulations include regulations pertaining to height requirements subject to additional requirements, conditions and exceptions to those already required by a zoning district. "[T]he height limitations contained in the schedule of district regulations do not apply to spires, belfries, cupolas, antennas, water tanks, ventilators, chimneys, or other mechanical appurtenances usually required to be placed above the roof level and not intended for human occupancy or to be used for any commercial or advertising purposes" (Santa Clara 2019a, § 18.64.010, subd. (a)). Therefore, the heights and screening for the mechanical equipment and the parapets hiding the equipment would conform to the City's Special Height Regulations.

A few purposes of a height limit are to preserve a scenic vista, protect the public view of a scenic resource (for example, architectural structure, landmark, natural feature), and to maintain the

character of a site and surrounding area (for example, residential or commercial area). As analyzed in section **5.1 Aesthetics**, the project as proposed would not significantly affect a scenic vista or scenic resources, and inclusive of the minor modification in allowable building height, the project would maintain the character of the site and surrounding area without causing a conflict with applicable zoning and other regulations governing scenic quality. The project as proposed would not cause a significant impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the impact is less than significant.

Required Mitigation Measures: None.

5.11.3 References

ALUC 2019 – Connolly, Mark. "RE: ALUC Consistency determination for the Sequoia Data Center located at 2600 De La Cruz Boulevard in Santa Clara." Received by Elaheh Kerachian, December 30, 2019.

CEC 2019c – Report of Conversation with Cary Greene, Airport Planner, City of San Jose Airport Department, dated December 20, 2019. (TN 231326)

Sequoia 2019d – Applicant responses to Data Request Set 2. (TN 230347-48, 230353-54, and 230356-57). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Sequoia 2019f – Applicant responses to Data Request Set 3. (TN 231257). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Santa Clara 2010 – Community Development Department, Planning Division. *City of Santa Clara 2010–2035 General Plan*. Chapter 5 Goals and Policies. Section 5.2.2 Land Use Classifications and Diagram. Land Use Diagrams Phases I, II, and III. Section 5.10.5 Safety Goals and Policies. Available online at: http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan. Accessed on September 23 and October 14, 2019.

Santa Clara 2019a – Santa Clara City Code. February 2019. Available online at: https://www.codepublishing.com/CA/SantaClara. Accessed on: September 4, 2019.

Santa Clara 2019b – Development Review Process. Available online at: https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/development-activity/development-review-process. Accessed on: December 31, 2019.

Santa Clara County 2016 – Santa Clara County Airport Land Use Commission. *Norman Y. Mineta San Jose International Airport Comprehensive Land Use Plan for Santa Clara County*. Pages 1-1, 3-17, 4-4, 4-5, 4-7, 4-8, Figures 6, 7, and 8. Adopted by Santa Clara County Airport Land Use Commission, San Jose, CA, May 25, 2011; amended November 16, 2016. Available online at: https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_SJC_CLUP.pdf. Accessed on October 21, 2019.

5.12 Mineral Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to mineral resources. Analysis of impacts is limited to project components where ground disturbance would occur, and operation of new facilities would limit access to mineral resources.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

5.12.1 Setting

Information on mineral resources was compiled from published literature, maps, and review of aerial photographs. Impacts to mineral resources from project construction and operational activities were evaluated qualitatively based on the area occupied by the project, site conditions, expected construction practices, anticipated materials used, and the locations and duration of project construction and operational activities.

The project site, located within the city of Santa Clara, is in an area identified as Mineral Resource Zone 1 (MRZ-1) for aggregate materials by the State of California (DOC, 1996). MRZ-1 refers to an area where available geologic information indicates that little likelihood exists for the presence of significant mineral resources (Jensen and Silva 1988). The project site and surrounding area are not known to support significant mineral resources of any type. In addition, the Division of Mine Reclamation's list of mines, referred to as the AB 3098 List and regulated under the Surface Mining and Reclamation Act (SMARA), does not include any mines within the city of Santa Clara (DOC 2016)

Regulatory Background

Federal

No federal regulations related to mineral resources apply to the project.

State

Surface Mining and Reclamation Act. The California Surface Mining and Reclamation Act of 1975 (SMARA) requires that the State Geologist classify land into MRZ or Scientific Zones according to the known or inferred mineral potential of the land (Pub. Resources Code, §§ 2710-2796).

MRZs are defined as the following (Jensen and Silva 1988):

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

- MRZ-2: Areas where adequate information indicates that significant deposits are present, or where it is judged that a high likelihood for their presence exists. The guidelines set forth two requirements to be used to determine if land should be classified MRZ-2:
    - The deposit must be composed of material that is suitable as a marketable commodity. The deposit must meet threshold value.
    - The projected value (gross selling price) of the deposit, based on the value of the first marketable product, must be at least $5 million (1978 dollars).
- MRZ-3: Areas containing mineral deposits, but their significance cannot be evaluated from available data.
- MRZ-4: Areas where available information is inadequate for assignment to any other MRZ category.

Scientific Zones are defined as**:** Areas containing unique or rare occurrence of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.

5.12.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: None.

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

Construction

NO IMPACT. The project site is in a developed urban area and does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a known mineral resource.

Operation and Maintenance

NO IMPACT. The project site is in a developed urban area and does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site.

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

Construction

NO IMPACT. The project site is in a developed urban area and does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site.

Operation and Maintenance

NO IMPACT. The project site is in a developed urban area and does not contain any known or designated mineral resources. Therefore, the project would not result in the loss of availability of a locally important mineral resource recovery site.

5.12.3 References

DOC 1996 – California Department of Conservation (DOC) - Revised Mineral Land Classification Map. Aggregate Resources Only. South San Francisco Bay Production-Consumption Region. Mountain View Quadrangle. Open-File Report 96-03. Available online at: https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc. Accessed on: August 26, 2019.

DOC 2016 – California Department of Conservation (DOC) - AB 3098 List. A link to this list is available online at: https://www.conservation.ca.gov/dmr. Accessed on: August 26, 2019.

Jensen, L.S. and Silva, M.A. 1988 – *Mineral Land Classification of Portland Cement Concrete Aggregate in the Stockton-Lodi Production-Consumption Region*. California Division of Mines and Geology, Special Report 160. Available online at: https://water.ca.gov/LegacyFiles/floodmgmt/docs/misc_refs/Jensen_Silva_1988_minerallandclass.pdf. Accessed on: August 26, 2019.

5.13 Noise

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC or project) with respect to noise. SDC and project are intended here to be the data center and the associated backup generation facility.

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

Environmental checklist established by CEQA Guidelines, Appendix G.

5.13.1 Setting

The project area consists primarily of heavy industrial land uses. The SDC site zoning is Heavy Industrial. The city of Santa Clara has approved data centers as a use consistent with the Heavy Industrial zoning designation. A building designated commercial use lies directly to the south of the site, but is within Heavy Industrial zoning. (Santa Clara 2014). The nearest residential area is located approximately 0.7 mile to the south of the project site boundary. The nearest airport is the Norman Y. Mineta San Jose International Airport. Its closest boundary is located approximately 100 feet east of the site. The predominant ambient noise sources are attributed to the automobile traffic on De La Cruz Blvd. to the east and Martin Avenue to the south of the project site and from aircraft arriving to and departing from the airport.

Two 15-minute noise surveys were conducted to characterize ambient noise in the areas surrounding the project site on Wednesday, July 3, 2019 (Sequoia 2019a). One survey was done between 10:07 a.m. and 10:22 a.m. to characterize ambient noise from traffic along De La Cruz Boulevard and also from San Jose Airport air traffic. The representative noise level, L_{eq}, for that survey was 65 dBA. The other survey was conducted on Martin Avenue along the southern boundary of the project site and was conducted from 10:32 a.m. and 10:47 a.m. The representative noise level, L_{eq}, for that survey was 71 dBA. While these two surveys were of short duration, they represent typical noise levels in the project vicinity during daytime.

Regulatory Background

Thresholds of Significance

The CEQA Guidelines state that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project would substantially increase existing noise levels at noise-sensitive receivers on a permanent or

temporary basis. CEQA does not define what noise level increase would be substantial. Generally, an increase of 3 dBA is noticeable and an increase of 5 dBA is distinct. A noise level increase of more than 5 dBA would be considered potentially significant. Some factors, such as the frequency of occurrence of the noise and time of day/night it occurs, are considered in determining if such an increase is clearly significant or not.

City of Santa Clara 2010-2035 General Plan. The city of Santa Clara 2010-2035 General Plan describes the levels of exterior noise considered compatible for various land uses to guide land use planning decisions. The Santa Clara Municipal Code, discussed below, establishes more specific sound limits (Santa Clara 2019).

City of Santa Clara Municipal Code. Chapter 9.10 (noise ordinance) of the city of Santa Clara Municipal Code applies to the regulation of noise and vibration for this project. Section 9.10.040 specifies the exterior noise limits that apply to land use zones within the city. The city's exterior noise limit is 75 dBA (anytime) for heavy industrial land use zones, 65 dBA daytime and 60 dBA nighttime for commercial land uses, and 55 dBA daytime and 50 dBA nighttime for residential land uses. The Municipal Code also considers a 5 dBA increase in ambient noise while it remains within allowable limits a significant impact, but if it would result in the noise level exceeding the allowable limit, then a 3 dBA increase is considered a significant impact.

The city's noise limits for stationary noise sources are not applicable to emergency work, including the operation of emergency generators during an emergency (Section 9.10.070); however, the intermittent testing of the emergency generators would be subject to the local noise regulations defined in the city's noise ordinance (Santa Clara 2019). Furthermore, Section 9.10.230 of the Municipal Code prohibits construction activities within 300 feet of residentially zoned property outside the hours of 7:00 a.m. and 6:00 p.m. on weekdays, 9:00 a.m. and 6:00 p.m. on Saturdays, and on Sundays.

5.13.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Measures:

NOI-1: The applicant shall complete a design level acoustical analysis and include appropriate site and building design, building construction, and noise attenuation techniques to ensure that the SDC's rooftop mechanical equipment meets the city's applicable exterior noise standard at the adjacent land uses. A qualified acoustical consultant shall review the final site plan, building elevations, and roof plan prior to issuance of a building permit to calculate the expected exterior noise levels at nearby land uses and require appropriate noise shielding. The applicant shall implement all recommendations of the acoustical analysis, which may include but not be limited to rooftop screening and/or acoustical wraps. In addition to the noise attenuation techniques that may be identified in the design level acoustical analysis, SDC shall consider the following potential feasible measures that are capable of meeting the city's applicable noise performance standard [SDC only]:

> In the realm of physical acoustical screening (like a noise wall), the use of a Perforated Fiberglass Sound-Absorptive Noise Barrier System would allow for a lightweight screening. This solution would provide efficient performance, as the wall system contains no gaps due to its tongue-and-groove design in 12-inch wide segments. This material features a noise reduction coefficient (NRC) rating of 1.05 and sound transmission class (STC) rating of 35. This results in a noise reduction of up to 25 dBA. For application at SDC, screening would be

provided at the perimeter of the rooftop platforms surrounding the air-cooled chillers. The screening walls would be approximately 8 feet high to align with the top of the chiller units.

Noise attenuation wraps for air cooled chillers can be used to produce noise reductions of 4 dBA to about 10 dBA. HUSH COVER™ removable sound blankets attenuate overall decibels and some tonal frequencies. Each chiller would be fitted with the HUSH CORE screw chiller noise reduction system or equal. The chiller noise reduction system to be applied to the suction and discharge piping, compressor housing, and oil separators would be a removable blanket insulation with Velcro flaps. The insulation mass shall be 3 pounds per square foot and shall be applied with 100 percent coverage. The noise reduction product shall be furnished and installed by the manufacturer.

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

LESS THAN SIGNIFICANT IMPACT. Construction activities for SDC would likely utilize equipment that could generate noise levels that exceed ambient noise, such as bulldozers and jackhammers. The loudest construction activity for this project would produce noise levels of 80 dBA at 50 feet (Sequoia 2019b, Appendix N: Noise Study).

Sound levels from stationary noise sources attenuate at a rate of 6 dBA for every doubling of distance. At the business center located about 100 feet directly to the south, the loudest construction noise level of 80 dBA translates to an exterior level of 74 dBA. This is an increase of 3 dBA above the ambient level in this area (71 dBA) and is not considered significant. Also, if needed, quieter equipment or commonly used noise-reducing accessories that are readily available can be used to reduce noise. Examples of such measures are: temporary noise barriers and blankets, equipping all internal combustion engine-driven construction equipment with intake and exhaust mufflers that are in good condition, and locating noisy equipment as far away from noise receptors as feasible.

At a rate of reduction of 6 dBA for every doubling of distance, the attenuation is about 37 dBA at the residences 0.7 mile (3,700 feet) away. Reducing the noise level of the loudest construction activity (80 dBA) by 37 dBA, the exterior sound that would be detected at the closest residence would be 43 dBA. This level of noise would not be detected at this residential area. Moreover, the calculation above does not account for significant shielding due to intervening structures that separate the SDC project site from the residential receptors. These barriers would result in further reduction of the noise impact at this residential area. Also, construction activities would occur only during daytime hours.

Thus, project construction activities would not be expected to result in a significant impact in terms of noise levels, especially in light of the fact that the project site is surrounded with mostly industrial areas and that the closest residence is about 0.7 mile away.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Emergency generators would provide backup power to the data center building in the event that an equipment failure or other conditions result in an interruption of the electricity provided by Silicon Valley Power (SVP). Sources of operational noise for SDC would include

the backup generators, rooftop air-cooled chillers, exhaust fans, and an HVAC system consisting of 5 dedicated outdoor air systems (DOAS). A sound-attenuating enclosure would be provided for each backup generator. Also, an 8-foot tall rooftop noise screening wall would be installed on top of the data center building to act as a noise screen. The applicant proposes using additional measures to further reduce noise levels at the project perimeter, if needed, including the use of removable sound blankets around the air-cooled chillers, suction and discharge piping, compressor housing, and oil separators.

As described above, the city's exterior noise limit is 75 dBA (anytime) for heavy industrial land use zones, and 55 dBA daytime and 50 dBA nighttime for residential land uses. To determine the impact from project construction and operation on the nearest residence and also the commercial building (business center) to the south of the project boundary, the applicant performed noise modeling for a conservative scenario (worst-case scenario) assuming that the air chillers, the DOAS equipment, and the exhaust fans would be running at 100 percent load 24-hours a day.

Noise modeling was performed for two modes of project operation: 1) normal mode, with rooftop air-cooled chillers, makeup air units, and HVAC units operating; and 2) testing mode, which consisted of the normal mode of operation plus one generator operating at the same time for testing. It should be noted that generator testing would occur for short durations and be done infrequently, yet the testing scenario assumed that the generator runs at all times.[1] The model showed that for both the normal operation and testing modes, the project noise would be below the city's criteria at the nearest residential area but would exceed the 75 dBA limit at the business center directly to the south of the project site. However, with installation of the sound attenuating enclosures for the backup generators, the rooftop screening wall on top of the data center building, and the removable noise reduction blankets, the project noise would be adequately reduced to less than 75 dBA at the business center, thereby meeting the city's 75 dBA significance criteria (Sequoia 2019a, Section 4.13). The modeling results for the residential area included the noise shielding effect due to the existence of more than 4 intervening rows of buildings which would result in a reduction of 9 dBA in the noise level from project operation.

The model did not consider emergency operations since emergency noise, including the operation of emergency generators necessary to provide services, is exempt from city regulations pursuant to section 9.10.070(a) of the Santa Clara Municipal Code (Sequoia 2019a). Nonetheless, considering that the nearest noise-sensitive receptors, the residential receptors, are about 0.7 mile away and that there would be a 9 dBA reduction due to intervening structures, the emergency operation would not result in excessive noise.

Impact from project operation in terms of noise pollution would be less than significant. Project operation would not result in generation of a substantial increase in ambient noise levels in excess of the city's standards.

Required Mitigation Measures: None.

[1] Typical extent of testing for each generator would cumulatively be no more than 50 hours per year (Sequoia 2019).

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction

LESS THAN SIGNIFICANT IMPACT. This analysis relies on the vibration thresholds identified by Caltrans to determine the significance of vibration impacts related to adverse human reaction. These thresholds are consistent with local regulations. The threshold of human response begins at a peak particle velocity of 0.16 in/sec. Caltrans characterizes this as a "distinctly perceptible" event (Caltrans 2013). A level of 0.20 in/sec has been found to be annoying to people in buildings and can pose a risk of architectural damage to buildings.

The only construction work likely to potentially produce significant vibration when perceived off site is pile driving, but pile driving would not occur for this project (Sequoia 2019a). Jackhammers can cause a ground-borne vibration rate of 0.035 in/sec at 25 feet (less than the threshold of human response) and vibratory rollers can cause a groundborne vibration of 0.21 in/sec at 25 feet (Caltrans 2013). A vibratory roller may be used during project construction for paving of the parking lot. At the nearest office buildings located about 100 feet to the south of the project, 0.21 in/sec translates to approximately 0.05 in/sec, much less than the threshold of human response. Also, there are no residential land uses are in the immediate proximity of the project site; the nearest residence is located roughly 0.7 mile away.

Construction equipment and activities would be similar to those used at similar projects and vibration impacts from project construction would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Sources of groundborne vibration associated with project operation would include the backup generators, rooftop air-cooled chillers, makeup air units, and DOAS units. These pieces of equipment are well-balanced, as they are designed to produce very low vibration levels throughout the life of a project. In most cases, even when there is an imbalance, they could contribute to ground vibration levels only in the vicinity of the equipment and would be dampened within a short distance. The proposed backup generators are equipped with specifications that ensure sufficient exhaust silencing to reduce vibration. Therefore, vibration impacts due to project operation would be less than significant.

Required Mitigation Measures: None.

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?

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The nearest airport to the project site is the Norman Y. Mineta San Jose International Airport, located approximately 100 feet to the east. It is located inside the Airport Noise

Zone (the 65 CNEL[2] contour, as set forth by state law) as defined in the Comprehensive Land Use Plan for the airport. Aircraft-related noise is continually audible at the project site. The project site is surrounded with mostly industrial uses and the closest residence is about 0.7 mile away from both the project site and the airport. The project's operational noise levels would not exceed the 24-hour ambient noise levels at the nearest residential receptors and would not be detected by these residents. The project site is not in the vicinity of a private airport and SDC would not place sensitive land uses within the airport noise contour. Thus, the project would not combine with the airport to expose people to excessive noise levels.

Required Mitigation Measures: None.

5.13.3 References

Caltrans 2013 – California Department of Transportation (Caltrans). Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol, A Guide for Measuring, Modeling, and Abating Highway Operation and Construction Noise Impacts, Division of Environmental Analysis, Environmental Engineering, September 2013. Report No. CT-HWANP-RT-13069.25.3. Available online at: http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf.

Santa Clara 2019 – City of Santa Clara (Santa Clara). City of Santa Clara City Code, Chapter 9.0: Regulation of Noise and Vibration. Available online at: https://www.codepublishing.com/CA/SantaClara/html/SantaClara09/SantaClara0910.html. Accessed on: May 30, 2019.

Santa Clara 2014 – City of Santa Clara (Santa Clara). City of Santa Clara 2010-2035 General Plan. Approved by City Council November 16, 2010 and updated December 9, 2014. Available online at: http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan. Accessed on: March 22, 2019.

Sequoia 2019a – Application for Small Power Plant Exemption: Sequoia Data Center, dated August, 2019. (TN 229419-1). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Sequoia 2019b – Appendices A-N to the Application for Small Power Plant Exemption: Sequoia Data Center, dated August, 2019. (TN 229419-2/3/4). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

[2] CNEL is the average sound level over a 24 hour period, with a penalty of 5 dB added between 7 pm and 10 pm and a penalty of 10 dB added for the nighttime hours of 10 pm to 7 am. CNEL is frequently used in regulations of airport noise impact on the surrounding community.

5.14 Population and Housing

This section describes the environmental and regulatory setting and discusses the impacts associated with the construction and operation of the project with respect to population and housing.

POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental checklist established by CEQA Guidelines, Appendix G.

5.14.1 Setting

The project is proposed in the City of Santa Clara in Santa Clara County. Nearby cities include Campbell, Cupertino, Milpitas, San Jose, and Sunnyvale. The applicant estimates the construction and operations workers would come from the greater Bay Area. Staff considers that the local workers[1] from the greater Bay Area are not likely to temporarily (during construction) or permanently (during operations) move closer to the project. Staff considers the City of Santa Clara as the study area for population and housing-related impacts and the San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area (MSA), which covers San Benito and Santa Clara counties, as the setting for labor supply for the project.

Population Growth

The City of Santa Clara has an estimated land area of 18.4 square miles. The Housing Element of the Comprehensive General Plan for the City of Santa Clara (adopted December 2014) forecasts population and housing estimates in three phases, reflecting the near (2010-2015), mid (2015-2023), and long term (2023-2035) horizons. By 2035, the general plan would allow for an additional 32,400 residents (Santa Clara 2014, page 2-4). The estimated 2019 population for the city was 128,717 people (CA DOF 2019).

Table 5.14-1 shows the historical and projected populations for the cities and communities within proximity of the project site, plus Santa Clara County. Population projections between 2019 and 2040 show a growth ranging from 9 to 42.8 percent or 0.4 to 2 percent per year in the cities within and around a 6-mile radius of the project site.

[1] Workers with a greater commute would be considered non-local and would tend to seek lodging closer to the project site (temporarily during construction or permanently during operations).

TABLE 5.14-1 HISTORICAL AND PROJECTED POPULATIONS

Area	2010[1]	2019[2]	2020[3]	2040[3]	Projected Population Change 2019-2040 Number	Projected Population Change 2019-2040 Percent (%)	Projected Population Change 2019-2040 Percent per Year (%)
Campbell	39,349	43,250	43,700	47,120	3,870	9.0	0.4
Cupertino	58,302	59,879	63,515	68,305	8,426	14.1	0.7
Milpitas	66,790	76,231	90,645	103,970	27,739	36.4	1.7
San Jose	945,942	1,043,058	1,028,210	1,377,145	334,087	32.0	1.5
Santa Clara	116,468	128,717	131,655	159,500	30,783	23.9	1.1
Sunnyvale	140,081	155,567	149,935	222,210	66,643	42.8	2.0
Santa Clara County	1,781,642	1,954,286	1,986,340	2,538,320	584,034	29.9	1.4

Sources: [1]US Census 2010; [2]CA DOF 2019; [3]ABAG 2019

Housing

Table 5.14-2 presents housing supply data for the project area. Year 2019 housing estimates indicated 30,420 vacant housing units within Santa Clara County representing a vacancy rate of 4.5 percent (CA DOF 2019).

TABLE 5.14-2 HOUSING SUPPLY ESTIMATES IN THE PROJECT AREA

Housing Supply		2019	
		Total	Vacant
Campbell	Number	18,096	919
	Percent	100	5.1
Cupertino	Number	21,022	987
	Percent	100	4.7
Milpitas	Number	22,027	742
	Percent	100	3.4
San Jose	Number	335,887	14,331
	Percent	100	4.3
Santa Clara	Number	48,183	2,113
	Percent	100	4.4
Sunnyvale	Number	59,953	2,626
	Percent	100	4.4
Santa Clara County	Number	671,439	30,420
	Percent	100	4.5

Source: CA DOF 2019

By 2035, the general plan would allow for an additional 32,400 residents in 13,312 new housing units, and 25,040 new jobs in 24,253,600 square feet of new non-residential development. This development would occur in addition to "in progress" development taking place under the general plan, for a total population of 154,990 and a total employment base of 152,860 by 2035 (Santa Clara 2014, page 2-4). The Santa Clara County regional housing needs assessment allocation for the City of Santa Clara is 4,093 new housing units for a projected county total of 58,836 housing units by 2022 (ABAG 2013, page 26).

Labor Supply

According to the California Employment Development Department 2016-2026 Occupational Employment Projections for the San Jose-Sunnyvale-Santa Clara MSA, the 2026 projected employment for the construction and extraction occupations is 52,430, which is a 1.2 percent annual average percent change

from 2016 estimated employment levels (46,900) as shown in **Table 5.14-3** (CA EDD 2019). In addition, the projected employment for general and operations managers is 19,590, which is a 1.2 percent annual average percent change from 2016 estimated employment levels (17,520). The projected employment for security guards is 9,390, which is a 1.0 percent annual average percent change from 2016 estimated employment levels (8,510). The projected employment for janitors is 17,910, which is a 0.8 percent annual average percent change from 2016 estimated employment levels (16,520) (CA EDD 2019).

TABLE 5.14-3 PROJECTED EMPLOYMENT GROWTH

San Jose-Sunnyvale-Santa Clara MSA	Year 2016	Year 2026	Annual Average Percent Change
Construction and Extraction Trades	46,900	52,430	1.2
General and Operations Managers	17,520	19,590	1.2
Security Guards	8,510	9,390	1.0
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	16,520	17,910	0.8

Source: CA EDD 2019

Regulatory Background

No regulations related to population and housing apply to the project.

5.14.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: None.

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

Construction

LESS THAN SIGNIFICANT IMPACT. The project would not directly or indirectly induce substantial unplanned growth in the City of Santa Clara. The project does not propose new housing or land use designation changes and it would not facilitate growth through extension of roads, water supply pipelines, or other growth inducing infrastructure. While the project includes 54 backup generators, the electricity produced would directly serve the project if utility power interruptions occurred and would not be an extension of infrastructure that would result in indirect population growth.

Site preparation activities for the project would include ground preparation and grading of the entire project site. Project construction would employ an average of 125 workers per month and have a peak workforce of 300 workers per month. Construction activities would last approximately 13 months from February 2020 through March 2021 (Sequoia 2019c, TN 229938-1).

The applicant anticipates all of the construction workforce would be sourced locally from within the Greater Bay Area (Sequoia 2019c, TN 229938-1). As shown in the "Setting" subsection of this analysis, there is a sufficient local construction workforce in the San Jose-Sunnyvale-Santa Clara MSA to accommodate the project. Therefore, the construction workforce would not likely seek temporary lodging closer to the project site. The project's construction workforce would not directly or indirectly induce substantial population growth in the project area. Impacts would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would employ a total of 25 operations workers. The applicant anticipates all of the operations workforce would be derived locally within the Greater Bay Area (Sequoia 2019c, TN 229938-1). Based on the proximity of the supply of operations workers, they are not likely to relocate closer to the project. As shown in the "Setting" subsection of this analysis, there is a sufficient local operations workforce in the San Jose-Sunnyvale-Santa Clara MSA. If some operations workers were to relocate, housing data shows a vacancy rate of 4.5 percent in Santa Clara County and 4.4 percent in the City of Santa Clara. A 5-percent vacancy is a largely industry-accepted minimum benchmark for a sufficient amount of housing available for occupancy (Virginia Tech 2006). While the vacancy rate in the city and county is slightly lower than the minimum benchmark, housing counts indicate a sufficient supply of available housing for the possible few operations workers that could seek housing closer to the project. In addition, the city's general plan has accounted for population growth in the City of Santa Clara and the proposed data center use would be consistent with the general plan designation of Heavy Industrial. If the few new operation workers were to relocate closer to the project site, it would not result in unplanned population growth. Therefore, the project's operations workforce would not directly or indirectly induce a substantial population growth in the project area. Impacts would be less than significant.

Required Mitigation Measures: None.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction, Operation and Maintenance

NO IMPACT. The project would occur on a currently vacant parcel that was previously developed with a recycled paperboard mill and warehouse, and therefore would not displace any people or housing. Construction of replacement housing elsewhere would not be necessary, no people or houses would be displaced, and thus no impact would occur.

5.14.3 References

ABAG 2013 – Association of Bay Area Governments (ABAG). Final Regional Housing Need Allocation 2015-2023, Adopted July 18, 2013.Available online at: https://abag.ca.gov/sites/default/files/2015-23_rhna_plan.pdf.

ABAG 2019 – Association of Bay Area Governments (ABAG). Projections 2040 by Jurisdiction. Data last updated May 1, 2019. Available online at: https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra.

CA DOF 2019 – California Department of Finance (CA DOF). E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2019, with 2010 Benchmark, May 2019. Available online at: http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

CA EDD 2019 – Employment Development Department, State of California (CA EDD). Labor Market Information Division, 2016-2026 Occupational Employment Projections, San Jose-Sunnyvale-Santa Clara Metropolitan Statistical Area, (San Benito and Santa Clara Counties), data last update May 28, 2019. Available online at: https://data.edd.ca.gov/Employment-Projections/Long-Term-Occupational-Employment-Projections/4yzm-uyfq.

Santa Clara 2014 – City of Santa Clara (Santa Clara). General Plan Land Use Component and Housing Element Updates, EIR Addendum. Prepared by ESA, November 2014. Adopted December 9, 2014. Available online at: http://santaclaraca.gov/home/showdocument?id=46446.

Sequoia 2019c – Applicant responses to Data Request Set 1. (TN 229938-1/2, 229973, 230507, and 230893). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

US Census 2010 – United States Census Bureau (US Census). P1: TOTAL POPULATION - Universe: Total population, 2010 Census Summary File 1. Available online at: http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.

5.15 Public Services

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to Public Services.

PUBLIC SERVICES 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:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☒	☐
d. Parks?	☐	☐	☒	☐
e. Other public facilities?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

5.15.1 Setting

The project is proposed in the City of Santa Clara in Santa Clara County. Fire and police protection services are provided from departments within the City of Santa Clara. Recreation facilities and other public facilities like libraries are within the City of Santa Clara. The project site is within the Santa Clara Unified School District boundaries. The study area for public services-related impacts is the City of Santa Clara. The project would include a 702,114 square foot four-story building housing computer servers, 54 diesel-fired backup generators in a generation yard, surface parking, and landscaping.

Fire Protection

The project would be located within the jurisdiction of the Santa Clara Fire Department (SCFD). The SCFD provides fire suppression, emergency medical, fire prevention, and hazardous materials services to the City of Santa Clara (Santa Clara 2019a). There are 10 fire station districts in the City of Santa Clara; the project site is located in District 2 at 1900 Walsh Avenue, approximately 0.9 mile northwest of the project site (Santa Clara 2019b).

SCFD has approximately 167 fire service personnel and is supplemented by 40 Reserve Firefighters when fully staffed. In 2018, SCFD had a total call volume of 9,050 calls. Approximately 77 percent of the calls were for emergency medical service, 21 percent were for fire, 16 percent were for alarm activation, 10 percent were for service, 2 percent were for hazardous materials, and 0.4 percent were for technical rescue (Santa Clara 2018). Based on the city's 2018 estimated population and the department's current fire personnel roster, the department's staffing ratio is 1.3 fire personnel for every 1,000 residents. The city is not in a very high fire hazard severity zone in a local responsibility area (CalFire 2008).

Police Protection

Police protection would be provided by the Santa Clara Police Department (SCPD). SCPD has two police stations. The police headquarters, located approximately one mile south, is the closest station to the project site.

In 2018, there were 58,912 calls for service and the department's average response time is approximately 4.26 minutes after dispatch. Police staff includes 159 sworn officers and 80 civilian professionals. There are 1.2 officers for every 1,000 residents. (Santa Clara 2019c)

Schools

The project would be located within the Santa Clara Unified School District. The district covers 56 square miles and is located in the northwestern portion of Santa Clara County (SCUSD 2019a). This district serves the cities of Santa Clara, Sunnyvale, San Jose, and Cupertino. The Santa Clara Unified School District had an enrollment of 15,387 students in the 2018/2019 school year (CDE 2019). Santa Clara Unified School District facilities include: 1 adult school, 5 high schools, 3 middle schools, 1 K-8 school, 17 elementary schools, and 1 community school (SCUSD 2019b). The nearest schools to the project site are Granada Islamic (private), approximately 1 mile northwest of the project and Scott Lane Elementary (public), approximately 1.2-miles southwest of the project.

Parks

The City of Santa Clara has total park acreage of 350 (made up of developed and undeveloped acreage). Included in the park and recreation areas are community parks, mini/pocket parks, neighborhood parks, public open space, recreation facilities, recreational trails, and joint use facilities (Santa Clara 2019d). The City of Santa Clara has a parkland dedication/in lieu standard based on the city's existing ratio of developed park acreage per 1,000 residents (Santa Clara 2014 and Santa Clara 2019d). The service population used to estimate existing service standard for parks in the current development impact fee update study (April 2019) is 126,408 residents (Santa Clara 2019d).[1] With a combined total of 328 acres[2], Santa Clara has approximately 2.6 acres per 1,000 residents and meets its park standards (Santa Clara 2019d, page19).

The closest park to the project site is the Larry J. Marsalli Park, which is located 0.9 mile to the north. The seven-acre park provides open space, restrooms, a softball field, and a children's playground. The City of Santa Clara maintains this park.

Other Public Facilities

The Santa Clara City Library has three branches to serve the City of Santa Clara. The closest library to the project site is the Mission Branch Library, which is located approximately 1.43 miles to the south (Santa Clara 2019f).

Regulatory Background

No regulations related to public services apply to the project.

[1] While the April 2019 City of Santa Clara Park and Recreation Facilities Development Impact Fee Update Study is an Administrative Draft, the methodology used to estimate park standard associated with mitigation fee is consistent with that used in the June 2014 Final Development Impact Fee Study.

[2] Total acres of improved and unimproved parkland that meets the Mitigation Fee Act Standard.

5.15.2 Environmental Impacts and Mitigation Measures

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:

a) Fire protection?

Construction

LESS THAN SIGNIFICANT IMPACT. The project site was previously developed with heavy industrial uses and is surrounded by commercial and industrial land uses. In addition, the project is located on a site currently served by fire protection and emergency services.

Project construction activities that could pose a risk for fire or the need for fire protection response due to heated exhaust or sparks, include the use of grinders, cranes, excavation equipment, vehicles, and bulldozers. Other construction activities with a potential fire risk due to heat sources or open flames could include the use of torches or welding.

The standard for response to structure fire calls for the first unit to arrive is under 6 minutes from dispatch of alarm, 90 percent of the time. Current data show the SCFD arrived in less than 6 minutes, 90 percent of the time (Santa Clara 2018). SCFD standard for an effective firefighting force (17 personnel) on scene is less than 10 minutes from dispatch of alarm, 90 percent of the time for structure fire calls. Current data shows that SCFD arrived in less than 10 minutes, 90 percent of the time. For emergency medical calls, the standard for an advanced life support fire company is to arrive in under 8 minutes from dispatch of the alarm, 90 percent of the time. Current data shows that SCFD arrived in less than 8 minutes, 90 percent of the time.

Upon notification and dispatch, SCFD response time for all types of emergencies is within 6 minutes, 90 percent of the time (Santa Clara 2018). As the project is located on a site already served, emergency response time to the project would be consistent with a 6-minute response.

While there may be a slight increased need for fire protection response during project construction, these effects would not be sufficient to induce the construction of new or physically altered governmental facilities that could result in significant environmental impacts; therefore, impacts would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would employ a total of 25 operations workers. The applicant estimates the all the workers would be hired locally from the greater Bay Area (Sequoia 2019c, TN 229938-1). Based on the proximity of the supply of operations workers, they are not likely to relocate closer to the project. The few operations employees that may move into the city and within SCFD's service area would have a negligible effect on the ability of the existing fire stations to meet their emergency service and response standards.

Diesel fuel would be stored in below-grade tanks beneath each of the generators. Diesel fuel deliveries would be on an as-needed basis in a compartmentalized truck with a maximum capacity of 8,500 gallons (Sequoia 2019a, page 2-7). An emergency pump shut-off would be used if a pump hose breaks

while fueling the tanks (Sequoia 2019a, page 2-8). A fire loop drive would be located around the building on all four sides and would connect all entrances. The fire lane on the north side of the project site would allow for aerial access by the fire department (Sequoia 2019a, page 2-10). The project would be constructed in accordance with current fire codes. With all of the above elements, the impacts to the fire protection service would be less than significant.

Required Mitigation Measures: None.

b) Police Protection?

Construction

LESS THAN SIGNIFICANT IMPACT. The construction workforce is not expected to relocate closer to the project site and would not increase the demand for emergency response services, including police protection. Construction activities would include erecting fencing and generator enclosure to secure the substation and generator yard. As noted in the "Setting" subsection above, SCPD meets their response goals. The response goals for the police department would not be significantly affected by the project nor would the project induce construction of new or physically altered governmental facilities, such as police stations that could result in significant environmental impacts; therefore, impacts would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project's 25 operations workers are not expected to relocate closer to the project site and would not increase the demand for police and emergency response services. The generator yard would be secured by a 20-foot-high precast concrete screen walls and an 8-foot-high decorative metal fence (Sequoia 2019a, page 2-6). The substation would have a 12-foot-high concrete masonry unit screen wall surrounding three sides of the substation and an 8-foot security fence on the remaining side (Sequoia 2019a, page 2-9). There would be a security office with 24-hour on-site security service (Sequoia 2019a, page 2-7). The fencing and security office would adequately deter criminal activity during operation. Therefore, the project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered police service facilities in order to maintain acceptable service ratios, response times, or other performance objectives. Impacts would be less than significant.

Required Mitigation Measures: None.

c) Schools?

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would be in the Santa Clara Unified School District. District Board Policy (BP 7211 Facilities: Developer Fees) allows the Board of Trustees to establish, levy, and collect developer fees on residential, commercial, and industrial construction within the district. Government Code section 65995 expressly provides that "[t]he payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995… are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in governmental organization… on the provision of adequate school facilities." The current school impact fee for the district is $0.61 per

square foot of covered, enclosed commercial/industrial space (SCUSD 2018). Based on the proposed size of the building (702,114 sq. ft. total), an estimated $428,290 would be assessed. These fees would be collected at the time the applicant applies for building permits from the City of Santa Clara; therefore, impacts would be less than significant.

Required Mitigation Measures: None.

d) Parks?

Construction

NO IMPACT. As identified in the "Setting" subsection, the city is currently meeting its park standards with a ratio of 2.6 acres per 1,000 residents. Construction of the project would require an average 125 workers and a peak of 300 workers. The construction workforce would be drawn from the greater Bay Area, which would not require an influx of new workers. Also, construction workers who may temporarily relocate closer to the project do not typically visit area parks or park facilities as they are working while in the project area and tend to return to their primary residence for the weekends. Therefore, construction of the project would not affect park standards or increase the demand for park facilities. The project construction would have no impact on parks or park facilities.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Approximately 25 operations workers are expected to be employed by the project. Like the project construction workforce, operations employees would be drawn from the greater Bay Area and are not likely to relocate closer to the project. If some operations workers were to relocate, the few new residents would have a negligible increase on the usage of or demand for parks or other recreational facilities. Therefore, the project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered park facilities in order to maintain acceptable service ratios or other performance objectives. Impacts would be less than significant.

Required Mitigation Measures: None.

e) Other Public Facilities?

Construction

NO IMPACT. The construction workforce would be drawn from the greater Bay Area and workers would not likely relocate closer to the project site. However, if some construction workers were to temporarily relocate, they are not likely to visit public facilities such as public libraries as they are working while in the project area and tend to return to their primary residence for the weekends. There would be no impacts to public facilities during project construction

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project's anticipated 25 operations employees are expected to be drawn from the greater Bay Area and are not expected to relocate closer to the project site. However, if some operations workers were to relocate, the few new residents would likely have a negligible increase in the usage of or demand for the surrounding libraries or public facilities; therefore, the project's operations impacts would be less than significant.

Required Mitigation Measures: None.

5.15.3 References

Cal Fire 2008 – Cal Fire. Santa Clara County FHSZ Map in Local Responsibility Area. October 8, 2008. Available online at: https://osfm.fire.ca.gov/media/6764/fhszl_map43.pdf Accessed on: October 2019.

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Santa Clara 2018 – City of Santa Clara (Santa Clara). City of Santa Clara Fire Department Annual Report 2018. Available online at: http://santaclaraca.gov/home/showdocument?id=64140 Accessed on: September 2019.

Santa Clara 2019a – City of Santa Clara (Santa Clara). Santa Clara Fire Department Website – About Us. Available online at: http://santaclaraca.gov/government/departments/fire/about-us Accessed on: September 2019.

Santa Clara 2019b – City of Santa Clara (Santa Clara). Santa Clara Fire Department Website - City of Santa Clara: Public Safety. Available online at: http://missioncity.maps.arcgis.com/apps/MapTour/index.html?appid=15779cefd9bc463d8bc6229b61d921d5 Accessed on: September 2019.

Santa Clara 2019c – City of Santa Clara (Santa Clara). Santa Clara Police Department Website – Fact Sheet. Available online at: http://santaclaraca.gov/government/departments/police-department/about-us/fact-sheet Accessed on: September 2019.

Santa Clara 2019d – City of Santa Clara (Santa Clara). City of Santa Clara Park and Recreation Facilities Development Impact Fee Update Study. Administrative Draft. April 9, 2019. Prepared by: Willdan Financial Services. Available online at: http://santaclaraca.gov/home/showdocument?id=63995.

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Santa Clara 2019f – City of Santa Clara City (Santa Clara). Santa Clara City Library Website- About the Library. Available online at: http://santaclaraca.gov/government/departments/library/about-the-library Accessed on: September 2019.

SCUSD 2018 – Santa Clara Unified School District (SCUSD). Santa Clara Unified School District Developer Fee. Approved on March 22, 2018 and effective May 22, 2018. Available online at: https://www.santaclarausd.org/Page/53. Accessed on: September 2019.

SCUSD 2019a – Santa Clara Unified School District (SCUSD). Santa Clara Unified School District, About Us. Available online at: https://www.santaclarausd.org/domain/15 Accessed on: September 2019.

SCUSD 2019b – Santa Clara Unified School District (SCUSD). Santa Clara Unified School District Map. June 2019. Available online at: https://www.santaclarausd.org/cms/lib/CA49000000/Centricity/shared/homepage/2019%20District%20Map.pdf Accessed on: September 2019.

Sequoia 2019a – Application for Small Power Plant Exemption: Sequoia Data Center, dated August, 2019. (TN 229419-1). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

Sequoia 2019c – Applicant responses to Data Request Set 1. (TN 229938-1/2, 229973, 230507, and 230893). Available online at: https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-03.

5.16 Recreation

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to recreation.

RECREATION	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

5.16.1 Setting

The project is proposed in the City of Santa Clara in Santa Clara County. The project site is on property designated as heavy industrial. While nearby cities include the cities of Campbell, Cupertino, Milpitas, San Jose, and Sunnyvale, staff considers the City of Santa Clara as the project study area for recreation impacts. This is consistent with staff's experience that local workers are not likely to temporarily or permanently relocate closer to the project site (see **Section 5.14, Population and Housing**) and thus, not add new users to the city's recreation facilities.

Recreation Facilities

The city has 2 community parks, 6 mini parks, 26 neighborhood parks, 3 open space parks, 5 recreational facilities, 4 trail reaches, and 11 joint use facilities for a total of approximately 252 acres of developed parks, not including city golf courses, and approximately 98 acres of undeveloped parks (Santa Clara 2019a). The closest recreational facilities are the Rotary Park located 1.0 mile southwest of the project and Larry J Marsalli Park locate 0.9 mile south of the project site (Santa Clara 2019b). These parks are maintained by the City of Santa Clara.

Regulatory Background

No regulations related to recreation apply to the project.

5.16.2 Environmental Impacts and Mitigation Measures

Applicant Proposed Mitigation Measures: None.

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?

Construction

NO IMPACT. The project would require an average of 125 workers during construction and a maximum of 300 workers during the peak construction period (Sequoia 2019c, TN 229938-1). Construction is

expected to last for approximately 13 months. The applicant estimates that all of the construction workforce would be recruited from the greater Bay Area, thus the workforce would likely be drawn from the San Jose-Sunnyvale-Santa Clara region.[3] Based on the proximity of the available workforce to the project, construction workers from neighboring cities and counties are not likely to temporarily relocate closer to the project site or visit the nearby parks. Thus, the project would not increase the use of or accelerate the physical deterioration of parks or other recreational facilities. Therefore, the project would have no impact on the surrounding parks and recreational facilities.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would employ 25 operations workers drawn from the greater Bay Area (see **Section 5.14, Population and Housing**). Based on the proximity of the supply of operations workers, they are not likely to relocate closer to the project. If however, some operations workers were to move closer to the project, they would not be in numbers where the use of existing parks or recreational facilities would be increased to the extent that substantial physical deterioration of the park or facility would result. Impacts to surrounding parks and recreational facilities would be less than significant.

Required Mitigation Measures: None.

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?

Construction

NO IMPACT. Recreational facilities are not included as part of the project nor would the project require the construction or expansion of recreational facilities. The construction needs of the project would be supplied by the existing workforce from the greater Bay Area and would not require an influx of new workers. Construction workers would commute to the project site during construction and they are not likely to temporarily relocate closer to the project. Therefore, the project would have no impacts to recreational facilities.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project would employ 25 operations workers drawn from the greater Bay Area. If some operations workers did move closer to the project, they would not be in numbers that would require the construction or expansion of recreational facilities. Therefore, the project would have less than significant impact on local recreation facilities and would not require the construction or expansion of recreational facilities to accommodate the project.

Required Mitigation Measures: None.

5.16.3 References

Santa Clara 2019a – City of Santa Clara (Santa Clara). City of Santa Clara Park and Recreation Facilities Development Impact Fee Update Study. Administrative Draft. April 9, 2019. Prepared by:

[3] Region in this instance is the Metropolitan Statistical Area. A Metropolitan Statistical Area is a geographical region with a relatively high population density at its core and close economic ties throughout the area.

Willdan Financial Services. Available online at: http://santaclaraca.gov/home/showdocument?id=63995.

Santa Clara 2019b – City of Santa Clara (Santa Clara). Parks and Recreation Department, Parks. Available online at: http://santaclaraca.gov/government/departments/parks-recreation/parks-pools/parks. Accessed on: September 2019.

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5.17 Transportation

This section describes the environmental and regulatory setting of the project with respect to transportation and discusses transportation impacts associated with construction and operation of the project.

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

Environmental checklist established by CEQA Guidelines, Appendix G

5.17.1 Setting

The project site is located in the City of Santa Clara on an approximately 15-acre site at 2600 De La Cruz Boulevard. The site is currently vacant. Regional access would be provided by numerous urban roadways and freeways in the vicinity of the project, including U.S. Highway 101 (US-101), Central Expressway, and Lafayette Street. Direct local access to the project site would be from the eastern side of the project at two driveways along De La Cruz Boulevard, one with security clearance for entering vehicles and one for exiting vehicles. A truck access would be constructed along Martin Avenue at the southern side of the project site. A fire loop drive would be located around the building on all sides and would connect all entrances.

Nearby transportation infrastructure includes bike lanes, bus transit, passenger rail, and the Norman Y. Mineta San Jose International Airport. There is a Class II bike lane (with a stripe separating the lane from vehicle traffic) and a Class III bike route (shared with vehicles) along De La Cruz Boulevard near the project site (VTA 2019a). The closest bus stop to the site is located approximately 450 feet northeast of the site along the Santa Clara Valley Transportation Authority's Bus Route 304 (VTA 2019b). Caltrain, Altamont Commuter Express (ACE), and Amtrak's Capitol Corridor provide passenger train service approximately one mile south of the project site at the Santa Clara Station (VTA 2019a). Railroad tracks used by the ACE and Amtrak's Capitol Corridor are adjacent to the western side of the project site (Santa Clara 2010). The San Jose International Airport is located approximately 100 feet from the eastern site boundary and has two runways that exceed 3,200 feet in length (AirNav 2019). There are no sidewalks adjacent to the project site.

Regulatory Background

Federal

Title 14, Part 77.9 of the Code of Federal Regulations requires Federal Aviation Administration (FAA) notification for construction or alterations within 20,000 feet of an airport with a runway more than 3,200 feet in length if the height of the construction or alteration exceeds a slope of 100 to 1 extending

outward and upward from the nearest point of the nearest runway of the airport (CFR 2019a). The threshold for the FAA notification 100 to 1 surface exceedance height is approximately 12 feet at the project site, not taking into account the difference in elevation between the project site and the airport. The threshold for notification at the project site is actually even lower considering that the project site elevation is, and upon project completion would be, higher than that of the airport. If a project's height, including any temporary equipment (such as cranes used during construction) or any ancillary structures (such as transmission poles), exceeds the 100:1 surface, the project applicant must submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

State

Project construction activities that require movement of oversized or excessive load vehicles on state roadways require a transportation permit issued by Caltrans. Caltrans may also require the applicant to prepare a Transportation Management Plan prior to construction to reduce effects on the state transportation network (Caltrans 2019).

Local

Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan for Norman Y. Mineta San Jose International Airport. Figure 6 of the Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan (CLUP) identifies the Federal Aviation Regulations (FAR) Part 77 surfaces above the project site. FAR Part 77 surfaces are those identified by the FAA as obstruction surfaces around an airport. Exceedance of these surfaces could result in obstruction of airspace and hazards to aircraft entering or exiting the San Jose International Airport. At the project site, the lowest and most restrictive FAR Part 77 surface shown on Figure 6 of the CLUP is at 162 feet above mean sea level (AMSL) (Santa Clara County 2016).

City of Santa Clara 2010-2035 General Plan. The City of Santa Clara 2010-2035 General Plan includes several goals and policies related to the project, including:

5.8.2-P9 Require all new development to provide streets and sidewalks that meet City goals and standards, including new development in employment areas.

5.8.4-P8 Require new development and public facilities to provide improvements, such as sidewalks, landscaping and bicycling facilities, to promote pedestrian and bicycle use.

5.8.5-G1 Transportation demand management programs for all new development in order to decrease vehicle miles traveled and single occupant vehicle use.

5.8.5-G2 Transportation demand management programs that promote an increase in vehicle occupancy and a decrease in vehicle trips during commute hours.

5.17.2 Environmental Impacts and Mitigation Measures

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction

LESS THAN SIGNIFICANT IMPACT. Project construction would not significantly obstruct any transit, roadway, bicycle, or pedestrian facilities in the area. Construction activities would occur mostly onsite and not in the public right-of-way, with the possible exceptions of: the addition of a sidewalk along the project's frontage on De La Cruz Boulevard; connection to gas services at De La Cruz Boulevard; interception of the transmission line in the railroad right-of-way near the western side of the project for routing into the new substation; and construction and modification of project access points at De La Cruz Boulevard and Martin Avenue. The City of Santa Clara, as the permitting agency, would ensure that these activities would obtain the proper permits to minimize disturbance to roadway and railroad activities. Furthermore, to ensure that significant disruption to roadway circulation would not occur during construction, the City of Santa Clara, as the permitting agency, would require the project owner to obtain all the required permits from Caltrans for the movement of oversized or excessive load vehicles on state roadways, and to submit to Caltrans a Transportation Management Plan, if required for the project, prior to construction to reduce effects on the state transportation network.

Construction would not significantly block access to any roadways or take place on any existing pedestrian, bike, or transit facilities. Project construction would not conflict with any program, plan, ordinance, or policy addressing the circulation system, and would therefore have less than significant impacts.

Operation and Maintenance

NO IMPACT. Operation of the project would occur fully onsite and would not obstruct pedestrian, bike, or transit facilities. Additionally, the project would not interfere with any future pedestrian, bike, or transit plans for the area. The project would be consistent with General Plan policies 5.8.2-P9 and 5.8.4-P8 (discussed under the "Regulatory Background" heading of this section), which require new development to provide improvements such as sidewalks, as the project would involve construction of a new sidewalk along its De La Cruz Boulevard frontage. Thus, the project would help implement pedestrian plans.

Operation of the project would not conflict with any program, plan, ordinance, or policy addressing the circulation system, and would therefore have no impacts.

Required Mitigation Measures: None.

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

Construction

LESS THAN SIGNIFICANT IMPACT. CEQA Guidelines section 15064.3, subdivision (a), states that generally vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. Increased VMT exceeding

an applicable threshold could constitute a significant impact. If existing models or methods are not available to estimate the VMT for the particular project being considered, a lead agency may analyze the project's VMT qualitatively, evaluating factors such as the availability of transit or proximity to other destinations. For construction traffic, a qualitative analysis of VMT impacts (instead of a more detailed quantitative analysis) is often appropriate (CANRA 2018; see also CEQA Guidelines section 15064.3(b)). The CEQA Guidelines also state that projects within 0.5 mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be regarded as having less than significant impacts with regard to VMT (CANRA, 2018).

Project construction would involve a temporary increase in vehicle trips resulting from workers commuting to the project site, and delivery and hauling of project materials. The 300-day "building phase" of the project would generate the highest number of daily trips: 319 one-way worker trips and 124 one-way vendor trips for a total of 443 daily one-way trips. All workers would be from the greater Bay Area and would not be traveling long distances. Trip length for workers was assumed to be an average of 10.8 miles and trip length for vendors was assumed to be an average of 7.3 miles (Sequoia 2019b, Appendix K: Energy Study, Appendix B: Energy Calculation Sheets).

The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) because construction-generated traffic would be temporary and all workers would commute from the greater Bay Area, minimizing VMT impacts. Furthermore, the project is located within 0.5 mile of the Santa Clara Valley Transportation Authority's Bus Route 304, which provides frequent bus service during commute hours. VMT impacts from project construction would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Operation trips would be generated by: the 25 daily employees who would travel to and from the project site; periodic trips by a tanker truck to supply diesel fuel for the generators on an as-needed basis; occasional visits from customers setting up or maintaining equipment; and delivery and trash-hauling trucks. It should be noted that the majority of trips would be made by the 25 employees, and that as a result, the vehicle trips generated by the project would be much lower than the number calculated by the Institute of Transportation Engineers (ITE) trip generation rate for data centers, which estimates an average of 695 daily trips.

According to technical guidance by the Governor's Office of Planning and Research, absent substantial evidence indicating that a project would generate a potentially significant level of VMT or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact (OPR 2018). Project operations would be expected to generate fewer than 110 trips on an average daily basis, and therefore would have a less than significant transportation impact. Furthermore, the City of Santa Clara, as the permitting agency, would require the applicant to prepare and implement a Transportation Demand Management Program for the project to reduce VMT. This is consistent with General Plan goals 5.8.5-G1 and 5.8.5-G2 (discussed under the "Regulatory Background" heading of this section). Additionally, the project is located within 0.5 mile of the Santa Clara Valley Transportation Authority's Bus Route 304, which provides frequent bus service during commute hours. For all these reasons, the project would not conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). VMT generated by the project operation would be less than significant.

Required Mitigation Measures: None.

c. ***Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

Construction

LESS THAN SIGNIFICANT IMPACT. Construction activities would occur mostly onsite and not in the public right-of-way, with the possible exceptions of: the addition of a sidewalk along the project's frontage on De La Cruz Boulevard; connection to gas services at De La Cruz Boulevard; interception of the transmission line in the railroad right-of-way near the western side of the project for routing into the new substation; and construction and modification of project access points at De La Cruz Boulevard and Martin Avenue. The City of Santa Clara, as the permitting agency, would ensure that these activities would obtain the proper permits, including encroachment permits, to minimize any hazards resulting from construction equipment or activities. The City of Santa Clara would also require the project owner to prepare a Traffic Control Plan to ensure localized traffic control around the project site during deliveries and construction activities that could cause hazards by obstructing roadways. Furthermore, the City of Santa Clara, as the permitting agency, would require the project owner to obtain all the required permits from Caltrans for the movement of oversized or excessive load vehicles on state roadways, and to submit to Caltrans a Transportation Management Plan, if required for the project, prior to construction. These actions would reduce any hazards from transportation of materials to and from the site and from construction activities affecting roadways.

As discussed under the "Regulatory Background" heading of this section, under Title 14, Part 77.9 of the Code of Federal Regulations, the threshold for the FAA notification 100 to 1 surface exceedance height is approximately 12 feet at the project site. Project construction would require a crane for placement of each generator. The crane would exceed 12 feet in height and would require the project owner to submit a copy of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA. The FAA generally grants a Determination of No Hazard for temporary construction equipment. The City of Santa Clara, as the permitting agency for the project, would ensure consistency with this regulation and compliance with any of the FAA's conditions.

For these reasons, project construction would not increase hazards due to a geometric design feature or incompatible uses; therefore, impacts would be less than significant.

Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project is located approximately 100 feet west of the Norman Y. Mineta San Jose International Airport. Tall structures can potentially pose a hazard to occupants of aircraft, depending on the heights of structures and their proximity to air traffic. Incompatible uses near airports can also pose hazards to aircraft.

The highest point of the proposed project, the parapet of the stair and elevator tower, is approximately 105 feet above ground level (AGL). Figure 6 in the Santa Clara County Airport Land Use Commission's CLUP for the San Jose International Airport identifies an FAR Part 77 obstruction surface of 162 feet AMSL at the project site (Santa Clara County 2016). The project, with a maximum structure height of 105 feet AGL, or 148.95 feet AMSL taking into account the 43.95-foot AMSL finished floor elevation of the project site (Sequoia 2019f), would not exceed the FAA's obstruction surface of 162 AMSL. The applicant submitted a more detailed FAA obstruction analysis which also

shows that the project would not exceed any FAA obstruction surfaces (Sequoia 2019f). This analysis was reviewed and accepted by Cary Greene, Airport Planner for the City of San Jose (CEC 2019c).

However, the project site is still subject to Title 14, Part 77.9 of the Code of Federal Regulations, Construction or Alteration Requiring Notice. With a maximum project height of 105 feet AGL, the project would exceed the FAA notification 100:1 surface threshold of 12 feet at the project site. The threshold for notification is even lower when taking into account that the project site elevation is, and upon project completion would be, higher than that of the airport. As a result, the project applicant would need to submit Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA. The applicant has provided this form to the FAA and submitted a copy of its receipt to staff (Sequoia 2019f). Because the project's tallest structure would be below the project site's FAR Part 77 (obstruction) surface of 162 feet AMSL, as identified in Figure 6 of the CLUP for the San Jose International Airport, and also below the more detailed obstruction surfaces identified in the applicant's FAA obstruction analysis (Sequoia 2019f), staff anticipates the FAA would issue a Determination of No Hazard. The City of Santa Clara, as the permitting agency for this project, would ensure consistency with any conditions the FAA might require. The project is also consistent with General Plan policies concerning airport hazards and airspace protection and with CLUP policies, as discussed further in sections **5.9 Hazards and Hazardous Materials** and **5.11 Land Use** of this document.

The project's emergency diesel generators and chillers would discharge thermal plumes, high-velocity columns of hot air, during operation. Thermal plume velocities would be greatest at the discharge points, with plume velocities decreasing with increasing altitude. Plume velocities would also be highest during certain weather conditions, such as cool temperatures and calm winds. High velocity thermal plumes have the potential to affect aviation safety, and the FAA Aeronautical Information Manual identifies thermal plumes as potential flight hazards (FAA 2017). Aircraft flying through thermal plumes may experience significant air disturbances, such as turbulence and vertical shear. The FAA manual advises that, when able, a pilot should fly upwind of smokestacks and cooling towers to avoid encountering thermal plumes.

Staff uses a peak vertical plume velocity of 10.6 meters per second (m/s) (5.3 m/s average plume velocity) as a screening threshold for potential impacts to aviation. Based on a literature search, this velocity generally defines the point at which aircraft begin to experience severe turbulence. To determine whether the project's thermal plume would exceed 10.6 m/s peak velocity at altitudes where aircraft would fly, Energy Commission staff performed a thermal plume analysis of the emergency diesel generators and chillers. Staff calculated that under worst-case weather conditions, calculation methods, and operating scenarios, the vertical velocity of plumes from the emergency diesel generators would not drop below 10.6 m/s until altitudes of 86 feet AGL and below. The vertical velocity of plumes from the chillers would not drop below 10.6 m/s until altitudes of 167.5 and below. Considering that the finished site elevation of the project would be 43.95 feet AMSL (Sequoia 2019f), the vertical velocity of plumes from the emergency diesel generators would not drop below 10.6 m/s until altitudes of 129.95 feet AMSL and below, and the vertical velocity of plumes from the chillers would not drop below 10.6 m/s until altitudes of 211.45 feet AMSL and below.

The high velocity (10.6 m/s and above) portion of the worst-case plume produced by the chillers would encroach into the FAA obstruction surface (shown in Figure 6 of the CLUP) of 162 feet AMSL over the project site. However, this worst-case scenario plume would only happen infrequently

during worst-case weather conditions, and aircraft are unlikely to be flying so low over the project site. Title 14, Section 91.119 of the Code of Federal Regulations states that unless necessary for takeoff or landing, the minimum safe altitudes for aircraft are 500 feet AGL for non-congested areas and 1,000 feet AGL for congested areas, such as the area around the project site (CFR 2019b). Another reason aircraft are unlikely to be flying at low altitudes over the project site is that the traffic pattern at the San Jose International Airport is much higher than 211.45 feet AMSL (942 feet AGL for single-engine aircraft and 1,442 feet AGL for multi-engine and turbine powered aircraft) (AirNav 2019). Finally, Figures 3a and 3b in the CLUP show that the project site is not under the flight tracks for the airport (Santa Clara County 2016). Because full operation of the chillers resulting in the worst-case plume scenario would only occur during hot weather, and because low altitude overflight of the site would be rare and unexpected, it is very unlikely that worst-case plume velocities would coincide with low altitude overflight of the site. As a result, impacts to aircraft from thermal plumes are expected to be less than significant. It should also be noted that while the FAA regulates the heights of physical structures, it does not regulate plumes.

As discussed above, the project would not result in hazards to aircraft from either a geometric design feature, such as structure height, or incompatible uses, including land uses or thermal plumes. The project would not increase any other hazards. For these reasons, impacts would be less than significant.

Required Mitigation Measures: None.

d. ***Would the project result in inadequate emergency access?***

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT. The project would not physically block any access roads or result in traffic congestion that could significantly compromise timely access to this facility or any other location during construction, operation and maintenance. Therefore, the impact would be less than significant.

Required Mitigation Measures: None.

5.17.3 References

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VTA 2019a – Santa Clara Valley Transportation Authority (VTA). Bikeways Map. Available online at: http://www.vta.org/getting-around/maps/bikeways-map. Accessed on: December 19, 2019.

VTA 2019b – Santa Clara Valley Transportation Authority (VTA). Bus and Rail Map. Available online at: http://www.vta.org/getting-around/maps/bus-rail-map. Accessed on: December 19, 2019.

5.18 Utilities and Service Systems

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Sequoia Data Center (SDC or project) with respect to utilities and service systems. SDC and project are intended to include the data center and the associated backup generation facility.

UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

5.18.1 Setting

Potable Water Supply

The project would be supplied with potable water provided by the city of Santa Clara. The potable water system gets water from three sources: Santa Clara Valley Water District (SCVWD), the San Francisco Public Utilities Commission (SFPUC), and 26 groundwater wells operated by the city's Water and Sewer Utility. The project is located in the northern part of the city, which is served with water from SFPUC. In 2015, about one third of the city's potable water came from the imported treated water supplies (SCVWD and SFPUC) and groundwater made up approximately two thirds of the city's potable water supply. The water system in the city consists of more than 335 miles of distribution mains, 26 groundwater wells, and seven storage tanks with a total capacity of approximately 28.8 million gallons. According to the city's 2015 Urban Water Management Plan (UWMP), which was approved and adopted by the Santa Clara City Council on November 22, 2016, the citywide demand for potable water in 2015 was 17,620 acre-feet (AF) (Santa Clara 2016).

Wastewater Service

The city of Santa Clara's Departments of Public Works and Water and Sewer Utilities are responsible for the wastewater collection system within the city. Wastewater is collected by sewer systems in Santa Clara and is conveyed by pipelines to the San Jose-Santa Clara RWF. The RWF is jointly owned by the cities of San Jose and Santa Clara and is operated by the city of San Jose's Department of Environmental Services.

The RWF has a capacity to treat 167 million gallons per day (mgd) of wastewater and currently treats an average of 110 mgd, thus the RWF facility has 57 mgd, or 35 percent of available capacity. Approximately 13 percent of the RWF's effluent undergoes advanced tertiary treatment to meet title 22 recycled water standards, after which it flows to SBWR's adjacent pump station to be distributed to several customers in the city. The remaining effluent flows into San Francisco Bay. The RWF's current Waste Discharge Requirements (WDRs) were issued by the San Francisco Regional Water Quality Control Board (RWQCB) in September of 2014.

Storm Sewer Service

The city of Santa Clara owns and maintains the municipal storm drainage system in the vicinity of the project site. The project site drains by a combination of surface flow and underground pipes towards the City's storm water system located in De La Cruz Boulevard, which discharges to Guadalupe River and ultimately the San Francisco Bay.

Solid Waste

Solid waste and recycling collection for businesses at commercial and institutional properties in the city of Santa Clara is provided by Mission Trail Waste Systems through a contract with the City. Newby Island Landfill, located in San Jose, provides disposal capacity to nearby cities, including San Jose, Milpitas, Santa Clara, Cupertino, Los Altos, and Los Altos Hills. According to the city's General Plan, the city of Santa Clara has an arrangement with the owners of the Newby Island Landfill, as well as other landfills located outside of the county, to provide disposal capacity for the city. The Newby Island Landfill is permitted to accept a maximum of 3,260 tons of solid waste per day and has an available disposal capacity of 21.2 million cubic yards (cy). The Santa Clara County Integrated Waste Management Plan estimates that there is adequate waste capacity through its planning horizon of 2024. According to the city of Santa Clara General Plan, the life of the Newby Island Landfill could be prolonged as a result of the increases in recycling and reduction in waste generation resulting from measures being implemented by the landfill. Also, the landfill has been evaluating an expansion plan. If the landfill cannot operate beyond 2024 for any reason, the city is planning to use property it owns outside its jurisdictional boundaries for waste disposal purposes (Santa Clara 2014). Solid waste and recycling collection for businesses at commercial and institutional properties in the city of Santa Clara is provided by Mission Trail Waste Systems through a contract with the city.

Electric Power, Natural Gas, and Telecommunications

Electricity needed for project operation would be provided by Silicon Valley Power (SVP). Telecommunication services would be provided by one of several fiber optics providers in the project area, who provide their services using lines that run in city-owned conduits that run close to the project site. The services would be provided to the facility via established rights of way, as is the industry's common practice. Natural gas would be supplied to the project by Pacific Gas and Electric (PG&E).

Regulatory Background

Federal

Federal Clean Water Act. The State Water Resources Control Board (SWRCB) and its nine RWQCBs are responsible for the regulation and enforcement of the water quality protection requirements of the federal Clean Water Act (CWA) and the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). The National Pollutant Discharge Elimination System (NPDES) is the permitting program that allows point source dischargers to comply with the CWA and Porter-Cologne laws. This regulatory framework protects

the beneficial uses of the state's surface and groundwater resources for public benefit and environmental protection. Protection of water quality could be achieved by the proposed project by complying with applicable NPDES permits from the SWRCB or the San Francisco Bay RWQCB. The RWF complies with the Clean Water Act through its current NPDES WDRs, which were issued by the San Francisco RWQCB September of 2014.

State

California Water Code, Sections 10910-10915. California Water Code (Sections 10910-10915) requires water service providers to evaluate stresses to the water supply service system caused by proposed project developments. The code sections require public water systems to prepare water supply assessments (WSA) for certain defined development projects subject to the California Environmental Quality Act (CEQA).

According to Section 10912, if a project meets any of the following criteria, then a detailed WSA would be required to be prepared by the water supplier:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

Further guidance for how to interpret these sections of the Water Code is provided in a California Department of Water Resources document titled "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001" (Guidebook) (DWR 2003). A helpful interpretive section on page 3 of the Guidebook explains how to interpret item (1) above. It states that one dwelling unit typically consumes 0.3 to 0.5 AF of water per year (DWR 2003). Therefore 500 dwelling units could be interpreted to mean 150 to 250 acre-feet per year (AFY) of potable water.

The Guidebook also provides guidance about how to interpret other items in the list, but the central theme is that WSAs are necessary for projects that increase the demand on the local system substantially. The Guidebook also emphasizes that WSAs are necessary in areas with a poorly understood water supply, or in an area where the project would increase the demand substantially, or by 10 percent (DWR 2003).

The project would be located in a very well-studied service area with many service connections. The city determined that the project's demand of approximately 5.0 AFY is less than the amount needed for 500 dwelling units and that the project does not meet the regulatory criteria of 250,000 square feet of office

space (Santa Clara 2016). Therefore, according to the city of Santa Clara, the project does not meet Section 10912's criteria and does not require a WSA (Sequoia 2019).

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code (2011), Title 24 Update (2014). The California Green Buildings Standards Code applies to planning, design, operation, construction, use, and occupancy of newly constructed buildings and requires installation of energy- and water-efficient indoor infrastructure. The related waste management plan is required to allow for diversion of 50 percent of the generated waste away from the landfill.

Integrated Waste Management Act. The Integrated Waste Management Act of 1989 requires cities and counties to reduce, by 50 percent, the amount of solid waste disposed of in landfills by the year 2000 and beyond. To comply with the Integrated Waste Management Act, counties adopt regulations and policies to fulfill the requirements of the Act.

Local

City of Santa Clara General Plan. The Santa Clara General Plan includes numerous policies related to utilities and service systems. With respect to waste, General Plan Policy 5.10.1-P8 aims to increase reduction for solid waste tonnage to 80 percent by 2020, or as consistent with the Climate Action Plan, Plan 2014 (Santa Clara 2016).

Santa Clara City Code. According to Santa Clara City Code Section 8.25.285, applicants seeking building or demolition permits for projects greater than 5,000 square feet are required to recycle at least 50 percent of the solid waste generated by their projects (Santa Clara 2014).

5.18.2 Environmental Impacts and Mitigation Measures

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The project's wastewater flow during construction and operation would be treated by the RWF, which is monitored by the San Francisco Bay RWQCB to ensure compliance with the facility's NPDES waste discharge permit. The RWF is permitted to treat the industrial and sanitary waste flows that would be generated by the project. Furthermore, as discussed below, the RWF has sufficient available capacity to accommodate the project's estimated wastewater flow. Therefore, the project would not cause the RWF to exceed its wastewater treatment requirements of the San Francisco Bay RWQCB for project construction and operation. The impact of the project on wastewater treatment capacity would be less than significant.

Electricity demand for construction and operation of the proposed project would be provided by the SVP. The SVP electrical resources available are reliable. SVP and its suppliers have sufficient energy to serve the expected future demand of the project. Project electricity demand during construction and operation would not be substantial and would not be expected to affect existing users. Construction and operation of the project would not require new or expanded electric power utilities. Therefore, potential impacts would be less than significant.

Telecommunication services would be provided by one of several fiber optics providers in the project area, who provide their services using lines that run in city owned conduits that run close to the project site. The services would be provided to the facility via established rights of way, as is the industry's common practice. Any of the prospective providers in the area has adequate available capacity to accommodate the project needs. The impact of the project on telecommunication services would be less than significant. The project would consume natural gas that would be supplied from PG&E through existing connections. PG&E has adequate supplies to meet the small project demand. Implementation of the project would not result in construction of new natural gas connections. The impact of the project on natural gas services would therefore be less than significant.

Required Mitigation Measures: None.

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The water system in the city is operated and maintained by the city's Water and Sewer Utility. This system is supplied with potable water from three sources: SCVWD, SFPUC, and 26 groundwater wells operated by the city's Water and Sewer Utility. The proposed project is located in an area served primarily with surface water from SFPUC. In 2015, about one third of the city's potable water came from the imported treated water supplies (SCVWD and SFPUC); the other two thirds came from groundwater. The water system in the city consists of more than 335 miles of distribution mains, the 26 groundwater wells discussed above, and seven storage tanks with approximately 28.8 million gallons of capacity. According to the 2015 UWMP, the citywide demand for potable water in 2015 was 17,620 acre-feet (Santa Clara 2016). The UWMP also concludes that the city is expected to meet projected future demands ranging from approximately 28,000 AFY in 2020 and gradually increasing to approximately 34,000 AFY in 2040.

No information was provided by the applicant about water use during construction. However, given the short duration of construction activities, the amount of water needed is expected to be small. The largest use of water during construction would be for dust suppression. Typically, dust suppression uses about 1,000 gallons per acre per day. Assuming that water would be applied to all 15 acres of the project site every day of the 6 months of construction (approximately 140 days), that would add up to approximately 2.0 million gallons, or about 6 AF. This overly conservative estimate is just over the project demand for one year of operation. As discussed below, this amount of water use would be less than significant.

The proposed project would have an operational demand of approximately 5 AFY. The city's UWMP for 2015 shows that the city has sufficient supply to meet the project's demand in normal and single dry year scenarios. However, the UWMP shows that the city could have a deficit in multiple dry year scenarios. This would be possible only if supply from SFPUC is interrupted. Under a multi-year drought scenario, the city's supply from SFPUC might be interrupted if certain conditions specified in the interruptible contract between the city and SFPUC are met (Santa Clara 2016). However, if supply from SFPUC is interrupted for any reason, the city has conservation plans and other measures in place to manage supply to meet demand.

The proposed project would be constructed on a previously disturbed site that was fully developed and was used for industrial manufacturing operation. Water used for the industrial activities was

potable water supplied by the city. Though historic water use at the site is not available, the proposed project's annual water use of about 5 AFY would likely constitute a substantial reduction in water use compared to typical historic consumption by the previous industrial use at the site. Thus the proposed project would result in a net reduction in potable water use and a net beneficial impact on local water supplies. In order to ensure that adequate water supplies would be available throughout the life of the project, the applicant requested a WSA from the city of Santa Clara, pursuant to Water Code sections 10910-10915. The city of Santa Clara reviewed the information provided by the applicant and concluded that the project does not meet the criteria for a project requiring a WSA (Sequoia 2019b, Appendix M).

Required Mitigation Measures: None.

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

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The RWF treats an average of 110 mgd of wastewater, which is 57 mgd less than its 167 mgd treatment capacity. No information was provided by the applicant about the rate of generation of wastewater by the project. However, a typical data center of similar size as SDC would not be expected to generate more than 0.5 mgd, which is substantially less than the available treatment capacity of the RWF. Implementation of the proposed project would therefore not result in an increase in the RWF's need for wastewater treatment beyond its design capacity. Therefore, the RWF has the ability to treat wastewater generated by the project and the impact on wastewater treatment facilities would be less than significant.

The majority of the project site is currently covered with impervious surfaces. The project would reduce the amount of impervious areas at the site[1] which results in more storm water infiltration and thus a reduction in storm water runoff. The proposed project would also include a storm water collection system that includes storm water bio-swales to reduce the overall runoff into the city's collection system and to control sedimentation impacts. In addition, the project would have to comply with the city's municipal storm water permit, which would further reduce the likelihood of the project causing an increase in storm water discharge from the site. The impact from the project on the storm water system capacity would be less than significant.

Required Mitigation Measures: None.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Construction activities for the project would result in a temporary increase in solid wastes. Operations would result in long-term generation of a small amount of solid waste. During operation, a maximum of 25 employees would be present at the project (Sequoia

[1] By removing some of the existing impervious land cover and replacing it with pervious areas such as planting areas and swales.

2019a). In 2017, an average employee in California generated 11.9 pounds of solid waste per day (CalRecycle 2019). Thus for 25 employees, the amount of solid waste expected to be generated by the project during operation would be just under 300 pounds (0.15 ton) per day. The majority of the solid waste would be classified as nonhazardous, while a small fraction would be classified as hazardous. Hazardous waste would be handled by licensed services and disposed of at available facilities licensed to accept such waste. Nonhazardous solid waste would be disposed of at the Newby Island Landfill in San Jose.

Solid waste generation rates by SDC would be substantially smaller than the maximum daily amount of solid waste of 3,260 tons per day allowed at the Newby Island Landfill. The Newby Island Landfill has a remaining capacity of 21.2 million cubic yards and would provide adequate disposal space for the solid waste associated with the project's construction, and for operations through 2024. According to the city of Santa Clara General Plan, the life of the Newby Island Landfill could be prolonged as a result of the increases in recycling and reduction in waste generation measures being implemented by the city. Also, the landfill has been evaluating an expansion plan. If the landfill cannot operate beyond 2024 for any reason, the city is planning to use property it owns outside its jurisdictional boundaries for waste disposal purposes (Santa Clara 2014). Therefore, the impact resulting from construction and operation of the proposed project on landfill capacity would be less than significant.

Required Mitigation Measures: None.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction, Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. The California Integrated Waste Management Act of 1989 (Assembly Bill 939) requires local jurisdictions in California to reduce, by 50 percent, the amount of solid waste disposed of in landfills by the year 2000 and beyond. During construction, the project would collect and haul construction debris off-site for recycling or disposal in local jurisdictions that comply with this state requirement and have programs in place to ensure that disposal of solid waste meets these requirements. The project would comply with these requirements pursuant to city requirements. The project would not result in an impact on solid waste collection and would comply with management and reduction regulations (Sequoia 2019a). Similar to typical data centers, SDC would not generate any special or unique wastes that would cause the project not to comply with federal, state, and local statutes or solid waste management and reduction regulations. Management of hazardous waste and applicable federal regulations are discussed in **Section 5.9, Hazards and Hazardous Materials**.

During operation, the project would comply with federal, state, and local statutes and regulations related to solid waste. There would be no change in compliance with federal, state, or local statutes and regulations related to solid waste management and reduction. Impacts would be less than significant.

Required Mitigation Measures: None.

5.18.3 References

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5.19 Wildfire

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the project with respect to wildfires.

WILDFIRE If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Environmental criteria established by CEQA Guidelines, Appendix G.

5.19.1 Setting

Wildfire Hazards

The Department of Forestry and Fire Protection (Cal Fire) identifies and maps areas of significant fire hazards based on fuels, terrain, and other relevant factors. These maps categorize this information by Fire Hazard Severity Zones (FHSZ), grouped into unzoned, moderate, high, and very high zones. State Responsibility Areas (SRA) are locations where the state of California is responsible for wildfire protection and Local Responsibility Areas are locations where the responding agency is the county or city.

The California Public Utilities Commission (CPUC) categorizes fire threat areas as Zone 1, Tier 2, or Tier 3. Zone 1 encompasses High Hazard Zones (HHZ) on the United States Forest Service (USFS-CAL FIRE) joint map of Tree Mortality HHZ. This tier represents areas where tree mortality directly coincides with critical infrastructure such as communities, roads, and utility lines, and are a direct threat to public safety. Tier 2 consists of areas where there is an elevated risk (including likelihood and potential impacts on people and property) from wildfires associated with overhead utility power lines or overhead utility power-line facilities also supporting communication facilities. Tier 3 consists of areas where there is an extreme risk (including likelihood and potential impacts on people and property) from wildfires associated with overhead utility power lines or overhead utility power-line facilities also supporting communication facilities.

The project site is surrounded by urban and industrial development in the city of Santa Clara and is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC. The city of Santa Clara is also not within a state of California FHSZ (Cal Fire 2019) at the wildland and urban interface and is not in the vicinity of wildlands.

Regulatory Background

Federal

No federal regulations related to wildfires apply to the project.

State

Fire Hazard Severity Zones (Pub. Resources Code, §§ 4201-4204). The purpose is to provide for the classification of lands within SRAs in accordance with the severity of fire hazard present and identify measures to be taken to retard the rate of spreading and to reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property.

Fire Hazard Severity (Cal. Code Regs, tit. 14, § 1280). FHSZs reflect the degree of severity of fire hazard.

CPUC General Order 95: Rules for Overhead Electric Line Construction. CPUC GO 95, Section 35, covers all aspects of design, construction, operation, and maintenance of overhead electrical lines and management of safety hazards. Its application would ensure adequate service and safety to persons engaged in the construction, maintenance, operation or use of overhead lines and to the public in general.

CPUC General Order 166: Standards for Operation, Reliability, and Safety During Emergencies and Disasters. CPUC GO 166 covers the standards which require all electric utilities to be prepared for emergencies and disasters in order to minimize damage and inconvenience to the public which may occur as a result of electric system failures, major outages or hazards posed by damage to electric distribution facilities.

Local

Santa Clara County Operational Area Hazard Mitigation Plan. The plan includes risk assessment that identifies the natural hazards and risks that can impact a community based on historical experience, estimate the potential frequency and magnitude of disasters, and assess potential losses to life and property. The plan also includes developed mitigation goals and objectives as part of a strategy for mitigating hazard-related losses.

5.19.2 Environmental Impacts and Mitigation Measures

The project site is surrounded by urban development in the city of Santa Clara. The project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC. The city of Santa Clara is not identified to be within a state of California FHSZ (Cal Fire 2019) at the wildland and urban interface and is not in the vicinity of wildlands.

Applicant Proposed Mitigation Measures: None.

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Construction

NO IMPACT. During project construction, traffic levels would experience a minimal increase that is not expected to degrade traffic performance significantly. Emergency response access during construction would not be significantly impeded. The project would not involve the development of

structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No streets would be closed, rerouted, or substantially altered during construction.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation and Maintenance

NO IMPACT. The project does not involve the addition of a large number of people to the local area who could increase emergency response demand during a potential evacuation. Thus, the project would not interfere with the coordination of the city's emergency operations plan at the emergency operations center or alternate emergency operations center, nor would the project interfere with any statewide emergency response, or evacuation routes or plans. Adequate emergency access to the project site and surrounding industrial area would be maintained.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

b. Would the project 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?

Construction

NO IMPACT. The topography of the project site is flat and the project area is highly developed with minimal open space areas, faces, or slopes. Therefore, project construction would not exacerbate wildfire risk or expose occupants to pollutant concentrations from a wildfire.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation and Maintenance

NO IMPACT. The topography of the project site is flat and the project area is highly developed with minimal open space areas, faces, or slopes. Therefore, project operation would not exacerbate wildfire risk or expose occupants to pollutant concentrations from a wildfire.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction

NO IMPACT. The project would require the installation of an onsite distribution substation. The three-bay substation would have an all-weather asphalt surface underlain by an aggregate base. The construction of the substation would not block access to any road or result in traffic congestion.

Maintenance of this substation would not physically block any access roads or result in traffic congestion that could significantly compromise timely access to this facility or any other location.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation and Maintenance

NO IMPACT. The project would not require the installation of associated infrastructure that could exacerbate fire risk or result in impacts to the environment.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Construction

NO IMPACT. The project would not substantially alter local drainage patterns. Storm water discharge during construction would be managed according to the project's Storm Water Pollution Prevention Plan, and appropriately discharged to the city of Santa Clara's storm drain system. The project would therefore not be expected to contribute to a flooding hazard onsite or offsite.

As discussed in this section, the topography of the project site and surrounding area is relatively flat and highly developed. Therefore, the project would not be exposed to post-fire slope instability or drainage changes.

For further discussion of the potential flooding impacts that could result from the proposed project, please see the discussion in **Chapter 5.10 Hydrology and Water Quality**.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

Operation and Maintenance

NO IMPACT. Operation of the project would not alter the course of a drainage (stream or river) and would not substantially alter local drainage patterns. The proposed onsite storm drainage system would be designed to meet the city's storm water drainage standards and sized adequately to convey water away from the site and to the city of Santa Clara's storm drain system. The project would therefore not contribute to a flooding hazard onsite or offsite.

As discussed in this section, the topography of the project site and surrounding area is relatively flat and highly developed. Therefore, the project would not be exposed to post-fire slope instability or drainage changes.

Additionally, the project is not located in or near a SRA or a very high FHSZ, or land classified as having a fire threat by the CPUC.

5.19.3 References

CalFire 2019 – *Santa Clara County FHSZ Map in Local Responsibility Area*. Accessed August 5, 2019. http://frap.fire.ca.gov/webdata/maps/santa_clara/fhszs_map.43.pdf.

Section 5.20 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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 an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Environmental checklist established by CEQA Guidelines, Appendix G.

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 an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory?***

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Biological Resources. As described in **Section 5.4, Biological Resources,** with implementation of mitigation the project would not substantially degrade the quality of the environment, substantially reduce the existing habitat of any fish or wildlife species, cause any fish or wildlife population to drop below self-sustaining levels, threaten to eliminate any plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

The project site is located in a highly developed area and surrounded by commercial and industrial buildings. Therefore, the potential to degrade environmental quality is minimal, as the main project site and surrounding properties do not support natural vegetation or features that would allow for extensive wildlife foraging or occupancy. However, mature landscaping trees and shrubs provide nesting opportunities for protected migratory bird species. In addition, western burrowing owl are known to occur as year-round residents at the Norma Y. Mineta San Jose International Airport, located immediately east across De La Cruz Boulevard. This species could occur as transient or dispersing individuals during the wintering or breeding season due to their proximity to the airport as well as the presence of small mammal burrows and burrow surrogates (for example, pile of pipes and demolition debris) on the project site. Proposed mitigation measures (MM) for nesting birds and western burrowing owl would ensure that project impacts would be less than significant.

Section 5.4, Biological Resources identifies the following mitigation measures:

- **MM BIO-1**, which requires a robust environmental sensitivity training program and construction site best management practices;
- **MM BIO-2,** which requires pre-construction surveys and construction avoidance measures for burrowing owl;
- **MM BIO-3,** which requires nesting bird pre-construction surveys and implementation of appropriate nest buffers; and,
- **MM BIO-4,** which provides detailed requirements for the replacement of trees removed as part of the project.

Implementation of these mitigation measures would ensure that species habitats, populations, and natural communities would not be substantially reduced.

Cultural and Tribal Cultural Resources. Important examples of the major periods of California history or prehistory would be represented by historical, unique archaeological, or tribal cultural resources. None are known to be present in the project area. Nevertheless, the extent of proposed ground disturbance has the potential to damage unknown, buried archaeological resources in the project area. As described in **Section 5.5, Cultural and Tribal Cultural Resources**, the majority of archaeological resources aged about 5,000 years or older are buried beneath the ground surface. If these resources were to be exposed or destroyed, it would be a significant impact. The SPPE application, however, contains Applicant Proposed Measures (APMs) **CULT-1** through **CULT-3**, and **TRIBE-1**, which would prevent, minimize, and compensate for inadvertent impacts to buried cultural resources. The project therefore is unlikely to eliminate important examples of major periods of California history or prehistory and would have a less than significant impact.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The analysis of cumulative impacts can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or, alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents may describe or evaluate the regional or area-wide conditions contributing to the cumulative impact.

This Initial Study evaluates cumulative impacts using the City of Santa Clara 2010-2035 General Plan Integrated Final Environmental Impact Report (General Plan EIR) since the project would be consistent with applicable land use plans and policies. The General Plan EIR evaluated future development, as identified in the current General Plan, and concluded that the city's contribution to cumulative impacts would be less than significant or less than cumulatively considerable on Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use, and Public Services. Given this, and given that the project, with mitigation, would have less than significant impacts on these resources, the project's contribution to these impacts would not be singularly or cumulatively considerable.

Additional discussion regarding proposed mitigation measures for impacts to Biological Resources continues below. Additional discussion for Air Quality is provided below for informational purposes.

Air Quality. The proposed project would be located in Santa Clara County in the San Francisco Bay Area Air Basin (SFBAAB), under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The SFBAAB is designated as a nonattainment area for ozone and particulate matter with a diameter of 2.5 microns or less (called "PM2.5") under both California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). The SFBAAB is also designated as nonattainment for particulate matter with a diameter of 10 microns or less (called "PM10") under CAAQS, but not NAAQS. SFBAAB's nonattainment status is attributed to the region's development history. Past, present and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. In developing thresholds of significance for air pollutants, BAAQMD considers the emission levels for which a project's individual emissions would be cumulatively considerable. 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. The California Environmental Quality Act (CEQA) would then require implementation of all feasible mitigation measures.

The construction emissions of the project would be lower than the thresholds of significance from the BAAQMD CEQA Air Quality Guidelines. There is no numerical threshold for fugitive dust generated during construction in BAAQMD. BAAQMD considers fugitive dust emissions to be potentially significant without incorporation of basic construction mitigation measures, also called best management practices (BMPs). The applicant proposes to incorporate the BAAQMD's recommended BMPs as **APM AQ-1** as a project design feature. Therefore, the project's construction emissions would not be cumulatively considerable during construction.

During readiness testing and maintenance, the oxides of nitrogen (NOx) emissions resulting from the standby generators are estimated to exceed the BAAQMD significance threshold of 10 tons per year. All other pollutants would have estimated emission rates below BAAQMD significance thresholds. The NOx emissions from the standby generator readiness testing and maintenance would be required to be fully offset at an offset ratio of 1.15 to 1 through the permitting process with the BAAQMD. Therefore, the project emissions during readiness testing and maintenance would not be cumulatively considerable.

Applicant and staff completed criteria pollutant air quality impact analyses of potential standby generator readiness testing and maintenance at any hour of the year. These analyses found that the concentrations from the non-concurrent, one at a time, testing of the standby engine generators (as proposed by the applicant in **APM AQ-2**) did not cause any exceedance of ambient air quality standards. Therefore, the project's criteria air pollutant impacts from standby generator readiness testing and maintenance would be less than significant.

Staff concludes that, the project's emergency operations are not likely to cause exceedance of the ambient air quality standards downwind of the project.

Staff also reviewed the applicant's health risk assessment (HRA) for construction and during standby generator readiness testing and maintenance. Such operation is not likely to exceed BAAQMD significance thresholds for cancer and chronic long-term health risks. Even when all standby engine generators are operating concurrently, the acute health risks would be below BAAQMD significance

thresholds. The HRA also shows that the project would not expose sensitive receptors to substantial toxic air contaminant (TAC) concentrations.

Therefore, the project's air quality impacts would not be considered cumulatively significant.

Biological Resources. The General Plan EIR found less than significant biological resources impacts in the event of a full build-out scenario. The project site is located in a highly developed area and surrounded by commercial and industrial buildings. The potential to degrade environmental quality is minimal, as the project site and surrounding properties do not support natural vegetation or features that would allow for extensive wildlife foraging or occupancy. Implementation of **MMs BIO-1**, **BIO-2**, **BIO-3**, and **BIO-4**, identified in **Section 5.4, Biological Resources**, would reduce the proposed project's impacts to biological resources (that is, nesting birds and western burrowing owl) to a less than significant level. The project's impacts on biological resources therefore would not be cumulatively considerable.

Tribal Cultural Resources. The General Plan EIR does not specifically address impacts on tribal cultural resources. Historical resources and unique archaeological resources, as defined by CEQA, share several of the impact vulnerabilities that tribal cultural resources face, especially the effects of ground-disturbing activities. In addition, historical and unique archaeological resources can also qualify as tribal cultural resources. The suite of mitigation measures presented in the 2010–2035 General Plan EIR would reduce the severity of some impacts on tribal cultural resources. No known tribal cultural resources have been found on the project site, although ground disturbance associated with the proposed project could result in the exposure and destruction of buried, as-yet unknown archaeological resources that could qualify as tribal cultural resources. Implementation of APMs **CULT-1** through **CULT-3**, and **TRIBE-1** would prevent, minimize, or compensate for impacts on buried, tribal cultural resources. Tribal cultural resources impacts from the proposed project therefore would not be cumulatively considerable.

The General Plan EIR identified the following significant environmental impacts:

- Climate Change – Contribution to greenhouse gas (GHG) emission exceeding Santa Clara's emission reduction target for 2035;
- Noise – Increase in localized traffic noise level on roadway segments throughout Santa Clara;
- Population and Housing – Exacerbation of land use impacts arising from the jobs/housing imbalance;
- Traffic – Degradation of traffic operations on regional roadways and highways within Santa Clara of an unacceptable level of service; and
- Solid Waste – Contribution to solid waste generation beyond available capacity after 2024.

Although the project, in combination with future development in the City of Santa Clara, could conceivably have a significant cumulative impact on these environmental resources, the following discussion demonstrates how the project's contribution to these impacts would be less than cumulatively considerable.

Climate Change Impacts

Greenhouse Gas Emissions. The BAAQMD CEQA Air Quality Guidelines do not identify a GHG emissions threshold for construction-related emissions. Instead, BAAQMD recommends that GHG emissions from construction be quantified and disclosed and the impacts be determined in relation to meeting Assembly Bill (AB) 32 GHG reduction goals. The BAAQMD further recommends incorporation of BMPs to reduce GHG emissions during construction, as feasible and applicable. The project's construction emissions would be in conformance with state and local GHG emissions reduction goals, so impacts would be less than significant.

For readiness testing and maintenance-related emissions, the BAAQMD CEQA Air Quality Guidelines states that for stationary-source projects, the threshold to determine the significance of an impact from GHG emissions is 10,000 metric tons per year of carbon dioxide equivalent ($MTCO_2e$/yr). For commercial/industrial land use development projects, BAAQMD has adopted a numeric threshold of 1,100 $MTCO_2e$/yr and a qualitative threshold of complying with a qualified GHG reduction strategy. The 10,000 MTCO2e/yr threshold would apply to the proposed project, which includes stationary sources that are subject to BAAQMD permitting, and the project would not be subject to the 1,100 MTCO2e/yr threshold recommended for commercial/industrial land use developments. The standby generators would not be considered to have a cumulatively considerable contribution of GHG emissions if emissions are below the BAAQMD's threshold of 10,000 $MTCO_2e$/yr. Other project-related emissions from mobile sources, area sources, energy use and water use, would not be included for comparison to this threshold, based on guidance in the BAAQMD's CEQA Guidelines. GHG impacts from all other project-related emission sources would be considered to have a less-than-significant impact if the project is consistent with the City of Santa Clara Climate Action Plan and applicable regulatory programs and policies adopted by the Air Resources Board or other California agencies, which are considered a qualified greenhouse gas reduction strategy.

The GHG emissions of the standby generators of the project are expected to be less than the 10,000 $MTCO_2e$/yr threshold and would not be considered to be cumulatively significant. Additionally, the project would implement efficiency measures to meet California green building standards, and additional voluntary efficiency and use reduction measures. GHG emissions from energy use would be reduced by the green power mix used by Silicon Valley Power. As such, GHG emissions related to the project would not conflict with the City of Santa Clara Climate Action Plan or other plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Therefore, the project's GHG emissions would not be considered cumulatively significant.

Noise Impacts

The General Plan EIR anticipates significant noise impacts from the build-out of the General Plan. The significant noise impacts identified are attributed to noise associated with increased traffic. As discussed in **Section 5.17, Transportation**, traffic from the project would not have a significant impact on surrounding roadways and the transportation network. The project would contribute to vehicle trips during the construction period as trucks deliver construction materials to the project site. These trips would be temporary in nature; therefore, they would not significantly add to regular traffic. The 25 operational employees would generate minimal daily trips and would not substantially increase the traffic in the project area. Any noise impacts associated with construction and operations traffic would be less than significant. The project's contribution to this cumulative impact would not be cumulatively considerable.

Population and Housing Impacts

The General Plan EIR identified significant impacts from the build-out of the General Plan land use designations. The General Plan EIR concluded that the proposed land uses would create a regional jobs/housing imbalance, as workers who are unable to live near their employment would commute long distances from outlying areas. As described in **Section 5.14, Population and Housing**, the project would not displace any people or housing, or necessitate construction of replacement housing elsewhere. Operation of the project is anticipated to require 25 employees. Based on the proximity of the supply of operations workers, they are not likely to relocate closer to the project. The project's construction and operation workforce would not directly or indirectly induce a substantial population growth in the project area. Therefore, the project's contribution to this cumulative impact would not be cumulatively considerable.

Traffic Impacts

The General Plan EIR anticipates significant traffic impacts from the build-out of the General Plan. As discussed in **Section 5.17, Transportation**, the project would not generate significant vehicle miles traveled, and therefore would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Construction vehicle trips would be temporary and would involve short trips from the nearby Bay Area. Operation vehicle trips would be mostly generated by the 25 employees at the site and would not substantially increase the regular traffic in the project area. The project's contribution to this cumulative impact would not be cumulatively considerable.

Solid Waste Impacts

As stated in **Section 5.18, Utilities and Service Systems**, the City of Santa Clara has available landfill capacity at the Newby Island Landfill in the City of San Jose through 2024. The current landfill impacts are addressed within an ongoing Integrated Waste Management Plan of the City of Santa Clara to provide waste disposal services. The project would generate minimal operational waste as data centers typically require very little equipment turnover. Additionally, the project does not include a residential component and would not generate any increases in the supply and demand of utility services and infrastructure. Therefore, the project's contribution to this cumulative impact would not be cumulatively considerable.

c. ***Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?***

LESS THAN SIGNIFICANT IMPACT. The proposed project would not cause substantial adverse effects on human beings either directly or indirectly. The proposed project would result in temporary impacts to human health during construction, including changes to air quality, exposure to geologic hazards, noise, and exposure to hazardous materials. As discussed in **Section 5.3, Air Quality**, with implementation of **APM AQ-1** and **AQ-2**, the project would result in a less than significant impact related to human health. As discussed in **Section 5.7, Geology and Soils**, implementation of seismic design guidelines in the current California Building Code and project-specific recommendations in a final geotechnical engineering report would ensure the project would not expose people or property to significant impacts associated with geologic or seismic conditions onsite. The proposed project would result in temporary noise impacts to humans during construction and intermittently during operation. As discussed in **Section 5.13, Noise**, construction-related noise impacts would be less than significant. As discussed in **Section 5.9, Hazards and Hazardous Materials**, hazards impacts would be

less than significant. No additional impacts to human beings would occur during operation and maintenance activities.

5.20. References

Santa Clara 2010 – City of Santa Clara (Santa Clara). City of Santa Clara 2010–2035 General Plan. Adopted November 16, 2010. Available online at: http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan.

Santa Clara 2011 – City of Santa Clara (Santa Clara). 2010-2035 General Plan Integrated Final Environmental Impact Report. January 2011. Available online at: http://santaclaraca.gov/home/showdocument?id=12900.

5.21 Environmental Justice

5.21.1 Setting

The United States Environmental Protection Agency (U.S. EPA) defines environmental justice (EJ) as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies" (U.S. EPA 2015, page 4).

The "Environmental Justice in the Energy Commission Site Certification Process" subsection immediately below describes why EJ is part of the CEC's site certification process, the methodology used to identify an EJ population, and the consideration of California Environmental Protection Agency's (CalEPA) CalEnviroScreen data. Below that, the "Environmental Justice Project Screening" subsection presents the demographic data for those people living in a six-mile radius of the project site and a determination on presence or absence of an EJ population. When an EJ population is identified, the analyses in 10 technical areas[1] consider the project's impacts on this population and whether any impacts would disproportionately affect the EJ population. Lastly, the "Project Outreach" subsection discusses the CEC's outreach program specifically as it relates to the proposed project.

Environmental Justice in the Energy Commission Site Certification Process

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," focuses federal attention on the environment and human health conditions of minority communities and calls on federal agencies to achieve environmental justice as part of their mission. The order requires the U.S. EPA and all other federal agencies (as well as state agencies receiving federal funds) to develop strategies to address this issue. The agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

The California Natural Resources Agency recognizes that EJ communities are commonly identified as those where residents are predominantly minorities or live below the poverty level; where residents have been excluded from the environmental policy setting or decision-making process; where they are subject to a disproportionate impact from one or more environmental hazards; and where residents experience disparate implementation of environmental regulations, requirements, practices, and activities in their communities. Environmental justice efforts attempt to address the inequities of environmental protection in these communities.

An EJ analysis is composed of the following:

- Identification of areas potentially affected by various emissions or impacts from a proposed project;
- Providing notice in appropriate languages (when possible) of the proposed project and opportunities for participation in public workshops to EJ communities;
- A determination of whether there is a significant population of minority persons, or persons below the poverty level, living in an area potentially affected by the proposed project; and

[1] The 10 technical areas are Aesthetics, Air Quality, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, Cultural and Tribal Cultural Resources, and Utilities and Service Systems. Cultural and Tribal Cultural Resources considers impacts to Native American populations.

- A determination of whether there may be a significant adverse impact on a population of minority persons or persons below the poverty level caused by the proposed project alone, or in combination with other existing and/or planned projects in the area.

California law defines EJ as "the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code, § 65040.12; Pub. Resources Code, §§ 71110-71118). All departments, boards, commissions, conservancies and special programs of the Resources Agency must consider EJ in their decision-making process if their actions have an impact on the environment, environmental laws, or policies. Such actions that require EJ consideration may include:

- adopting regulations;
- enforcing environmental laws or regulations;
- making discretionary decisions or taking actions that affect the environment;
- providing funding for activities affecting the environment; and
- interacting with the public on environmental issues

CalEnviroScreen - More Information About an EJ Population

The California Communities Environmental Health Screening Tool (CalEnviroScreen) is a science-based mapping tool used by CalEPA to identify disadvantaged communities[2] pursuant to Senate Bill (SB) 535. As required by SB 535, disadvantaged communities are identified based on geographic, socioeconomic, public health and environmental hazard criteria. CalEnviroScreen identifies communities most burdened by pollution from multiple sources and most vulnerable to its effects, taking into account socioeconomic and health status of people living in those communities (OEHHA 2017, page 1).

Using data from federal and state sources, the tool consists of four components in two broad groups. The Exposure and Environmental Effects components comprise a Pollution Burden group, and the Sensitive Populations and Socioeconomic Factors components comprise a Population Characteristic Group. The four components are made up of environmental, health, and socioeconomic data from 20 indictors.

CalEnviroScreen scores are calculated by combining the individual indicator scores within each of the four components, then multiplying the Pollution Burden and Population Characteristics group scores to produce a final score (Pollution Burden X Population Characteristics = CalEnviroScreen Score). (CalEPA 2017, page 3) Each group has a maximum score of 10, thus the maximum CalEnviroScreen score is 100. Based on these scores, census tracts across California are ranked relative to one another. (OEHHA 2017, page 6). Values for the various components are shown as percentiles, which indicate the percent of all census tracts with a lower score. A higher percentile indicates a higher potential relative burden.

Table 5.21-1 lists the indicators that go into the Pollution Burden score and the Population Characteristics score to form the final CalEnviroScreen score. These indicators are used to measure factors that affect the potential for pollution impacts in communities.

[2] The California Environmental Protection Agency, for purposes of its Cap-and-Trade Program, has designated "disadvantaged communities" as census tracts having a CalEnviroScreen score at the top 25 percent (75th percentile) (CalEPA 2017)

TABLE 5.21-1 COMPONENTS THAT FORM THE CALENVIROSCREEN 3.0 SCORE	
Pollution Burden	
Exposure Indicators	Environmental Effects Indicators
Ozone concentrations	Cleanup sites
Particulate matter (PM) 2.5 concentrations	Groundwater threats
Diesel PM emissions	Hazardous waste
Drinking water contaminants	Impaired water bodies
Pesticide use	Solid waste sites and facilities
Toxic releases from facilities	
Traffic density	
Population Characteristics	
Sensitive Populations Indicators	Socioeconomic Factors Indicators
Asthma emergency department	Educational attainment
Low birth-weight infants	Housing burdened low income households
Cardiovascular disease (emergency department visits for heart attacks)	Linguistic isolation
	Poverty
	Unemployment

Source: OEHHA 2017

Part of staff's assessment of how, or if, the project would impact an EJ population includes a review of CalEnviroScreen data for the project area. There are four technical areas that could have project impacts that could combine with the indicators in CalEnviroScreen: Air Quality, Hydrology and Water Quality, Hazards and Hazardous Materials, and Utilities and Service Systems.

The CalEnviroScreen indicators relevant to each of the four technical areas are:

Air Quality:

- Asthma
- Cardiovascular disease
- Diesel PM emissions
- Low birth-weight infants
- Ozone concentrations
- Particulate Matter (PM) 2.5 concentrations
- Pesticide use
- Toxic releases from facilities
- Traffic density

Hydrology and Water Quality:

- Drinking water contaminants
- Groundwater threats
- Impaired water bodies

Hazards and Hazardous Materials:

- Cleanup sites

Utilities and Service Systems

- Cleanup sites
- Hazardous waste
- Solid waste sites and facilities

When these technical areas have identified a potential project impact where an EJ population is present, they use CalEnviroScreen to better understand the characteristics of the areas where the impact would occur and ensure that disadvantaged communities in the vicinity of the proposed project have not been missed when screened by race/ethnicity and low income.

There are several limitations with CalEnviroScreen that are important to note (OEHHA 2017, pages iii, 1-3, 6, 12). Some limitations and items to note on CalEnviroScreen include the following:

- The core purpose of this tool is to characterize "impacts" of pollution in communities with respect to factors that are not routinely included in risk assessments, where "impacts," for the purposes of this tool, refers broadly to stressors that can affect health and quality of life.
- The tool is a screening tool developed to conduct statewide evaluations of community-scale impacts.
- Many factors, or stressors, contribute to a community's pollution burden and vulnerability.
- Integration of multiple stressors into a risk assessment is currently not feasible.
- The score provides a relative rather than absolute measure of pollution's impacts and vulnerabilities in California communities.
- The score provides a broad picture of the burdens and vulnerabilities that communities confront from environmental pollutants.
- A percentile does not describe the magnitude of the difference between two tracts, rather it simply tells the percentage of tracts with lower values for that indicator.
- The score is for a given tract relative to other tracts in the state.

The tool did not/does not:

- substitute for a cumulative impact analysis under the California Environmental Quality Act (CEQA).
- restrict the authority of government agencies in permit and land use decisions.
- guide all public policy decisions.
- inform the implementation of many policies, programs and activities throughout the state.

Project Outreach

As a part of the U.S. EPA's definition of environmental justice, meaningful involvement is an important part of the siting process. Meaningful involvement occurs when:

- those whose environment and/or health would be potentially affected by the decision on the proposed activity have an appropriate opportunity to participate in the decision;
- the population's contribution can influence the decision;
- the concerns of all participants involved are considered in the decision-making process; and,
- involvement of the population potentially affected by the decision on proposed project.

Energy Commission staff and the Public Advisor's Office (PAO) coordinated closely on public outreach early in the review process. The PAO outreach contact consisted of emails and phone calls to local elected officials, environmental justice organizations, local chamber of commerce, schools and school districts, community centers, daycare centers, park departments, religious organizations, local hospitals within a six-mile radius of the proposed project.

A Notice of Receipt of the Sequoia Data Center (project) Small Power Plant Exemption (SPPE) Application was docketed and mailed to the project mail list, including environmental justice organizations and similar interest groups on August 30, 2019. A Request of Agency Participation was docketed and mailed to

agencies on the project mail list on August 30, 2019. Based on current U.S. Census English fluency data for the population residing in the cities and communities within a six-mile radius of the project site, translation of the public notices was deemed appropriate. U.S. Census data also showed that of those who report they "speak English less than very well," the predominant language spoken was Chinese. Mandarin Chinese was the more commonly spoken dialect. Public notices for the project in both English and Chinese (Mandarin) were published in local newspapers on October 23 and October 21, 2019, respectively.

In accordance with the Governor's Executive Order B-10-11, the Energy Commission's Tribal Consultation Policy, the Energy Commission's Siting Regulations, and recent amendments to CEQA (i.e., AB 52), staff conducted outreach and consultation with regional tribal governments. Additional information regarding the outreach efforts and specific groups contacted can be found in **Section 5.5, Cultural and Tribal Cultural Resources**.

As described in **Section 3, Introduction to the Initial Study**, staff mailed notification of the IS/PMND to property owners and occupants within 1,000 feet of the project and 500 feet of the linears.

Environmental Justice Project Screening

Figure 5.21-1 shows 2010 census blocks in a six-mile radius of the project with a minority population greater than or equal to 50 percent (US Census 2010). The population in these census blocks represents an EJ population based on race and ethnicity as defined in the U.S. EPA's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (U.S. EPA 2015).

Based on California Department of Education data in **Table 5.21-2** and presented in **Figure 5.21-2**, staff concludes that the percentage of those living in the school districts of East Side Union High, San Jose Unified, and Santa Clara Unified (in a six-mile radius of the project site) and enrolled in the free or reduced price meal program is larger than those in the reference geography, and thus are considered an EJ population based on a low income population as defined in *Guidance on Considering Environmental Justice During the Development of Regulatory Actions*.

TABLE 5.21-2 LOW INCOME DATA WITHIN THE PROJECT AREA

School Districts in a Six-Mile Radius of the Project Site	Enrollment Used for Meals	Free or Reduced Price Meals	
Campbell Union High	8,043	1,996	24.8%
East Side Union High	**27,263**	**14,560**	**53.4%**
Fremont Union High	11,140	1,688	15.2%
Milpitas Unified	10,318	3,452	33.5%
Mountain View – Los Altos Union High	4,304	848	19.7%
San Jose Unified	**31,713**	**14,479**	**45.7%**
Santa Clara Unified	**15,509**	**6,402**	**41.3%**
Reference Geography			
Santa Clara County	272,155	102,647	37.7%

Note: **Bold** indicates school districts considered having an EJ population based on low income Source: CDE 2018.

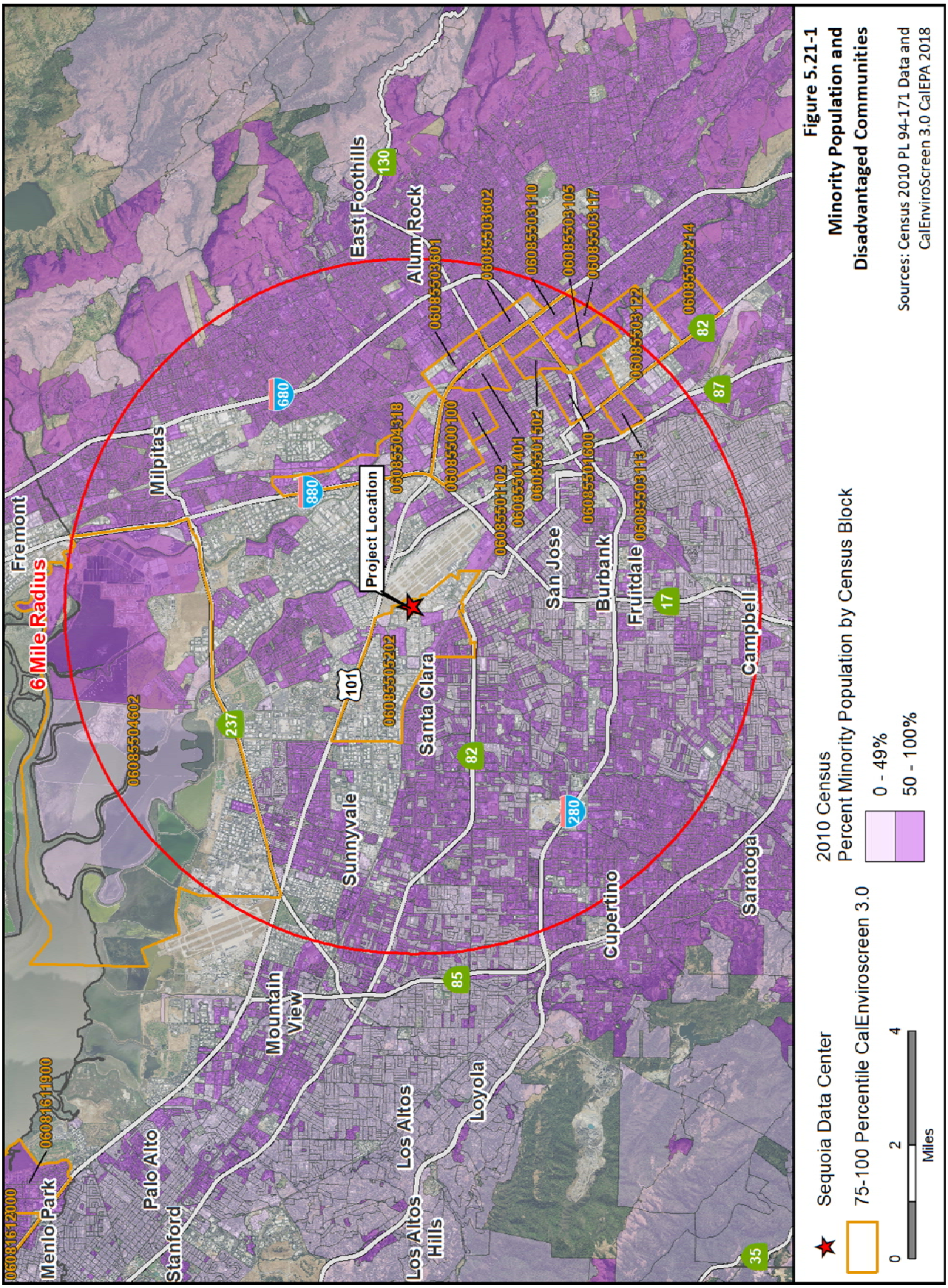

Figure 5.21-1
Minority Population and Disadvantaged Communities

Sources: Census 2010 PL 94-171 Data and CalEnviroScreen 3.0 CalEPA 2018

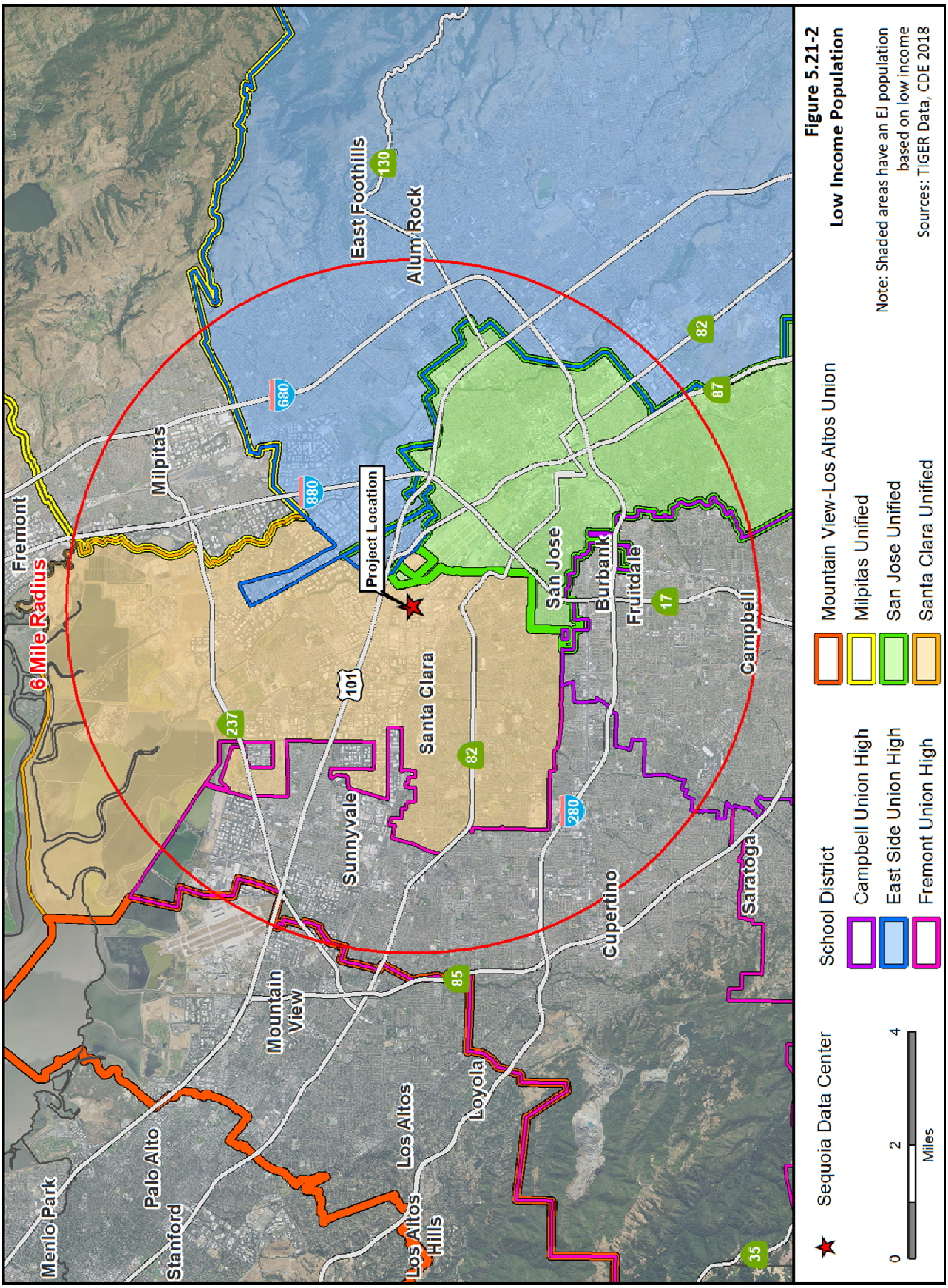

Figure 5.21-2
Low Income Population

Note: Shaded areas have an EJ population based on low income

Sources: TIGER Data, CDE 2018

CalEnviroScreen - Disadvantaged Communities

CalEnviroScreen 3.0 was used to gather additional information about the population potentially impacted by the proposed project. The CalEnviroScreen indicators are used to measure factors that affect the potential[3] for pollution impacts in communities (OEHHA 2017). Staff used CalEnviroScreen 3.0 to identify disadvantaged communities[4] in the vicinity of the proposed project and better understand the characteristics of the areas where impacts would occur (see **Figure 5.21-1**, which includes CalEnviroScreen-defined disadvantaged communities by census tracts). **Table 5.21-3** presents the CalEnviroScreen overall scores for the disadvantaged communities in the project area.

TABLE 5.21-3 CALENVIROSCREEN SCORES FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Total Population	CES 3.0 Percentile	Pollution Burden Percentile	Population Characteristics Percentile
06085503105	2,484	92.24	88.16	84.13
06085500100	6,339	88.86	93.17	70.94
06085504318	5,265	87.33	94.51	65.72
06085503601	2,992	85.64	87.13	71.82
06085503122	3,449	85.09	83.58	75.08
06085501600	6,854	84.12	77.61	78.23
06085503110	4,618	83.19	68.67	84.02
06085504602	2,144	82.28	88.30	65.33
06085501102	4,477	80.92	85.50	66.02
06085503602	4,741	80.02	50.45	92.65
06085501401	3,295	79.98	81.88	68.08
06085503113	4,760	78.67	83.66	64.57
06085503117	3,120	78.07	61.36	80.58
06085505202	5,867	76.89	88.04	57.65
06085501502	4,549	74.55	81.27	60.18

Note: Disadvantaged communities by census tract in the project's 6-mile radius. Shaded row indicate census tract where the project is located. Source: CalEPA 2018

Table 5.21-4 presents the CalEnviroScreen percentiles for the indicators that make up the pollution burden percentile in a six-mile radius of the project site. Where percentiles for CalEnviroScreen indicators are 90 and above, the percentile is shown in bold. These relatively higher percentiles could be seen as drivers for the census tract's identification as a disadvantaged community. There are two census tracts where the pollution burden percentile is above 90 and there are 13 census tracts where individual pollution burden indicators are in the 90 or above percentile. **Table 5.21-5** presents the CalEnviroScreen percentiles for the indicators that make up the population characteristics in a six-mile radius of the project site. There is one census tract where the population characteristics burden percentile is above 90 and there are 11 census tracts where individual population characteristic indicators are in the 90 or above percentile.

[3] It is important to note that CalEnviroScreen is not an expression of health risk and does not provide quantitative information on increases of impacts for specific sites or project. CalEnviroScreen uses the criteria of "proximity" to a hazardous waste site, a leaking underground tank, contaminated soil, an emission stack (industry, power plant, etc.) to determine that a population is "impacted". It does not address general principles of toxicology: dose/response and exposure pathways. For certain toxic chemicals to pose a risk to the public, offsite migration pathways must exist (through ingestion, inhalation, dermal contact, etc.) and contact to a certain amount – not just any amount – must exist.

[4] The California Environmental Protection Agency (CalEPA), for purposes of its Cap-and-Trade Program, has designated "disadvantaged communities" as census tracts having a CalEnviroScreen score at or above the 75th percentile (CalEPA 2017). As a comparative screening tool, it is not intended to be used as a health or ecological risk assessment for a specific area or site.

TABLE 5.21-4 CALENVIROSCREEN INDICATOR PERCENTILES FOR POLLUTION BURDEN FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Percentiles												
	Pollution Burden	Ozone	PM2.5	Diesel PM	Drinking Water	Pesticides	Toxic Release	Traffic	Cleanup Sites	Groundwater Threats	Hazardous Waste	Impaired Water Bodies	Solid Waste
06085503105	88.16	22.34	52.61	89.48	51.02	0.00	35.33	88.03	84.13	76.50	**96.90**	29.25	**95.47**
06085500100	**93.17**	16.94	52.61	**91.75**	51.02	0.00	47.78	82.20	**98.74**	**96.94**	**97.41**	41.15	**97.24**
06085504318	**94.51**	16.94	52.61	**91.74**	56.64	0.00	53.89	88.43	**99.80**	**98.39**	**99.68**	29.25	**99.79**
06085503601	87.13	16.94	52.61	87.94	51.02	0.00	43.71	82.75	83.95	84.79	89.92	29.25	**90.99**
06085503122	83.58	22.34	52.61	89.97	51.02	0.00	32.10	43.50	85.52	**94.19**	**99.28**	29.25	**99.34**
06085501600	77.61	16.94	52.61	89.00	51.02	0.00	37.32	**96.20**	53.19	**92.04**	25.76	41.15	80.55
06085503110	68.67	22.34	52.61	88.29	51.02	0.00	36.46	**97.04**	52.46	37.92	60.50	29.25	52.16
06085504602	88.30	16.94	42.86	25.50	30.45	38.47	35.40	88.24	**99.42**	**91.91**	88.36	**91.47**	**99.98**
06085501102	85.50	16.94	52.61	88.77	51.02	0.00	43.68	64.46	89.13	89.79	88.42	29.25	**92.74**
06085503602	50.45	22.34	52.61	88.79	30.45	0.00	39.87	**91.50**	35.08	59.50	25.76	15.26	0.00
06085501401	81.88	16.94	52.61	88.89	51.02	0.00	42.88	89.97	73.37	82.51	50.68	29.25	85.97
06085503113	83.66	22.34	52.61	**90.96**	51.02	0.00	32.90	75.89	53.03	**93.53**	88.84	41.15	82.86
06085503117	61.36	22.34	52.61	89.04	51.02	0.00	35.02	54.63	42.92	39.42	80.61	29.25	62.40
06085505202	88.04	16.94	52.61	89.89	13.56	0.00	57.35	71.95	**99.84**	**98.30**	**99.11**	41.15	**95.02**
06085501502	81.27	16.94	52.61	89.00	51.02	0.00	39.47	**95.94**	49.53	87.95	60.50	29.25	86.42

Note: Disadvantaged communities by census tract in the project's 6-mile radius. **Bold** indicates a percentile is 90 or above. Shaded row indicate census tract where the project is located. Source: CalEPA 2018

TABLE 5.21-5 CALENVIROSCREEN INDICATOR PERCENTILES FOR POPULATION CHARACTERISTICS FOR DISADVANTAGED COMMUNITIES

Census Tract No.	Percentiles								
	Population Characteristics	Asthma	Low Birth Weight	Cardiovascular Disease	Education	Linguistic Isolation	Poverty	Unemployment	Housing Burden
06085503105	84.13	51.04	81.24	52.51	83.23	**98.87**	72.57	85.53	80.81
06085500100	70.94	70.94	49.03	65.33	71.65	69.02	59.97	59.88	68.95
06085504318	65.72	40.88	61.09	43.75	76.65	**95.35**	69.30	66.75	54.18
06085503601	71.82	56.56	64.22	51.04	77.04	88.15	77.10	56.83	59.39
06085503122	75.08	27.79	**92.16**	14.00	73.63	**97.21**	84.19	**94.29**	**92.78**
06085501600	78.23	67.96	77.16	51.84	66.46	64.34	76.32	59.12	**93.89**
06085503110	84.02	64.73	37.05	81.49	**95.14**	**98.28**	**94.12**	42.25	**93.12**
06085504602	65.33	79.87	**99.82**	34.21	47.43	66.88	34.38	48.58	48.53
06085501102	66.02	67.77	41.87	60.24	75.32	66.66	49.45	76.86	55.15
06085503602	**92.65**	74.03	87.33	71.19	82.12	**92.40**	76.57	82.00	78.41
06085501401	68.08	52.79	67.72	38.00	87.90	**92.13**	68.81	33.82	73.80
06085503113	64.57	38.27	46.74	35.49	**94.36**	81.99	85.41	42.25	**92.24**
06085503117	80.58	65.18	11.76	81.89	88.49	**97.15**	86.79	81.61	86.52
06085505202	57.65	34.95	79.87	51.84	65.90	76.00	54.83	6.94	69.61
06085501502	60.18	43.88	41.87	30.57	**91.07**	**94.16**	71.68	70.57	47.33

Note: Disadvantaged communities by census tract in the project's 6-mile radius. **Bold** indicates a percentile is 90 or above. Shaded row indicate census tract where the project is located. Source: CalEPA 2018.

5.21.2 Environmental Impacts and Mitigation Measures

The following technical areas discuss impacts to EJ populations: Aesthetics, Air Quality[7], Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, Cultural and Tribal Cultural Resources, and Utilities and Service Systems.

Part of staff's assessment of how, or if, the project would impact an EJ population includes a review of CalEnviroScreen data for the project area. There are three technical areas that could have project impacts that could combine with the indicators in CalEnviroScreen: Air Quality, Hazards and Hazardous Materials, and Hydrology and Water Quality. When these technical areas have identified a potential impact where an EJ population is present, CalEnviroScreen is used to better understand the characteristics of the areas where the impact would occur and ensure that disadvantaged communities in the vicinity of the proposed project have not been missed when screened by race/ethnicity and low income.

Aesthetics

LESS THAN SIGNIFICANT IMPACT. A disproportionate impact pertaining to Aesthetics to an EJ population may occur if a project is in proximity to an EJ population and the following:

- The project, if in an "urbanized area" per Public Resources Code, section 21071, conflicts with applicable zoning and other regulations governing scenic quality.
- The project, if in a non-urbanized area, substantially degrades the existing visual character or quality of the public view of the site and its surroundings.
- The project creates a new source of substantial light and glare that would adversely affect day or nighttime views in the area.

The project is in an urbanized area. The project conforms to the applicable city zoning and other regulations governing scenic quality inclusive of a minor modification in allowable height. It would be visually consistent with the existing character of the site and surrounding area, and the larger cityscape.

Staff review of GIS data and viewing aerial and street view images concludes the nearest EJ population would have no to low visibility of the project due to the existence of aboveground landscape elements (buildings, structures, earthworks, trees, and so forth) obstructing or obscuring the public view of it. The project would not have a disproportionate effect to an EJ population and would have a less than significant effect.

Air Quality

LESS THAN SIGNIFICANT IMPACT. Ambient air quality standards (AAQS) are established to protect the health of even the most sensitive individuals in our communities, which includes the EJ population, by defining the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. Both the California Air Resources Board and the U.S. EPA are authorized to set ambient air quality standards. Staff identified the potential public health impacts (that is, cancer and non-cancer health effects) that could affect the EJ population represented in **Figures 5.21-1** and **5.21-2**. These potential public health risks were evaluated quantitatively based on the most sensitive population, which includes the EJ population, by conducting a health risk assessment. The results were presented by level of risks.

[7] Public Health issues discussed under Air Quality

The potential construction and standby generator readiness testing and maintenance risks are associated with exposure to diesel particulate matter, total organic gases in diesel exhaust, and evaporative and exhaust total organic gases from gasoline vehicles. The toxic air contaminants from total organic gases include 1,3-Butadiene, Acetaldehyde, Benzene, Ethylbenzene, Formaldehyde, n-Hexane, Methanol, Methyl Ethyl Ketone, Napthalene, Propylene, Styrene, Toluene, and Xylene.

Staff identified the potential air quality impacts (that is, ozone and particulate matter [PM2.5] with a diameter less than or equal to 2.5 micrometers) that could affect the EJ population represented in **Figures 5.21-1** and **5.21-2**. Staff also examined individual contributions of indicators in CalEnviroScreen that are relevant to air quality (see **Table 5.21-1**).

Staff concluded that construction, readiness testing and maintenance, and any emergency operation as defined in the Air Quality section of this Initial Study are not likely to cause significant adverse impacts. The project would not cause significant adverse direct or indirect public health impacts from the project's toxic air emissions and no mitigation is needed. Likewise, the project would not cause disproportionate public health impacts on sensitive populations, such as the EJ population represented in **Figures 5.21-1** and **5.21-2**.

Ozone Impacts

Ozone is known to cause numerous health effects, which can potentially affect EJ communities as follows:

- lung irritation, inflammation and exacerbation of existing chronic conditions, even at low exposures (Alexis et al. 2010, Fann et al. 2012, Zanobetti and Schwartz 2011);
- increased risk of asthma among children under 2 years of age, young males, and African American children (Lin et al., 2008, Burnett et al., 2001); and,
- higher mortality, particularly in the elderly, women and African Americans (Medina- Ramon, 2008).

Even though ozone is not directly emitted from emission sources such as Sequoia Backup Generator Facility (SBGF), precursor pollutants that create ozone such as nitrogen oxides (NOx) and volatile organic compounds (VOCs) are expected to be emitted. Before obtaining a permit to construct from the Bay Area Air Quality Management District (BAAQMD) for the SBGF, the applicant will be required to purchase NOx emission reduction credits (ERCs) that would come from within the San Francisco Bay Area Air Basin. The applicant has stated it would purchase ERCs from the market to offset emissions from readiness testing and maintenance. The BAAQMD would determine the quantity and location of ERCs required during the permitting process.

For CalEnviroScreen, the air monitoring data used in this indicator have been updated to reflect ozone measurements for the years 2011 to 2013. CalEnviroScreen 3.0 uses the average daily maximum ozone concentration. According to CalEnviroScreen data, ozone concentrations in each census tract are ordered by ozone concentration values, and then are assigned a percentile based on the statewide distribution of values. Results are shown in **Table 5.21-4**. The percentile for nine out of the fifteen census tracts are the same at 16.9, and six of the fifteen census tracts are the same at 22.3. This means ozone levels in these census tracts are higher than just 16.9 percent and 22.3 percent, respectively of the census tracts in California. Another way to look at the data is that 83.1 and 77.7 percent, respectively, of all California census tracts have higher ozone levels than these near SBGF.

Census tract 6085505202 was at the 16.9 percentile in the ozone category (see **Table 5.12-4**). This indicates that ozone in these census tracts are below the statewide average in terms of relative air quality as it relates to ozone. This indicates that these communities are not exposed to high ozone concentrations as compared to the rest of the state.

The project would not be expected to contribute significantly to the regional air quality as it relates to ozone. The project would be required to comply with ambient air quality standards for NOx and VOCs, which are precursor pollutants that create ozone during the construction and testing and maintenance phases. The project would use best management practices (BMPs) during construction, which would reduce NOx and VOCs during construction. The project is also expected to be below ambient air quality standards during readiness testing and maintenance. NOx emissions resulting from readiness testing and maintenance are above BAAQMD's annual threshold of significance, but the applicant will be required to offset NOx emissions using ERCs. VOC emissions are below the BAAQMD's threshold of significance and the applicant will not be required to offset VOC emissions. The project would therefore be expected to not contribute significantly to regional ozone concentrations, relative to baseline conditions. The project's air quality impacts, as it related to ozone and ozone precursors would be less than significant for the census tract of concern and the general population.

Staff concludes that the project would not expose sensitive receptors to substantial ozone precursor concentrations.

PM2.5 Impacts

Particulate matter (PM) is a complex mixture of aerosolized solid and liquid particles including such substances as organic chemicals, dust, allergens and metals. These particles can come from many sources, including cars and trucks, industrial processes, wood burning, or other activities involving combustion. The composition of PM depends on the local and regional sources, time of year, location and weather.

PM2.5 refers to particles that have a diameter less than or equal to 2.5 micrometers. PM2.5 is known to cause numerous health effects, which can potentially affect EJ communities. Particles in this size range can have adverse effects on the heart and lungs, including lung irritation, exacerbation of existing respiratory disease, and cardiovascular effects.

For CalEnviroScreen, the indicator PM2.5 is determined by the annual mean concentration of PM2.5 (average of quarterly means), averaged over three years (2011-2013). According to CalEnviroScreen data, PM2.5 concentrations in each census tract are ordered by PM2.5 concentration values, and then are assigned a percentile based on the statewide distribution of values and are shown in **Table 5.21-4**. The percentiles are 52.6 for all census tracts except 6085504602, which was at the 42.8 percentile.

Census tract 6085505202 was at the 52.6 percentile in the PM2.5 category (see **Table 5.12-4**). This indicates that particulate matter concentrations in this census tract are higher than 52.6 percent of tracts statewide. This indicates that these communities are exposed to average PM2.5 concentrations compared to the rest of the state.

The project would not be expected to contribute significantly to the regional air quality related to PM2.5. The project would be required to comply with ambient air quality standards for particulate matter during construction, testing and maintenance of the standby generators. The project would use best management practices (BMPs) during construction, which would reduce particulate matter during construction. The project is also expected to be below ambient air quality standards during readiness

testing and maintenance. The project would therefore be expected to not contribute significantly to regional PM2.5 concentrations, relative to baseline conditions. The project's air quality impacts, as it related to PM2.5 would be less than significant for the census tract of concern and the general population.

Staff concludes that the project would not expose sensitive receptors to substantial PM2.5 concentrations.

NO_2 Impacts

As stated in **Section 5.3**, **Air Quality**, staff did an additional assessment of other criteria pollutant impacts. Specifically, staff completed an independent modeling analysis for the standby generator readiness testing and maintenance activities to determine NO_2 impacts. Staff's conservative 1-hour NO_2 modeling results indicate that the SBGF's readiness testing and maintenance would not cause adverse NO_2 impacts to the EJ population. Staff concludes that the project would not expose sensitive receptors to substantial criteria pollutant concentrations.

Diesel PM

This indicator represents how much diesel PM is emitted into the air within and near the census tract. The data are from 2012 California Air Resources Board's emission data from on-road vehicles (trucks and buses) and off-road sources (ships and trains, for example). Among these fifteen census tracts, three are higher than the 90th percentile. The highest percentiles being 91.75 and 91.74 (in census tracts 6085500100 and 6085504318, respectively), meaning these two are higher than 91.75 and 91.74 percent of the census tracts in California. However, according to the results of the health risk assessment conducted for this project, impacts associated with diesel PM from the proposed project construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to the diesel PM levels in the disadvantaged communities.

Pesticide Use

Specific pesticides included in the Pesticide Use category were narrowed from the list of all registered pesticides in use in California to focus on a subset of 70 chemicals that are filtered for hazard and volatility for the years 2012-2014 collected by the California Department of Pesticide Regulation. Only pesticides used on agricultural commodities are included in the indicator.

Census tract 6085505202 was at 0 percent in the Pesticide Use category (see **Table 5.12-4**). This indicates that pesticide use in these census tracts are below the statewide average in terms of pesticide use. This indicates that these communities are not exposed to high pesticide concentrations as compared to the rest of the state.

Toxic Releases from Facilities

This indicator represents modeled air concentrations of chemical releases from large facility emissions in and near the census tract. The U.S. EPA provides public information on the amount of chemicals released into the environment from many facilities. This indicator uses the modeled air concentration and toxicity of the chemical to determine the toxic release score. The data are from 2011-2013.

Census tract 6085505202 was at the 57.3 percentile in the Toxic Release from Facilities category (see **Table 5.12-4**). This indicates that toxic release from facilities threats in this census tract is higher than

57.3 percent of tracts statewide. This indicates that these communities are average for exposure to toxic releases from facilities compared to the rest of the state.

Traffic Density

This indicator represents the sum of traffic volumes adjusted by road segment length. It is calculated by dividing the traffic volumes by the total road length within 150 meters of the census tract boundary. It is not a measure of level of service on roadways. The data are from 2013. Among the fifteen census tracts of staff's focus, four are higher than the 90th percentile. The highest one is 97.04 (in census tract 6085503110), meaning it is higher than 97.04 percent of the census tracts in California. Traffic Density is related to the diesel PM emitted from diesel-fueled vehicles. However, according to the results of the health risk assessment conducted for the project, impacts associated with diesel PM from the proposed project construction and operation activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to the diesel PM-related traffic density in the disadvantaged communities.

Asthma ER Visits

This indicator is a representation of an asthma rate. It measures the number of emergency room visits for asthma per 10,000 people over the years 2011 to 2013. The information was collected by the California Office of Statewide Health Planning and Development.

Census tract 6085505202 was at the 34.9 percentile in the Asthma category (see **Table 5.12-4**). This indicates the number of emergency room visits for asthma per 10,000 people over the years 2011 to 2013 are higher than 34.9 percent of tracts statewide. This indicates that these communities have a below average number of emergency room visits due to asthma compared to the rest of the state.

Low Birth Weight Infants

This indicator measures the percentage of babies born weighing less than 2500 grams (about 5.5 pounds) out of the total number of live births over the years 2006 to 2012. The information was collected by the California Department of Public Health. Among these fifteen census tracts, Census Tract 6085504602 has the highest potential relative burden. The low birth weight percentile for this census tract is 100, meaning the percent low birth weight is higher than all other census tracts in California. In this census tract the total population is of 2,144 people, with 10.38 percent of births were of low birth weight. Note that this tract has a relatively small population (94% of the California census tracts have a larger population than this tract) such that small changes in a particular metric like birth weight can skew the results compared to other tracts. Staff's health risk assessment was based on a highly conservative health-protective methodology that accounts for impacts on the most sensitive individuals in a given population. According to the results of the assessment, the risk of the nearest sensitive receptor (i.e. Maximally Exposed Sensitive Receptor) is below health-based thresholds. Therefore, the toxic emissions from the project would not cause significant health effects for the low birth weight infants in these disadvantaged communities or have a significant cumulative contribution to these disadvantaged communities.

Cardiovascular Disease

This indicator represents the rate of heart attacks. It measures the number of emergency department visits for acute myocardial infarction (or heart attack) per 10,000 people over the years 2011 to 2013.

Census tract 6085505202 was at the 51.8 percentile in the Cardiovascular Disease category (see **Table 5.12-4**). This indicates the number of emergency department visits for acute myocardial infarction (or

heart attack) per 10,000 people over the years 2011 to 2013 is higher than 51.8 percent of tracts statewide. This indicates that these communities have an average number of emergency department visits for acute myocardial infarction (or heart attack) compared to the rest of the state.

Cultural and Tribal Cultural Resources

NO IMPACT. Staff did not identify any Native American environmental justice populations that either reside within 6 miles of the project or that rely on any subsistence resources that could be impacted by the proposed project.

Hazards and Hazardous Materials

LESS THAN SIGNIFICANT IMPACT. EJ populations may experience disproportionate hazards and hazardous materials impacts if the storage and use of hazardous materials within or near EJ communities occur to a greater extent than within the community at large. A disproportionate impact upon the EJ population resulting from the planned storage and use of hazardous materials on the site is extremely low. Diesel fuel to run the emergency generators is the hazardous material that the project site would have in greatest quantity. The total quantity would be divided up and stored in many separate double-walled containers (one for each generator) with proper spill controls. Therefore, the likelihood of a spill of sufficient quantity to impact the surrounding community and EJ population would be very unlikely, and is considered less than significant.

Hydrology and Water Quality

LESS THAN SIGNIFICANT IMPACT. A disproportionate hydrologic or water quality impact on an EJ population could occur if the project would contribute to impairment of drinking water, exacerbate groundwater contamination threats, or contribute pollutants to impaired water bodies.

Since the overall CalEnviroScreen score reflects the collective impacts of multiple pollutants and factors, staff examined the individual contributions to indicators as they relate to hydrology and water quality. The pollutants of concern in this analysis are those from construction and operational activities. The CalEnviroScreen scores for the disadvantaged community census tracts in a 6-mile radius of the project (see **Figure 5.21-1**) are presented in **Environmental Justice Table 5.12-4** for each of the following environmental stressors that relate to hydrology and water quality: Drinking Water Contaminants, Groundwater Threats, and Impaired Water Bodies. The percentile for each disadvantaged census tract reflects its relative ranking among all of California's census tracts. A disproportionate hydrology or water quality impact on an EJ population could occur if a project introduces an additional pollutant burden to a disadvantaged community.

CalEnviroScreen 3.0 assigns a score to each type of stressor. To assess the impact of a stressor on population within a census tract, the score is assigned a weighting factor that decreases with distance from the census tract. For stationary stressors related to hydrology or water quality, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **Environmental Justice Figure 5.21-1** shows, all but one of the assessed census tracts are more than 1,000 meters away from the project. The only tract that is within 1,000 meters of the proposed project site is tract 6085505202—the tract in which the project would be located. Therefore, this analysis focuses on that tract.

Drinking Water Contaminants

Low income and rural communities, particularly those served by small community water systems, can be disproportionately exposed to contaminants in their drinking water. CalEnviroscreen 3.0 aggregates drinking water quality data from the California Department of Public Health, the United States Environmental Protection Agency, and the California State Water Resources Control Board (SWRCB). The score provided by the Drinking Water Contaminant metric calculation is intended to rank water supplies relative to their history or likelihood to provide water that exceeds drinking water standards.

Census tract 6085505202 was at the 14 percentile in the Drinking Water Contaminants category (see **Environmental Justice Table 5.12-4**). This indicates that drinking water contamination threats in this census tract is very low. This suggests that this community is not expected to have a high level of exposure to contaminants through drinking water.

The project would not be expected to contribute significantly to drinking water source degradation. The project would be required to comply with the Clean Water Act (CWA) by controlling the discharge of pollutants during its construction and operation phases. The project would implement modern operational phase storm water and containment controls that would improve upon the site's potential to release contaminants to the environment. The project would therefore be expected to provide a long-term drinking water quality benefit relative to baseline conditions. The project's hydrology and water quality impacts would be reduced to less than significant for the census tract of concern and the general population.

Groundwater Threats

Common groundwater pollutants found at leaking underground storage tank (LUST) and cleanup sites in California include gasoline and diesel fuels, chlorinated solvents and other volatile organic compounds (VOCs) such as benzene, toluene, and methyl tert-butyl ether (MTBE); heavy metals such as lead, chromium and arsenic; polycyclic aromatic hydrocarbons (PAHs); persistent organic pollutants like polychlorinated biphenyls (PCBs); DDT and other insecticides; and perchlorate. CalEnviroscreen 3.0 aggregates data from the SWRCB's GeoTracker website about groundwater threats. The score provided by the Groundwater Threat metric calculation is intended to rank the relative risk of environmental contamination by groundwater contamination, within each census tract.

Census tract 6085505202 was at the 98 percentile in the Groundwater Threat category (see **Environmental Justice Table 5.12-4**). This indicates that groundwater contamination threats in this census tract are within the top 10 percent of tracts statewide. This indicates that this community is located alongside a high relative proportion of groundwater threats.

The project would not be expected to contribute significantly to groundwater degradation, relative to existing conditions. The project would be required to comply with the CWA by controlling the discharge of pollutants during its construction and operation phases. The project would implement modern operational phase storm water and containment controls that would improve upon the site's potential to release contaminants to groundwater. The project would therefore be expected to provide a long-term drinking groundwater quality benefit relative to baseline conditions. The project's hydrology and water quality impacts would be reduced to less than significant for the census tract of concern and the general population.

Impaired Water Bodies

Rivers, lakes, estuaries and marine waters in California are important for many different uses. Water bodies used for recreation may also be important to the quality of life of nearby residents if subsistence fishing is critical to their livelihood. Water bodies also support abundant flora and fauna. Changes in aquatic environments can affect biological diversity and overall health of ecosystems. Aquatic species important to local economies may be impaired if the habitats where they seek food and reproduce are changed. Additionally, communities of color, low-income communities, and tribes generally depend on the fish, aquatic plants, and wildlife provided by nearby surface waters to a greater extent than the general population. CalEnviroscreen 3.0 aggregates data from the SWRCB's Final 2012 California Integrated Report (CWA Section 303(d) List / 305(b) Report). The score provided by the Impaired Water Bodies metric calculation is intended to rank the relative risk of impaired water bodies, within each census tract.

Census tract 6085505202 was at the 41 percentile in the Groundwater Threat category (see **Environmental Justice Table 5.12-4**). This indicates that Impaired Water Bodies in these census tracts are near the statewide average in terms of relative abundance. This indicates that these communities are not expected to contain a high abundance of impaired water bodies.

The project would not be expected to contribute significantly to the impairment of local or regional water bodies. The project would be required to comply with the CWA by controlling the discharge of pollutants during its construction and operation phases. The project would implement modern operational phase storm water and containment controls that would improve upon the site's potential to release contaminants to the environment. The project would therefore be expected to provide a long-term benefit to local and regional water bodies, relative to baseline conditions. The project's hydrology and water quality impacts would be reduced to less than significant for the census tract of concern and the general population.

Land Use and Planning

LESS THAN SIGNIFICANT IMPACT. The project's floor area ratio (FAR) would exceed the maximum FAR for the zoning district. However, as is typical of data center projects, the project would have a low employment density relative to the size of its data center building. With its low employment density, the project would not cause the types of environmental impacts sometimes attributed to projects with high employment densities due to a commensurate increase in vehicle miles traveled. The project would not cause environmental impacts associated with the FAR exceedance, including no disproportionate impacts on an EJ population.

The project site is in an urbanized area that includes various industrial and commercial uses, and the project is consistent with other, similar land uses in the surrounding area. The proposed project is in an area with the General Plan land use designation of Heavy Industrial, which specifically allows data centers. The project site is in the MH, Heavy Industrial zoning district. The data center would have a typical height of 85 feet from adjacent grade. Maximum permitted building height in the MH zoning district is 70 feet; therefore, the applicant is requesting a minor modification to the regulation to allow the height exceedance. With granting of the minor modification, the project would conform to zoning. The added height for mechanical equipment screening at the top of the data center building would also conform to the City of Santa Clara's Special Height Regulations. As discussed in section **5.11 Land Use and Planning**, the project would not conflict with land use plans or policies such that significant environmental impacts

would occur. The overall impact is less than significant, including potential disproportionate impacts on an EJ population.

Noise

LESS THAN SIGNIFICANT IMPACT. EJ populations may experience disproportionate noise impacts if the siting of unmitigated industrial facilities occurs within or near EJ communities to a greater extent than within the community at large. The project site is within an area having an EJ population. Because the area surrounding the site is primarily industrial and commercial, and the nearest residences are approximately 0.7-mile away from the project site, potential impacts would not be disproportionate.

Construction activities would increase existing noise levels at the adjacent commercial and industrial land uses, but they would be temporary and intermittent. In addition, construction activities would not occur on Sundays and holidays, in compliance with the Santa Clara City Code, Section 9.10.230. Also, the loudest noise levels from construction and demolition activities are not expected to be higher than the existing ambient noise levels at the closest residential area. Therefore, potential noise effects related to project construction would not result in a significant noise impact on the area's population, including the EJ population.

The operational noise levels would comply with the city's noise limits and would not elevate the existing ambient noise levels at the nearest residences. Thus, the impacts would be less than significant for all the area's population, including the EJ population.

Population and Housing

LESS THAN SIGNIFICANT IMPACT. Because the study area used in this analysis for impacts related to population influx and housing supply includes Campbell, Cupertino, Milpitas, San Jose, Santa Clara, Sunnyvale, and Santa Clara County, staff considered the project's population and housing impacts on the EJ population living in these geographic areas.

The potential for population and housing impacts is predominantly driven by the temporary influx of non-local construction workers seeking lodging closer to a project site. For the project, the construction workers would be drawn from the greater Bay Area and thus would not likely seek temporary lodging closer to the project site. The operations workers are also anticipated to be drawn from the greater Bay Area and would not likely seek housing closer to the project site. If some operations workers were to relocate closer to the project site, there would be sufficient housing in the project area.

A population and housing impact could disproportionately affect an EJ population if the project were to displace minority or low income residents from where they live, causing them to find housing elsewhere. If this occurs, an EJ population may have a more difficult time finding replacement housing due to racial biases and possible financial constraints. As the project would not displace any residents or remove any housing, there would be no disproportionate impact to EJ populations from this project.

Transportation

LESS THAN SIGNIFICANT IMPACT. Significant reductions in transportation options may significantly impact EJ populations. In particular, an impact to bus transit, pedestrian facilities, or bicycle facilities could cause disproportionate impacts to low-income communities, as low-income residents more often use these modes of transportation. For the project, all transportation impacts, including impacts to alternative

transportation, would be less than significant, and therefore would cause less than significant impacts to EJ populations. Likewise, transportation impacts would not be disproportionate.

Utilities and Service Systems

LESS THAN SIGNIFICANT IMPACT. A disproportionate utilities and system services impact on an EJ population could occur if the project would contribute to or exacerbate the effects of cleanup sites, hazardous waste and solid waste sites and facilities.

Since the overall CalEnviroScreen score reflects the collective impacts of multiple pollutants and factors, staff examined the individual contributions to indicators as they relate to wastes addressed under utilities and system services. The wastes of concern in this analysis are those from construction and operational activities. The handling and disposal of each type of waste depends on the hazardous ranking of its constituent materials. Existing laws, ordinances, regulations, and standards ensure the desired handling and disposal of waste materials without potential public or environmental health impacts. The CalEnviroScreen percentiles for the disadvantaged community census tracts in a 6-mile radius of the project (see **Environmental Justice Figure 5.21-1**) are presented in **Environmental Justice Table 5.21-4** for each of the following environmental stressors that relate to waste management: cleanup sites, hazardous waste and solid waste sites and facilities. The percentile for each disadvantaged census tract reflects its relative ranking among all of California's census tracts. A disproportionate waste management impact on an EJ population could occur if project wastes impacted the disadvantaged community.

CalEnviroScreen 3.0 assigns a score to each category of stressors. To assess the impact of a stressor on population within a census tract, the score is assigned a weighting factor that decreases with distance from the census tract. For stationery stressors, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **Environmental Justice Figure 5.21-1** shows, all but one of the assessed census tracts are more than 1,000 meters away from the project. The only tract that is within 1,000 meters of the proposed project site is tract 6085505202—the tract in which the project would be located. Therefore, this analysis focuses on that tract.

Cleanup Sites

This indicator is calculated by considering the number of cleanup sites including Superfund sites on the National Priorities List (NPL), the weight of each site, and the distance to the census tract. Sites undergoing cleanup actions by governmental authorities, or by property owners, have suffered environmental degradation due to presence of hazardous substances. Of primary concern is the potential for people to come in contact with these substances.

The percentile score in the cleanup sites category for the only census tract within 1,000 meters of the project site (tract 6085505202) is 99.84 (see Table 4). The interpretation is that contamination threats due to the presence of cleanup sites in that census tract are among the highest of all tracts statewide. This is an indication that the communities within that tract are located alongside a high relative proportion of cleanup sites.

Past contamination at the project site would be remediated by the current owner in accordance with regulatory requirements that would ensure there would be no impacts to on- or off-site receptors. In addition, the applicant would have to comply with appropriate laws, ordinances, regulations, and standards that would require additional cleanup of contaminated soils and groundwater that might be encountered during construction and operation activities. Therefore, the project would not be expected

to contribute significantly to effects from cleanup sites for the relevant census tract and for the general population, nor would any impacts be disproportionate to the EJ population in the relevant census tract.

Hazardous Waste

This indicator is calculated by considering the number of permitted treatment, storage and disposal Facilities (TSDFs) or generators of hazardous waste, the weight of each generator or site, and the distance to the census tract. Most hazardous waste must be transported from hazardous waste generators to permitted recycling, treatment, storage, or disposal facilities (TSDF) by registered hazardous waste transporters. Most shipments must be accompanied by a hazardous waste manifest. There are widespread concerns for both human health and the environment from sites that serve for the processing and disposal of hazardous waste. Newer facilities are designed to prevent the contamination of air, water, and soil with hazardous material. However, even newer facilities may negatively affect perceptions of surrounding areas in ways that have economic, social, and health impacts.

The percentile score in the hazardous waste category for the only census tract within 1,000 meters of the project site is 99.11. The interpretation is that threats related to hazardous waste generation and facilities in this census tract is among the worst of all tracts statewide, meaning that the communities in that tract are located alongside sites with a high relative proportion of hazardous waste generators and facilities.

The project would not be expected to contribute significantly to hazardous waste generation or to the number or size of facilities handling hazardous waste processing, nor would the impacts on the EJ population be disproportionate. Further, the project would be required to comply with appropriate laws, ordinances, regulations, and standards to control storage and disposal of hazardous waste during its construction and operation phases. The project would implement modern operational phase controls to prevent or reduce the generation of hazardous wastes and to dispose of them in a manner that would minimize impacts to the environment both during project construction and operation. The project's impacts related to hazardous waste would be less than significant and the impacts on the EJ population would not be disproportionate for the relevant census tract and the general population.

Solid Waste Sites and Facilities

This indicator is calculated by considering the number of solid waste sites and facilities including illegal sites, the weight of each, and the distance to a census tract. Newer solid waste landfills are designed to prevent the contamination of air, water, and soil with hazardous materials. However, older sites that are out of compliance with current standards or illegal solid waste sites may degrade environmental conditions in the surrounding area and pose a risk of exposure. Other types of facilities, such as composting, treatment, and recycling facilities may raise concerns about odors, vermin, and increased traffic.

The percentile score in the solid waste sites and facilities category for the only assessed census tract within 1,000 meters is 95 (see **Environmental Justice Table 5.21-4**). The interpretation is that the number and type of facilities within or nearby this census tract is in the upper 10 percent of the census tracts in California. This also indicates that environmental deterioration due to the presence of solid waste facilities in that census tract is within the top 10 percent of tracts statewide.

Solid waste generated during construction and operation of the project would be segregated, where practical, for recycling, and disposed where there is adequate capacity for disposal of nonhazardous waste. Also, the project would be required to develop and implement plans that would ensure proper

disposal of nonhazardous waste at appropriately licensed facilities. The applicant would use solid wastes sites or facilities that are verified to be in compliance with current laws, ordinances, regulations, and standards. In addition, there would be no increase of solid waste generators and facilities in the area due to project construction or operation because there is adequate space for disposal of waste from the project. Therefore, there would be no impact due to solid waste facilities that would disproportionately impact an EJ community in the relevant census tract.

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Section 6

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Appendix A

Project's Jurisdictional and Generating Capacity Analysis

Appendix A: Project's Jurisdictional and Generating Capacity Analysis

The Sequoia Data Center (SDC) and Sequoia Backup Generating Facility (SBGF) would include 54 diesel-fired standby generators (gensets) that would provide emergency backup power supply for the SDC project only during interruptions of electric service from Silicon Valley Power (SVP) or during an emergency. The gensets would be electrically isolated from the SVP electrical transmission grid with no means to deliver electricity offsite of SDC.

Each generator would have a nameplate output capacity of 2.25 megawatts (MW) and continuous steady-state output capacity of 1.91 MW. The maximum total SDC facility load requirements would not exceed 96.5 MW. This includes the critical Information Technology (IT) load of the servers and server bays, the cooling load of the IT servers and bays, and the facility's ancillary electrical and telecommunications equipment operating loads to support the data customers and campus.

The California Energy Commission is responsible for reviewing, and ultimately approving or denying, all applications for thermal electric power plants, 50 MW and greater, proposed for construction in California. (Pub. Resources Code, § 25500.) The Energy Commission has a regulatory process, referred to as the Small Power Plant Exemption (SPPE) process, which allows applicants with projects between 50 and 100 MW to obtain an exemption from the Energy Commission's jurisdiction and proceed with local approval rather than requiring an Energy Commission certificate. The Energy Commission can grant an exemption if it finds that the proposed project would not create a substantial adverse impact on the environment or energy resources. (See Pub. Resources Code, § 25541.)

The Energy Commission should calculate a net deliverable or useable electricity capacity of more than 50 MW and less than 100 MW from the SDC backup generation facility, qualifying it for a Small Power Plant Exemption under the capacity criterion. The following provides a summary of the factors supporting this conclusion, with a more detailed discussion of these factors following after.

1. The diesel-fueled reciprocating engine generators use a thermal energy source.
2. The gensets and the associated SDC that they would support would all be located on a common property under common ownership sharing common utilities and the 54 gensets should be aggregated and considered as one thermal power plant facility with a generation capacity of greater than 50 MW.
3. While SDC has an apparent installed generation capacity greater than 100 MW (54 gensets, each with 2.25 MW peak capacity and 1.91 MW maximum steady-state capacity), the "extra" MW installed are redundant and not able to operate unless other generating units fail to operate, i.e., there are physical constraints that prevent them from operating.
4. While not controlling, the Energy Commission should use the principles in Title 20, California Code of Regulations, section 2003 as guidance to calculate a net deliverable or useable electricity capacity from the SDC backup generation facility. Jurisdictional analyses are based on the net MWs that can be delivered for "use," not the gross or nameplate rating. The maximum load being served is determinative and not the combined capacity of the installed generators. Here, the maximum facility-wide SDC load requirement would be 96.5 MW.
5. The backup generators would be exclusively connected to the SDC buildings and would not be capable of delivering electricity to any other user or to the electrical transmission grid. The

proposed redundancies built into the design of the facility are to ensure performance reliability, not to generate and supply the SDC facility with more than 96.5 MW of electricity.

6. The restriction on the facility's load demand are hardwired through various control systems. It would be physically impossible for the gensets to generate more electricity than the buildings require. Excess electricity would damage components or at a minimum, isolate the SDC loads from the backup generators.

In order to make a jurisdictional recommendation, staff assessed the generating capacity of the power plant site, using the following:

1. SBGF is a thermal power plant under the Energy Commission's definition.

The Warren-Alquist Act defines a thermal power plant "as any stationary or floating electrical generating facility using any source of thermal energy, with a generating capacity of 50 megawatts or more, and any facilities appurtenant thereto." (Pub. Resources Code, § 25120.) The SBGF is made up of gensets that use diesel fossil-fueled engines to convert the thermal energy in the diesel fuel[1] into electricity from a rotating generator, thus - each genset is an electrical generating device that uses a source of thermal energy. The facility proposes to use 54 such gensets to service SDC.

The 54 gensets, and the associated SDC that they would support, would all be located on a common property under common ownership sharing common utilities. Most of the gensets would operate to provide backup electricity to SDC when its connection to the grid is lost; a few gensets would be installed for the purpose of redundancy, to operate to back up the initial or grid back up gensets. However, any genset can function either as a back up to the grid or a back up to the grid back up gensets, so there is not a functional difference in the type of engine or generator between each genset. All of the backup gensets at the SDC would share a common trigger for operation during an emergency: the transfer switch isolating the SDC from the grid.

2. Title 20, California Code of Regulations section 2003 does not control.

The SBGF would be installed during the initial construction of the project by the project owner, but there is no specific timeline proposed for when the SDC will need the full capacity of the facility; the exact timing of individual leases that fill server bay space is subject to the market decisions of disparate customers. Therefore, it may be years before the SDC is at full load. Nevertheless, for purposes of this analysis, staff assumes full load will eventually be reached.

Title 20, California Code of Regulations, section 2003 specifies how the Energy Commission calculates "generating capacity" for jurisdictional determinations, including the 50 MW threshold for the definition of a thermal power plant under section 25120. However, section 2003, which uses nameplate capacity in addition to consideration of other factors, only addresses steam and combustion turbines, not diesel-fueled gensets as used in the SBGF, and is therefore not controlling here. There are also other reasons to conclude that simply focusing on nameplate capacity here is not appropriate.

For a typical powerplant, outside the factors identified in section 2003, there is almost no limit on what might be generated and provided to the grid, so the approach outlined in that provision identifies the potential maximum generating capacity and is reasonable for those facilities. This is not the case with data

[1] Diesel fuel is composed of a mixture of hydrocarbons, containing chemical energy. When ignited, this chemical energy is converted to thermal energy.

centers, where producing electricity in excess of what the data center requires would be economically wasteful and likely result in damage to the facility.

In traditional turbine-based power plants, parasitic loads (fans, pumps, and heaters) are external to the turbine; the generating capacity is the total net MWs at the switchyard bus, less parasitic loads. If the grid "demands" more, the power plant cannot deliver more electricity unless it burns fuel at a higher rate or reduces parasitic loads. Even then, equipment would have to have the physical capacity to burn more fuel and convert thermal energy into rotational energy, and then operate the generator at a higher output. The calculations assume normal conditions, where generation would be under average operating conditions, and assumes the onsite loads (often called parasitic loads) are also average (e.g., a filter backwash pumping load would not be included if that operation only occurs monthly or annually). Typically, at a traditional power plant, no redundant generating equipment is installed.[2] Generating capacity is determined based on the net capacity of all of the generators that are proposed to be installed because they are to be connected to the grid where there is almost no limitation on the amount of MWs the grid can "take" from the facility.

Typically, backup generating facilities serving data centers are not physically able to send excess electricity to the grid and all electricity generated must be absorbed by the data center itself. Data centers are designed with precise loads, assuming full build-out, and providing electricity in excess of these loads is not only economically wasteful (burning fuel for no benefit or reason), but can result in damage to the sensitive components located inside these data centers, as well as to the HVAC and other systems serving the buildings. Therefore, for purposes of evaluating the capacity of backup generating facilities serving data centers, it is reasonable for staff to consider the controlling factor in how much electricity is capable of being generated to be building load.

3. Data Centers are analyzed differently than conventional power plant facilities for a number of reasons.

To determine the net generating capacity of a collection of backup gensets[3] for data centers, the approach is slightly different but consistent with that used on a traditional power plant. The differences are: 1) the end user is the building and data servers, not the grid, and 2) extra gensets or generating capacity are installed to provide electricity not only for building and data server loads, but to provide redundancy that achieves a statistical reliability that can be marketed to data customers.

Staff's approach is consistent with widely practiced standards. For example, ASHRAE's (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Energy Standards for Data Centers do not use the nameplate or gross capacity, but the net generating capacity of data centers, or the IT load.[4] These ASHRAE standards are performance-based as opposed to prescriptive standards, advocating the position that determination of load requirements should be based on project-specific operational characteristics.

Staff's approach to calculating generating capacity has been devised based on the International Organization for Standardization (ISO), which sets standards for different industries including the energy industry. The ISO standards are widely accepted by, and used throughout, the energy industry. Consistent

[2] At modern power plants, some equipment design includes 50 to 100 percent redundancy. The redundant equipment is generally limited to certain critical components like transformers, which are often custom items with long lead times for fabrication, or boiler water feed pumps, which are intended to protect the steam boiler components from damage from too much heat if circulating water flow is interrupted.

[3] Backup generators, by definition, generally have the following characteristics: reliable starts, fast starting to full load, cheap to maintain as they sit idle most of the time, use cheap and stable fuel as the fuel sits unused most of the time, and use high-density fuels to limit storage volumes onsite so the project can operate if "islanded."

[4] American National Standards Institute (ANSI)/ASHRAE Standard 90.4-2016, www.ashrae.org.

with staff's method, the ISO specifies that generating capacity should be the net capacity at average annual ambient conditions.[5]

In the case of SBGF, the load served acts as a limit to the generation levels from the gensets in the backup generating facility. This factor is not present in a capacity generation determination for a typical power plant feeding to the grid because the grid does not act in the same way the "SDC grid" does. If the breakers between the SDC building and the gensets were to trip due to excess generation, the data center would be isolated from the backup generators, the servers and building cooling would be forced to shut down. This subverts the intention of using the backup generators to maintain reliable and high quality electricity. Excess electricity would damage components or at a minimum, isolate the load from the backup generators. If a building and cooling load were to increase (e.g., the day gets warmer), the genset(s) would open the engine fuel throttle to increase generation output and match demand but would still not exceed the combined 96.5 MW IT and building demand.

4. SBGF's capacity will not exceed 96.5 MW.

While no more than 45 backup generators would need to operate at an output of 2.14 MW to reach the facility's maximum output requirement of 96.5 MW, the exact number of backup generators that could operate in an emergency depends on actual cooling and IT server loads, and the reliability and performance of the backup generators. In no case would the combined output of backup generators exceed the prescribed maximum load of 96.5 MW. As explained above, it would be physically impossible for the gensets to generate more electricity than the buildings require. Non-operating backup generators would be reserved as redundant generators, ready to start if other generators fail. For the purposes of testing and maintenance, only one generator would operate at any given time.

The maximum demand of 96.5 MW would be fixed by the specification and installation of electrical buses and panels, switchyard, and breakers that would have an upper electrical capacity limit. The cooling equipment's maximum demand would be fixed by the specification and installation of equipment that have an upper physical limit of cooling capacity, and would include some redundant cooling equipment. Redundant equipment could only be operated if a primary component fails, and could not be operated in addition to the primary components, which would damage the data center. The data center would be served from the grid or from the emergency gensets with electricity that matches and does not exceed demand for operations of the data server bays and buildings.

The heat rejected by the IT servers has to be removed from each server bay or else the server equipment and data would be damaged. Any attempt to add more servers to a bay would result in direct, immediate and dire consequences because the building and equipment would have been designed for an upper critical IT load. It is important to note that the maximum combined building load of 96.5 MW is based on 100 percent critical IT load with maximum cooling on the hottest day. In actuality, the critical IT load and related cooling load would typically be less than this worst-case scenario.

In recent years, the power and energy industries have advanced in terms of software development and hardwired digital control to permanently limit generation capacity. The generation by the SDC backup generation facility would be regulated by each building and each bay in that building. Software would be used to operate the gensets in a manner that meets the bay and building demand. If the demand decreases (i.e., less mechanical load for cooling, etc.), the generator sets would automatically adjust the loading and corresponding electrical output. If a generator or the software were to malfunction and

[5] ISO 3046-1 Reciprocating Internal Combustion Engines – Performance, www.iso.org/standards.

attempt to generate more electricity than the building demand, individual electrical generator controllers would shut down.

For the maximum generating capacity to increase, the project would have to be redesigned to physically fit more servers in a server bay or add more bays. The project owner would have to address the unplanned increase in electricity demand for normal operations, because the existing electrical equipment would not be sized for the higher electricity throughput. Additionally, the project owner would have to install additional cooling equipment units to address the increased heat rejected by the server bays and buildings, and install additional redundant cooling equipment, additional uninterruptable power supply battery units, and additional gensets to maintain the level of backup and reliability to match the new higher levels of load. This is an unlikely outcome because such changes are not trivial and would result in a cascade of design and physical changes to the facility. Consequently, this would likely obliterate the project owner's ability to meet its contractual obligations for electrical reliability and quality to their data customers. In addition, because the project changes would be considered permanent, the project owner must amend the design of the facility post-certification or exemption.

When the SDC is at full load, its worst-case day combined IT and building load[6] will be 96.5 MW. The project proposes generators that total more than this amount for purposes of redundancy. The combined generating capacity of the installed operational gensets is autonomously determined by the electrical equipment in the SDC server bays and building equipment in use at the time of an emergency. The emergency operation of each set ("6 to make 5 server bay set") is fully automated. Once the SDC loses connection to the local grid, the transfer switch isolates the SDC from the local SVP grid and 5 of the 6 gensets in a server bay set initiate startup. As the gensets start, synchronize, and take up load associated with their server bays and building equipment, the uninterruptable power supply (UPS) system supplies up to 10 minutes[7] of power to smoothly transition the SDC customer's data servers from the grid to the emergency gensets (Sequoia 2019a, Section 2.4.4). If a genset or two fail to start or synchronize, the remaining genset initiates a startup and the other gensets in the server bay set ramp up to higher output levels. The genset output in the 6 to make 5 server bay set match (meet but cannot exceed) the SDC data customer's IT demand in their server bay and also the server bay heating, ventilation, air conditioning (HVAC) demand. The combined output of the server bay set is autonomously determined by the electrical equipment in the SDC server bays and building equipment.

Combined output would be limited by sizing the electricity handling equipment that would throttle transfer capacity to no more than 96.5 MW, which would prevent damage to IT servers and building equipment. Therefore, it would be physically impossible for the gensets to generate more electricity than what the data center would use, or more than 96.5 MW.

[6] Based on the hottest, most humid day of the year and with all IT servers in use at their full usage rate

[7] The gensets are expected to be on and synchronized within a minute or so, but the UPS can supply up to 10 minutes of power to ensure a complete transition from the grid to the emergency gensets.

Appendix B

Silicon Valley Power System Details

Appendix B: Silicon Valley Power System Details

Energy Commission staff provided a series of questions to Silicon Valley Power designed to understand when, why, and for how long backup generators would need to operate for any purpose, including PSPSs, other than readiness testing or maintenance at the proposed data centers in the Silicon Valley Power (SVP) service area. The questions were directed towards the Laurelwood Data Center (LDC or project) proceeding but descriptions of the overall SVP system as well as historical outage data would apply to any data centers, including the proposed Sequoia Data and Walsh Data centers, connecting to the SVP 60 kilovolt (kV) system.

This Appendix includes the questions originally sent to SVP, the response SVP provided August 2, 2019, and responses on August 8, 2019 to staff's follow-up questions. Additionally, SVP provided additional responses on January 17, 2020 to CEC staff questions:

1. A direct written response August 2, 2019 to staff's questions (including a table listing 10 years of faults on the SVP 60 kV system),
2. A direct written response August 8, 2019 follow-up questions,
3. A one-line diagram of the proposed substation for the LDC,
4. A schematic diagram of the SVP 230 kV, 115 kV and 60 kV transmission system,
5. A list of the customers connected to each of the five 60 kV loops in the SVP system,
6. Silicon Valley Power System Map, and
7. A direct written response January 17, 2020 to more staff follow-up questions.

August 2, 2019 City of Santa Clara/Silicon Valley Power

Outlined below is information related to MECP1's [19-SPPE-01 Laurelwood project owner] proposed substation located in the City of Santa Clara's Silicon Valley Power's service territory. The proposed substation will be located at 2201 Laurelwood Road under SVP's nomenclature, San Tomas Junction. This facility is designated as a Junction as the customer has elected to receive electric service from SVP at the 60,000V level.

1. Please provide for the 60 kV loop on the SVP system that will serve the MECP1 data center:

    a. A physical description

    San Tomas Junction is a three-50MVA (60kV:12.47kV) transformer bank substation on SVP's 60kv Northwest Loop. It is located between SVP's two 60kV Substations, Central (CEN) and Juliette (JUL). Each Transformer has a proposed rating of 30/40/50 MVA. The final buildout of San Tomas Junction will have a capability of 99 MVA, with 150 MVA of installed capacity which increases its reliability. The customers Single Line Diagram (SLD) "LAUREL SITE SINGLE LINE DIAGRAM SIMPLIFIED" is attached.

    b. The interconnection points to SVP service

    The Interconnection points to SVP will be the three high-side transformer gang switches. SVP's nomenclature will be drafted as GS36, GS26, and GS16.

    c. The breakers and isolation devices and use protocols

    There are four 60kV Breakers at San Tomas Junction shown on customer SLD, CB1, CB2, CB3 and CB4 which will enable various isolation schemes to insure a transformer bank can be isolated while the other two transformers remain in service. The system is designed such that one of the transformers can be taken out of service for repairs or maintenance while the other two can fully support customer load.

    d. A list of other connected loads and type of industrial customers

    See attached Excel Spreadsheet, Loop Customer and Loading Peak 8-1-19.xlsx

    e. A written description of the redundant features that allow the system to provide continuous service during maintenance and fault conditions

    SVP's Northwest Loop is fed from Northern Receiving Station (NRS) and Scott Receiving Station (SRS). Both NRS and SRS are 115/60 kV receiving stations. NRS has five 115kV lines connected to the bulk electric system, two are connected to SRS, two are connected to PG&E's Newark Substation (NEW), and one is connected to PG&E's Nortech Substation (NOR). NRS also has one 230kV line connected to SVP's Switching Station (SSS) which is also connected to the greater bulk electric system (BES). SRS is connected to SVP's Duane Substation (DUA). The DUA Substation is connected to the City's 147 MW Donald Von Raesfeld Combined Cycle Power Plant. Both NRS and SRS have two 115/60kV transformers for redundancy and reliability. This arrangement allows for a high reliability electrical system.

    The 60kV loop is designed to maintain power to all customers when any line on the loop is out of service due to either maintenance or an unplanned outage. Each Receiving

Station on the loop ends, NRS and SRS, is capable of delivering power to the entire loop. The full redundancy design of the system allows any line segment on the loop to be taken out of service for regular maintenance activities without causing a service interruption to any customers. Additionally, the protection systems on the loop are designed to detect fault conditions and isolate the fault to a single line segment. The isolation of the fault allows for continuous service for all customers during fault conditions.

As discussed above, San Tomas Junction will have three 30/40/50 MVA transformers. The maximum load being requested by the customer is 99 MVA. With 150MVA of transformers, one transformer can be removed from service for maintenance and the load can be provided by the remaining two transformers.

See attached SVP Network Diagram 082319 MECP1 San Tomas Junction (STJ).pdf.

2. Please provide a description of the SVP system in general and the other 60 kV loops that would serve data centers.

    a. Could you provide a one-line diagram and a "*.shp" file of the 60 kV and above lines serving the Silicon Valley Power System? Would you have any concerns with us using either of these in a public document?

    Refer to SVP CA Energy Map 082319 MECP1 San Tomas Junction (STJ).pdf and SVP Network Diagram 082319 MECP1 San Tomas Junction (STJ).pdf.

    b. Are each of the 60 kV loops designed similarly or do some of them have features that make them more or less reliable than the others?

    They are all designed similarly with the same redundancy/reliability philosophy.

3. Please describe any outages or service interruptions on the 60 kV systems that will serve the proposed data centers:

    a. How many 60 kV double looped lines serve data centers in SVP, and how many data centers are on each?

    The City currently has five 60kV Loops. They are as follows:

    - East Loop
    - Northeast Loop
    - Northwest Loop
    - Center Loop
    - South Loop

    Customer location per loop is provided in Question 1 d. above.

    b. What is the frequency of 60 kV double-looped lines having a "double outage" that would require use of backup generators?

Extremely Rare. There was only one outage between years 2009 current 2019 where SVP lost both 60kV feeds into a substation. The total duration of the outage was 7 hours and 23 min for the outage that occurred on May 28th, 2016 at 9:28 PM.

A balloon released by an individual made contact with the 60kV line between the Northwestern Substation (NWN) and the Zeno Substation (ZEN) at pole NWZ4. The balloon contact caused a pole fire and the bottom phase, bottom insulator and guy wire burned. The circuit breaker at ZEN substation tripped properly, isolating the fault from the ZEN substation and keeping the line from the ZEN substation to the Kiefer Receiving Station energized.

However, on the NWN Substation side, the circuit breaker failed to trip due to a faulty direct current (DC) voltage source which is required for the breaker tripping coil.

Once this breaker failed to open, due to the directional nature of the fault, the fault was picked up at the Scott Receiving Station (SRS) which caused the section of the loop from the ZEN to SRS to be without power. This included the NWN Substation and the Fairview (FVR) substation. Since this was an unusual event, SVP spent the required time determining the root cause and inspecting the system prior to re-energization.

c. How long were any outages and what were their causes?

60kV outage data since 2009 is in the below chart (10 years of data). The items highlighted in yellow indicate that there was some kind of fault associated with the outage. The items highlighted in blue is when we had customers out of power as a result. The non-highlighted items are where an outage was taken to correct an observed situation.

From 2009 through current 2019 there have been:

1. 15-60kV impacted outages due to faults.
2. 4- 60 kV impacted outages that caused customers to be out of power. Only the 12/2/16 outage and 5/28/16 involved data centers.
3. 31- 60kV total outages
4. The average 60kv outage lasts for 2.75 hours

Date	Line(s)	Cause	Duration	Customers out of power
3/30/19	URA-WAL	Bird @ UW43	1 Hour 46 Min	0
11/22/18	HOM-SER	Pole Fire HS9 (force out)	1 Hour 27 Min	0
7/5/18	SER-HOM	Force out to remove balloons	9 Min	0
5/5/18	SER-HOM	Force out to remove balloons	11 Min	0
9/1/17	AGN-NAJ	Force out to cut trees	1 hour 5 min	0
8/8/17	URA-ZEN	Force out to remove balloons	20 Min	0
5/25/17	SRS-FRV	Tripped during SCADA commissioning	1 Min	0
5/8/17	NWN-ZEN	Force out to remove bird	50 Min	0
4/29/17	SRS-HOM	Force out to remove balloons	2 hours 22 min	0
03/20/17	JUL-CEN	Third Party got into 60kV	9 hours 55 min	0
01/22/17	SER-BRO	Tree in wires	3 hours 31 min	0

01/22/17	NAJ-PLM	A phase contact guy wire when winds pick up	1 hour 47 min	0
01/19/17	KRS-PLM	Palm frond between phases	41 min	0
01/18/17	NAJ-PLM	A phase contact guy wire when winds pick up	1 Hour 44 min	0
12/02/16	RAY T1 & T2	Dropped both transformers during restoration switching due to relay not reset	12 minutes	257
09/06/16	SRS-CEN	Bird Contact	40 Min	0
06/30/16	WAL-FIB	Bird nest contact	12 hours and 4 min	0
5/28/16	SRS-FRV-NWN-ZEN	Balloons in line and breaker fail	7 hours 23 min	28
02/17/16	SRS-FRV	Palm tree with fire	7 hours	0
11/18/15	SER-BRO	Arcing wires forced	2 hours 59 min	0
11/16/15	SER-BRO	Rotten Pole- forced	22 hours 32 min	0
11/09/15	JUL CB32	Possible lightning	53 min	0
10/29/15	SER-BRO	Roller arcing-forced	3 hours 33 min	0
08/12/15	BRO-DCJ, BRO T1	Squirrel on CB100	3 hours 55 min	2155
06/24/15	CCA CB22	Bad JMUX card	3 hours 23 min	0
05/30/15	SER-BRO	No cause found	3 hours 12 min	0
03/31/15	BRO-DCJ 12KV BUS 1 & 2	Squirrel across 12kv bus tie	3 hours 26 min	2927
01/28/15	Mission CB12	Shorted control cable	6 hours 29 min	0
04/24/14	DCJ CB42	Tripped during relay work. BF wired as TT	1 Hour 30 Min	0
10/14/13	URA_WAL	Sheared Hydrant hit 60kV above	2 hours 26 min	0
12/06/12	Jul CB 32	Tripped due to cabinet vibration	2 min	0

d. Have there been any changes to the SVP system that would prevent these types of outages from occurring in the future?

Every outage is analyzed for root cause. Most of the outages that occur on the 60kV system are outside SVP's control, e.g. Mylar balloon, squirrels or animals, car accidents, and similar events. If the outage is suspected to be caused by a failure of the intended protection scheme or equipment, then further analysis is performed and appropriate changes are implemented to minimize impact of future outages. After the outage in May, 2016, SVP performed additional circuit breaker testing and DC wire checks to maintain the reliability of its system.

e. Given the large number of data centers with backup generators being developed in the SVP service area, would future outages likely affect more than one data center or are there elements of the SVP system design that might limit the impact of transmission outages?

Adding more data centers on the 60kV looped system would not make it more or less likely that an outage will occur. A "double outage," which has occurred only once in the last ten years, has the potential to cause multiple data centers to go to back up generators depending on the locations of both line segments that are out of service.

f. Are there data center customers served by SVP (ie, legacy data centers) that are not on the 60kV loops? How are they served and what are the expected service outage types and rates?

No, ALL data center customers are inherently part of our 60kV loop. The voltage level these data center customers are on our 12kV distribution system, which power is provided from our 60kV substations.

4. During the proceeding for the McClaren Backup Generating Facility, the project owner described a 5/29/2016 outage at their Vantage Santa Clara Campus. The project owner provided information that six backup generators operated during that outage; of those, two operated for 7 hours while four others operated approximately 19 hours.

    a. What was the reason for the outage?

    Balloons made contact with the NWN-ZEN 60kV Line at Pole NWZ4. Original fault was A Phase and GRD due to contact with the Guy wire. NWN CB 32 failed to trip due to a bad DC power source to the breaker trip coil. FRV CB12 tripped as a result of NWN CB32 not tripping. FRV CB42 and SRS CB572 also tripped due to 3 phase differential fault that occurred which is believed to have been caused by the amount of time the A phase and ground fault lasted.

    b. How long did it last for the Vantage customer? For other customers on that loop?

    The outage occurred on 5/28/2019 at 2128. On 5/29/19 @ 0429- Fairview was restored, @ 0434 NWN 60kV bus restored. The system outage was 7 hours and 23 minutes. We are not privileged to the information as to why the data center may have chosen to continue to operate on their back-up generators.

    c. Is the anything about the location or interconnection of the proposed data centers that protect against a similar outage?

    No difference with this location.

5. Pacific Gas and Electric Company and other utilities have developed Public Safety Power Shutoff protocols that could disconnect electrical services during periods of concern in order to prevent their equipment from starting wildfires. These potential shutoffs could last hours or even days. How would these new protocols potentially affect SVP's service territory or access to bulk transmission assets?

    The City of Santa Clara's SVP is not located in a California Public Utilities Commission/Cal Fire Tier 2 or Tier 3 high fire risk zone. Therefore, SVP does not have a Public Safety Power Shutoff as part of their Wildfire Mitigation Plan. However, we do receive power from PG&E through six interconnection points. Based on our discussion with PG&E, Santa Clara may be requested by PG&E or the California Independent System Operator (CAISO) to curtail load. This request may be because of the reduced capacity somewhere within the system which will require overall system load reduction. This experience may be similar to the energy crisis of the early 2000's when rolling black-outs were require to maintain electric grid reliability. SVP has the capability to provide 200 MW of generation in the City with its Donald Von Raesfeld Combined Cycle Power Plant (147 MW) and the Gianera Peaker Plant (49 MW) and Cogen Facility (6 MW), we may be requested to curtail load.

    SVP is working with PG&E and the CAISO as to how this situation may occur.

August 9, 2019 City of Santa Clara/Silicon Valley Power

Please note: These CEC staff questions and SVP responses are pertinent to the Silicon Valley Power system in general, and not specific to a particular transmission loop or data center.

1. The Aug 2 response talks about the May 28/29, 2016 outage and the 28 customers that lost power. The table of outages in their response seems to list outages that affected 60kV customers, and these customers appear to be data centers customers and other, non-data center customers. Does SVP know how many of the 28 customers referred to on the May 28, 2016 entry were data centers?

   Two Data Centers were affected.

2. The Aug 2 response talks about a Dec 2, 2016 outage and the 257 customers that lost power. The table of outages in their response seems to list outage that affected 60kV customers, and these customers appear to be data centers customers and other, non-data center customers. Does SVP know how many of the 257 referred to on the Dec 2, 2016 entry were data centers?

   Four Data Centers were affected.

3. The Aug 2 response talks about a Dec 2, 2016 outage and the 257 customers that lost power. Can we get more information about this outage? Was it also an N-1-1 cascade like the series of faults that caused the May 28/29, 2016 outage? Why did we not hear about this outage earlier - was it different that the May 2016 outage (eg, internal faults versus an external fault like a balloon or squirrel)?

   This outage was caused during maintenance work with the Relay Technician. During the testing, the relay was required to be reset prior to returning to service. Since the relay was not reset, when put back into service the device tripped. The Standard Operating Procedure was revised to include the step of resetting the relay prior to placing back into service. This was not a N-1-1 cascading type outage. The outage lasted 12 minutes.

4. The Aug 2 response has a table of 60kV outages. Just to confirm, only the Dec 2 and May 28, 2016 outages affected data centers. So, for example, none of the 2927 customers affected by Mar 31, 2015 outage were data centers - is that correct?

   Correct, no data centers were effected during March 31, 2015 outage.

5. Also, it sounds like some data center customers are connected to 12kV feeds, but these feed are connected to the dual feed 60kV loops that are highly reliable. Is this correct, and how many customers might be on a 12kV line that comes off a 60kV loop? And how is reliability maintained on the 12kV line - looping, breakers and redundant equipment - like the 60kV loops?

   Yes, this is correct. The electric services that supply power to our 12kV data center customers are from our general 60kV distribution substations, which is inherently connected to our 60kV looped system. The number of customers that are off a 12kV feeder (line) is limited to SVP's operational loading philosophy, which is 4.5MVA or 50% of the maximum 9MVA. Said in another way, we can have as few as one customer or as many as one-hundred on a feeder, as long as the entire load is less than 4.5MVA. To address reliability, by operating our 12kV feeders at half-loaded, SVP has operational flexibility to completely transfer loads to other 12kV feeders in the event of an outage. SVP may make an operational determination to limit a feeder to one data center customer, but at this time is not contractually obligated to provide as such.

6. The Aug 2 response has a 4.d. response regarding how the Vantage MECP1 data center responded to the May 28/29, 2016 SVP outage that said "[t]he description of the Vantage event is reasonable, however cannot be directly applied to the Laurelwood Data Center. The Vantage event had a unique combination of contributing factors for which the resulting outcome cannot be reasonably assumed to be the expected outcome for line faults on the SVP 60kV network." Do you have more information on what were the "contributing factors", and why should we not assume that other data centers would have similar "expected outcomes"?

   As discussed in the 8/2/19 document, had the DC voltage supply cable not had an issue, a similar event would have been contained. Our anticipation, an outage in the future the protection system would operate as expected.

7. Regarding the Aug 2 response to PG&E's PSPS plans, could SVP curtailments ever allow a data center to operate under emergency conditions?

   To date this has not happened, the decision to operate during this situation would be by the data center. Our understanding is during emergency situation, individuals can operate their emergency generators.

8. Are SVP curtailments to PSPS conditions voluntary or emergency conditions? We understand that diesel emergency gensets cannot operate for economic reasons, only in response to an unplanned emergency or upset on their supply grid.

   We will be instructed to reduce load to respond to emergency conditions somewhere within the CAISO controlled grid, we have to follow what the CAISO directs us to do. The CAISO instructions are not voluntary. We would request customers to reduce load to satisfy the emergency condition and if that is not sufficient we will begin shutdown of our customers to meet the emergency situation. We would be operating at the direction of the CAISO.

9. Are there any plans that part of the PSPS program might include payments to some loads to curtail or shed?

   SVP does not have a plan to pay a data center to shed or curtail load.

10. Would the 6 interconnection points with the PG&E system allow SVP/PG&E to wheel bulk deliveries around potential shutdowns on the PG&E system? In other words, is the current understanding of the PSPS program that most shutdown will be in specific areas and not across the greater PG&E system, and that would allow PG&E to work around an area that would be fully shutdown?

    The understanding is if the conditions are such where transmission has to be curtailed, the CAISO will require load reductions of the CAISO controlled grid, similar to the energy crisis from the early 2000's. SVP will request voluntary reductions to meet the CAISO demand or will make switching changes which to remove blocks of customers load. It will depend how much reductions the CAISO will be instructing us to reduce, voluntary load shedding and customer shutoff.

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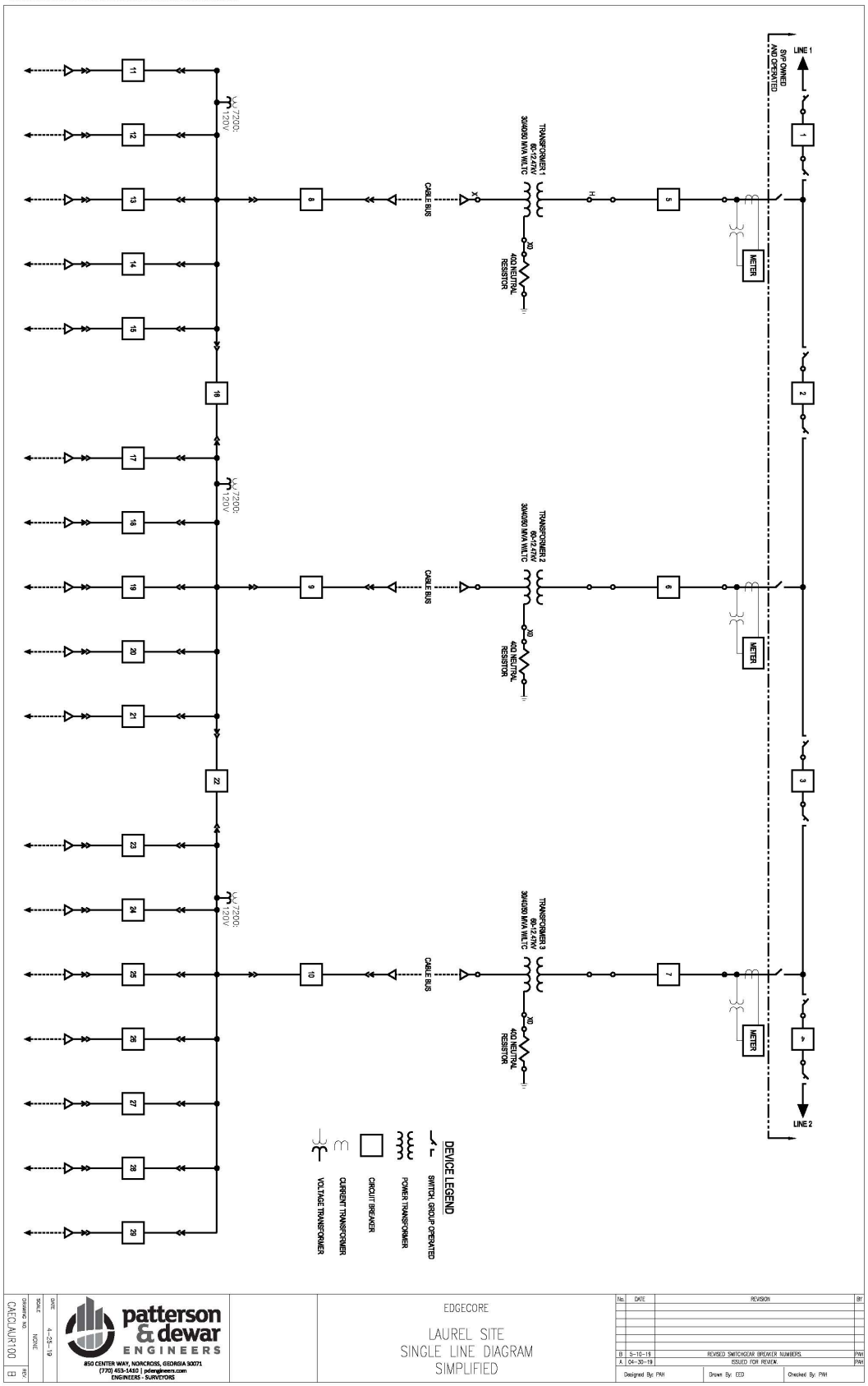
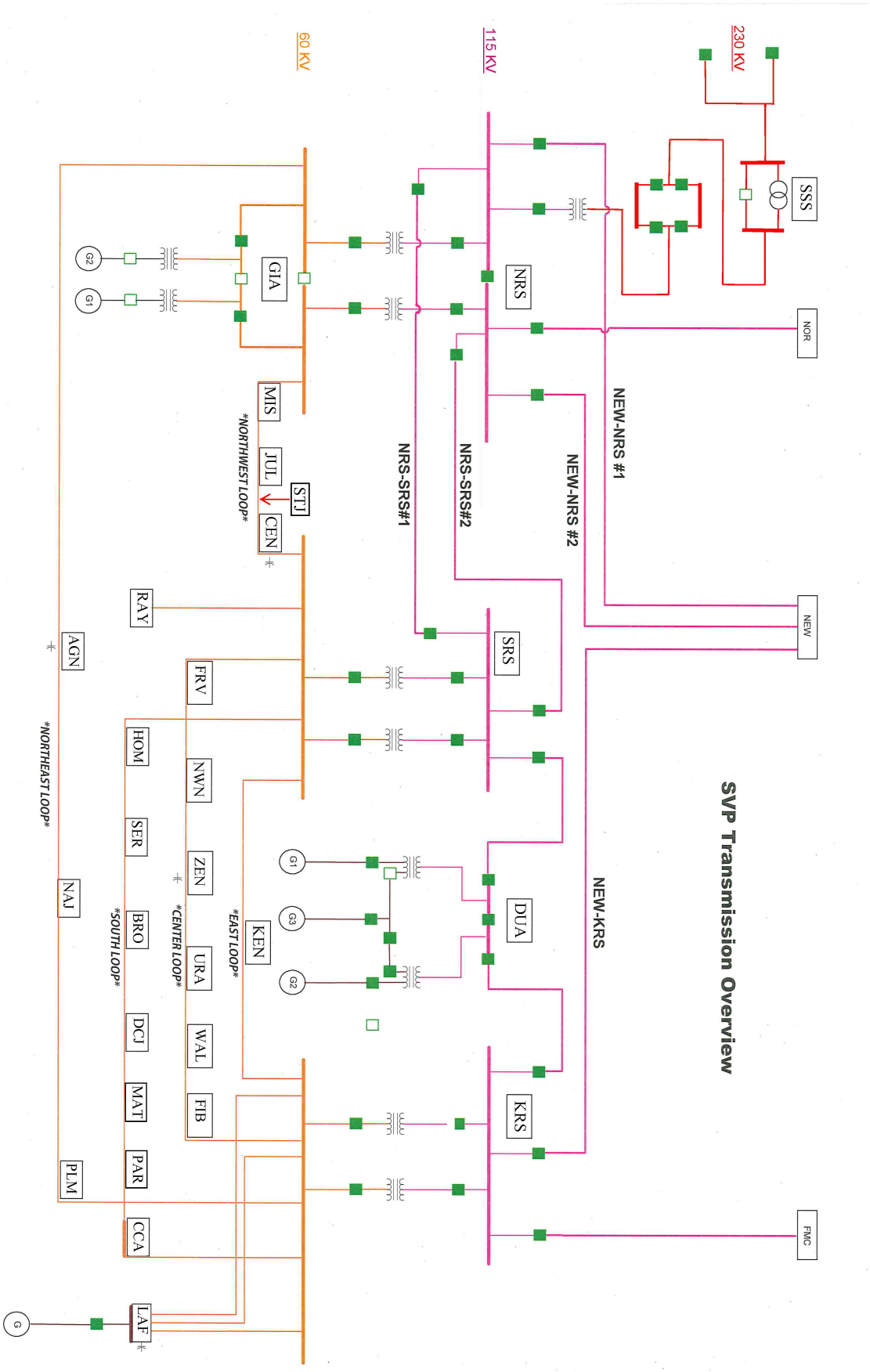


CAECLAUR100	4-25-19	patterson & dewar ENGINEERS 850 CENTER WAY, NORCROSS, GEORGIA 30071 (770) 453-1410 | pdengineers.com ENGINEERS - SURVEYORS	EDGECORE LAUREL SITE SINGLE LINE DIAGRAM SIMPLIFIED

No.	DATE	REVISION	BY
B	5-10-19	REVISED SWITCHGEAR BREAKER NUMBERS.	PAH
A	04-30-19	ISSUED FOR REVIEW.	PAH

Designed By: PAH | Drawn By: ECD | Checked By: PAH


SVP Transmission Overview
230 KV
115 KV
60 KV
SSS
NRS
NOR
NEW
SRS
DUA
KRS
FMC
NEW-NRS #1
NEW-NRS #2
NEW-KRS
NRS-SRS#1
NRS-SRS#2
GIA
G1
G2
G3
MIS
JUL
STJ
CEN
RAY
FRV
HOM
NWN
SER
ZEN
BRO
URA
DCJ
WAL
MAT
FIB
PAR
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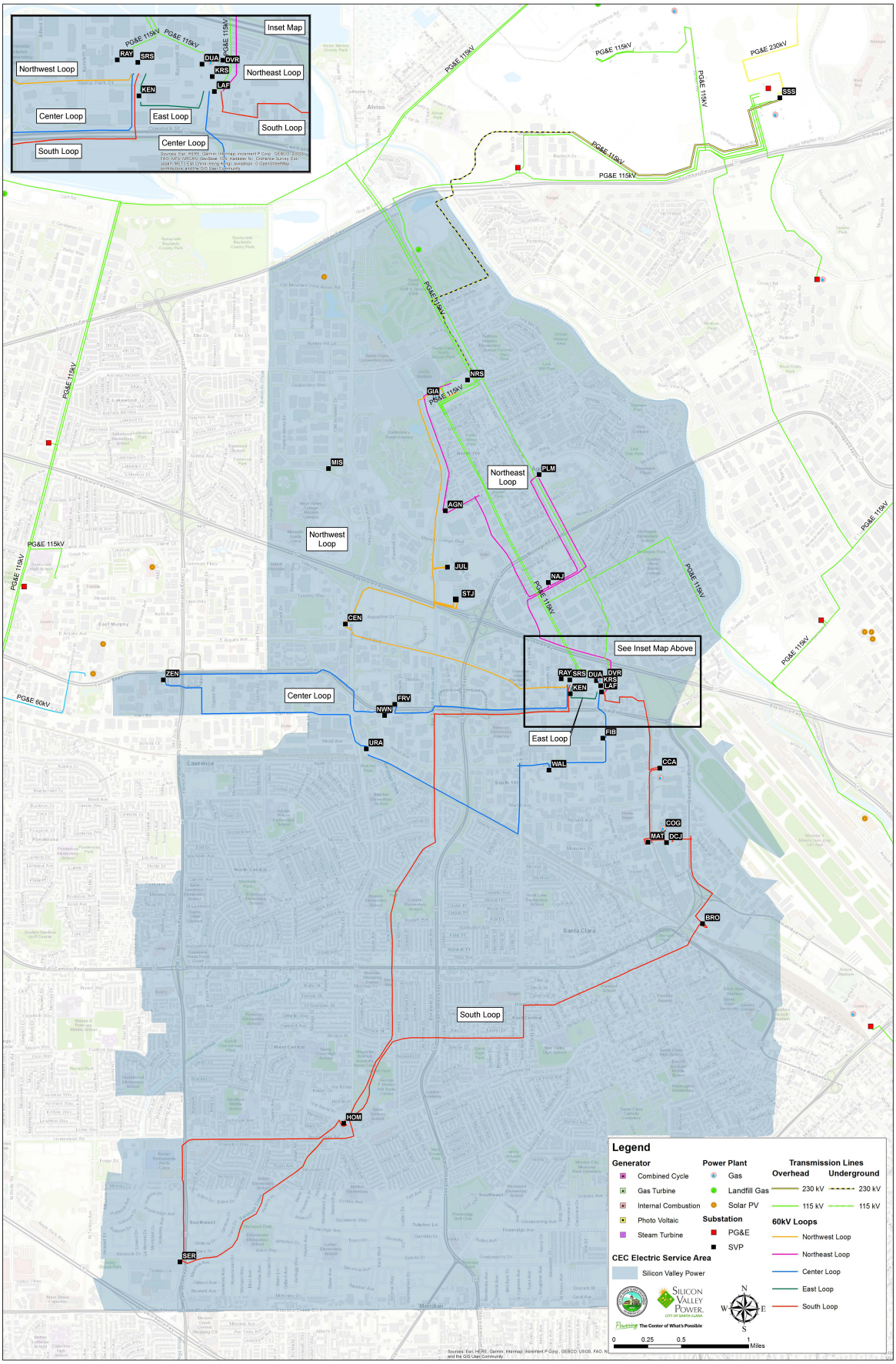
KEN
AGN
NAJ
PLM
NORTHWEST LOOP
NORTHEAST LOOP
SOUTH LOOP
CENTER LOOP
EAST LOOP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Northwest Loop
Northeast Loop
Center Loop
East Loop
South Loop
Center Loop
South Loop
RAY
SRS
DUA
DVR
KRS
LAF
KEN
PG&E 115kV
PG&E 230kV
SSS
NRS
GIA
MIS
PLM
AGN
JUL
STJ
NAJ
CEN
ZEN
FRV
NWN
URA
WAL
FIB
CCA
COG
MAT
DCJ
BRO
HOM
SER
See Inset Map Above
PG&E 60kV
Legend
Generator
Combined Cycle
Gas Turbine
Internal Combustion
Photo Voltaic
Steam Turbine
Power Plant
Gas
Landfill Gas
Solar PV
Substation
PG&E
SVP
CEC Electric Service Area
Silicon Valley Power
Transmission Lines
Overhead
Underground
230 kV
115 kV
60kV Loops
Northwest Loop
Northeast Loop
Center Loop
East Loop
South Loop
Silicon Valley Power
CITY OF SANTA CLARA
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SVP Loop Customers and Loading Peak - Substation:

Substation	Loop	Customer/Industry	Substation	Loop	Customer/Industry
Fairview	Center	Mfg1	Central	Northwest	Medical2
Fairview	Center	Datacenter1	Central	Northwest	Real Estate2
Fairview	Center	Datacenter2	Central	Northwest	Real Estate3
Fairview	Center	Datacenter3	Central	Northwest	Real Estate4
Fairview	Center	Datacenter4	Central	Northwest	Datacenter24
FIB	Center	Mfg2	Central	Northwest	Datacenter25
Lafayette	Center	Mfg3	Central	Northwest	R&D2
Lafayette	Center	Datacenter5	Central	Northwest	Real Estate5
Lafayette	Center	Mfg4	Central	Northwest	Real Estate6
Lafayette	Center	Mfg5	Central	Northwest	Healthcare equipment
Lafayette	Center	Datacenter6	Central	Northwest	Education13
Lafayette	Center	Mfg6	Central	Northwest	Semiconductor/R&D
NWN	Center	Datacenter7	JUL	Northwest	Datacenter26
Uranium	Center	Datacenter8	Mission	Northwest	Property Management7
Uranium	Center	R&D1	Mission	Northwest	Computer hardware/software 2
Uranium	Center	Property Management1	Mission	Northwest	Real Estate7
Uranium	Center	Datacenter9	Mission	Northwest	Datacenter27
Uranium	Center	Datacenter10	Mission	Northwest	Software1
Uranium	Center	Datacenter11	Mission	Northwest	Computer hardware/software 3
Uranium	Center	Property Management2	Mission	Northwest	Cyber Security 2
Uranium	Center	Education1	Mission	Northwest	Conventions 2
Uranium	Center	Education2	Mission	Northwest	Hotel3
Uranium	Center	Education3	Mission	Northwest	Medical3
Uranium	Center	Education4	Mission	Northwest	Cyber Security 3
Uranium	Center	Semiconductor/ Telecommunications	Mission	Northwest	Education14
Uranium	Center	Gaming/AI/ Semiconductors1	Mission	Northwest	Datacenter28
Uranium	Center	R&D/Mfg	Mission	Northwest	R&D3
Uranium	Center	Mfg7	Mission	Northwest	Semiconductor6
Walsh	Center	Semiconductor1	Mission	Northwest	Storage1
Walsh	Center	Gaming/AI/ Semiconductors2	Mission	Northwest	Entertainment3
Walsh	Center	Mfg8	Mission	Northwest	Property Management8
Walsh	Center	Gaming/AI/ Semiconductors3	Mission	Northwest	Medical4
Walsh	Center	Datacenter12	Mission	Northwest	Telecommunications2
Walsh	Center	Education5	Mission	Northwest	NFL5
Walsh	Center	Government1	Raymond	Northwest	Datacenter29
Walsh	Center	Government2	Raymond	Northwest	Datacenter30
Walsh	Center	Semiconductor2	Raymond	Northwest	Datacenter31
Walsh	Center	Semiconductor/R&D/Mfg	Raymond	Northwest	Datacenter32
Walsh	Center	Mfg9	Raymond	Northwest	Telecommunications3
Walsh	Center	Telecommunications1	Raymond	Northwest	Datacenter33
Walsh	Center	Datacenter13	Raymond	Northwest	Gaming/AI/Semiconductors5
Walsh	Center	Education6	Raymond	Northwest	Datacenter34
Walsh	Center	Datacenter14	Brokaw	South	Government3
Zeno	Center	Education7	Brokaw	South	Education15
Zeno	Center	Education8	Brokaw	South	Education16
Zeno	Center	Semiconductor3	Brokaw	South	Education17

Substation	Loop	Customer/Industry	Substation	Loop	Customer/Industry
Zeno	Center	Datacenter15	Brokaw	South	Real Estate8
Zeno	Center	Bio Tech 1	Brokaw	South	Design1
Zeno	Center	Semiconductor/ Telecommunications	Brokaw	South	Security 2
Zeno	Center	Semiconductor/R&D/Mfg	Brokaw	South	Education18
Agnew	Northeast	Security1	Brokaw	South	Education19
Agnew	Northeast	Property Management3	CCA	South	Mfg12
Agnew	Northeast	Property Management4	DCJ	South	Datacenter35
Agnew	Northeast	Entertainment1	Homestead	South	Education20
Agnew	Northeast	NFL1	Homestead	South	Education21
Agnew	Northeast	Property Management5	Homestead	South	Education22
Agnew	Northeast	Entertainment2	Homestead	South	Education23
Agnew	Northeast	Hotel1	Homestead	South	Education24
Agnew	Northeast	Datacenter18	Homestead	South	Education25
Agnew	Northeast	Medical1	Homestead	South	Education26
Agnew	Northeast	Mfg10	Homestead	South	Healthcare1
Agnew	Northeast	Datacenter19	Homestead	South	Telecommunications4
Agnew	Northeast	Datacenter20	Homestead	South	Education27
Agnew	Northeast	Datacenter21	Homestead	South	Education28
Agnew	Northeast	Datacenter22	MAT	South	Datacenter36
Agnew	Northeast	Cyber Security 1	PRK	South	Datacenter37
Agnew	Northeast	Hotel2	Serra	South	Medical device
Agnew	Northeast	Property Management6	Serra	South	Education29
NAJ	Northeast	Mfg11	Serra	South	Education30
Palm	Northeast	Datacenter/software/ cloud computing	Serra	South	Healthcare2
Palm	Northeast	NFL2	Serra	South	Healthcare3
Palm	Northeast	NFL3	Serra	South	Healthcare4
Palm	Northeast	NFL4	Serra	South	Healthcare5
Palm	Northeast	Education9	Kenneth	East	Datacenter16
Palm	Northeast	Education10	Kenneth	East	Datacenter17
Palm	Northeast	Conventions 1	Kenneth	East	Gaming/AI/Semiconductors4
Palm	Northeast	Education11			
Palm	Northeast	Semiconductor4			
Palm	Northeast	Datacenter23			
Palm	Northeast	Education12			
Palm	Northeast	Real Estate1			
Palm	Northeast	Network hardware1			
Palm	Northeast	Semiconductor5			
Palm	Northeast	Computer hardware/software 1			

SVP Loop Customers and Loading Peak - Loop:

Center 141MW	East Loop 15MW	Northeast Loop 28MW	Northwest Loop 112MW	South Loop 65MW
Mfg1	Datacenter16	Security1	Medical2	Government3
Datacenter1	Datacenter17	Property Management3	Real Estate2	Education15
Datacenter2	Gaming/AI/Semiconductors4	Property Management4	Real Estate3	Education16
Datacenter3		Entertainment1	Real Estate4	Education17
Datacenter4		NFL1	Datacenter24	Real Estate8
Mfg2		Property Management5	Datacenter25	Design1
Mfg3		Entertainment2	R&D2	Security 2
Datacenter5		Hotel1	Real Estate5	Education18
Mfg4		Datacenter18	Real Estate6	Education19
Mfg5		Medical1	Healthcare equipment	Mfg12
Datacenter6		Mfg10	Education13	Datacenter35
Mfg6		Datacenter19	Semiconductor/R&D	Education20
Datacenter7		Datacenter20	Datacenter26	Education21
Datacenter8		Datacenter21	Property Management7	Education22
R&D1		Datacenter22	Computer hardware/software 2	Education23
Property Management1		Cyber Security 1	Real Estate7	Education24
Datacenter9		Hotel2	Datacenter27	Education25
Datacenter10		Property Management6	Software1	Education26
Datacenter11		Mfg11	Computer hardware/software 3	Healthcare1
Property Management2		Datacenter/software/cloud computing	Cyber Security 2	Telecommunications4
Education1		NFL2	Conventions 2	Education27
Education2		NFL3	Hotel3	Education28
Education3		NFL4	Medical3	Datacenter36
Education4		Education9	Cyber Security 3	Datacenter37
Semiconductor/Telecommunications		Education10	Education14	Medical device
Gaming/AI/Semiconductors1		Conventions 1	Datacenter28	Education29
R&D/Mfg		Education11	R&D3	Education30
Mfg7		Semiconductor4	Semiconductor6	Healthcare2
Semiconductor1		Datacenter23	Storage1	Healthcare3
Gaming/AI/Semiconductors2		Education12	Entertainment3	Healthcare4
Mfg8		Real Estate1	Property Management8	Healthcare5
Gaming/AI/Semiconductors3		Network hardware1	Medical4	
Datacenter12		Semiconductor5	Telecommunications2	
Education5		Computer hardware/software 1	NFL5	

Center 141MW	East Loop 15MW	Northeast Loop 28MW	Northwest Loop 112MW	South Loop 65MW
Government1			Datacenter29	
Government2			Datacenter30	
Semiconductor2			Datacenter31	
Semiconductor/R&D/Mfg			Datacenter32	
Mfg9			Telecommunications3	
Telecommunications1			Datacenter33	
Datacenter13			Gaming/AI/Semiconductors5	
Education6			Datacenter34	
Datacenter14				
Education7				
Education8				
Semiconductor3				
Datacenter15				
Bio Tech 1				
Semiconductor/Telecommunications				
Semiconductor/R&D/Mfg				

January 17, 2020 City of Santa Clara/Silicon Valley Power

Please note: These CEC staff questions and SVP responses are pertinent to the Silicon Valley Power system in general, and not specific to a particular transmission loop or data center. Follow up to SVP regarding their system operations:

SVP Responses in BLUE

1. How many PSPS have been implemented in 2019 in Northern California in service territories adjacent or near to the SVP service territory? Date and approximate durations would be useful, but since the PSPS were not directed at SVP, you may only have approximations.
    a. PSPS 1 - Beginning October 9, 2019 ending October 11. SVP was notified officially from PG&E Tuesday October 8th SVP territory would not be impacted. PG&E targeted smaller transmission and distribution systems in the Santa Clara foothills, Cupertino foothills, and the Los Gatos Mountains.
    b. PSPS 2 - October 27 - October 30 – impacted Morgan Hill area and areas of the Los Gatos Mountains. Not sure of exact timing.
    c. PG&E filed CPUC PSPS Report Link: https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/public-safety-power-shutoff-faq.page

       See Bottom of Webpage under “Access PSPS resources”, “WHERE CAN I FIND PSPS REPORTS FILED WITH THE CPUC”.

2. Did any of above 2019 PSPS require SVP to curtail or shutoff service to any of their electricity customers?
    a. No.

3. Do you anticipate that future PSPS will be more targeted and location specific? Will that result in more or less potential effects on SVP?
    a. Based on CPUC actions, SVP anticipates future PSPS events to be more targeted and have less potential impacts to SVP’s service territory.
        i. August 14, 2019 - CPUC Phase 2 R.18-12-005 to address additional aspects of utilities’ PSPS processes and practices.
            1. CPUC Phase 2 R.18-12-005 Link: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M251/K987/251987258.PDF
        ii. Oct. 28, 2019 - CPUC Action:
            1. Launching a formal investigation
            2. Immediate re-examination of how utilities use PSPS
            3. Ensuring additional consumer protection
            4. Expanding wildfire mitigation plans for immediate impact
            5. Enlist new technology partnerships

6. Document Link: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M318/K885/318885370.PDF

4. Did any of the above 2019 PSPS require SVP to use alternative bulk transmission providers or infrastructure to deliver contracted power to their service territory from remote generators?
    a. No.

5. One of your main bulk transmission corridors is that provided by PG&E to the Tesla substation in the Central Valley. Is that substation and transmission corridor subject to higher fire risk than other parts of the bulk transmission that you use? Why not?
    a. SVP is not interconnected to the Tesla Substation.
        i. Please refer to CPUC website for PG&E Fire Mitigation Plan for fire risk related to the substation and corridor.
    b. SVP has interconnection points at the following: Newark (three interconnection points), Los Esteros (two interconnection points), Nortech (one interconnection point), and FMC (one interconnection point).
    c. SVP has no influence on how PG&E operates their system to provide power to SVP.

6. Do the bulk transmission corridors and interconnection points to these corridors have differing fire risks ratings than the SVP service territory?
    a. Refer to the CPUC's fire map (Link: https://www.cpuc.ca.gov/FireThreatMaps/). The PG&E interconnection points to SVP identified in Question 5 above are not in a fire risk zone.

7. Could there have been PG&E customers that were curtailed by a PSPS located directly adjacent (with in a city block, for example) to SVP customers that did not experience any outage or interruption of service (ie, parts of Santa Clara County lost power, but not the part of the county inside the City and SVP boundaries).
    a. No.

8. Have any discussions with the California ISO, other utilities or internal teams clarified how and when SVP might be affected by a PSPS? If the discussion are final or agreed up, can the agreement or the gist of the agreements and discussions be provided to us?
    a. June 6, 2019 - PG&E outreach call/presentation – no formal agreement. PG&E outlined their determinants for initiating a PSPS and detailed their communication strategy. PG&E cannot directly curtail SVP load, only the CAISO can direct SVP to curtail load. PG&E agreed to notify SVP of PSPS events that may impact Santa Clara.
    b. August 14, 2019 CAISO conference call – no formal agreement. Scenario planning and notification strategy. CAISO's responsibility to model the transmission system based on PG&E's proposed PSPS scenarios. SVP will be notified by CAISO to curtail load if CAISO studies determined744 the need to do so.

9. There appears to be a rush of new, large data centers that will be located in SVP service territory. In many cases the proposed data centers have an apparent total electricity draw that is much higher than the current MW supplied on the 60 kV loops that they will be connected to. Will the new data centers overwhelm the capacity of the loops or the supplies available to SVP?

    a. SVP performs engineering analysis for impacts and potential deficiencies caused by a large data center project. The total electricity draw anticipated by the customer requires build out and load ramp that often times take several years with multiple phases of construction. When a new customer proposes a new data center they are required to provide a load ramp. SVP performs analysis to determine what upgrades are necessary to reliably serve the new loads proposed by the customer. In cases where the total apparent electricity draw will exceed the capacity of the 60kV loop that will serve the load, Capital Improvement Projects (CIP) are created to address these issues. The customer's load may be limited to a reduced demand until these projects are completed to ensure that system operating limits are not exceeded. SVP currently has a 60kV loop upgrade project that will increase the capacity of the South and East Loop. Additionally, there are CIP projects to increase the capacity when the electrical demand on the loops justifies the construction of the project.

       The total impact of the projected growth for all of SVP's customers, including large data center growth, is studied annually as part of the CAISO Transmission Planning Process (TPP) for the impacts of SVP load growth on the surrounding electrical system. The cumulative effects of all load growth is studied and deficiencies are identified and mitigated in the TPP.

10. In discussion with you, you indicated that many customers of existing data centers in SVP territory appear to be migrating to the new data centers (perhaps for reasons of space, energy efficiency, enhanced security). Will such of migration result in slower demand increases (or a smaller net increase) than indicated purely by the addition of the name plate values of the data center and back-up generation facilities?

    a. SVP does not have direct knowledge of load migration between data centers and their customers. Despite building 80MVA of capacity from two substation projects, completed for data centers in the last two years, SVP's load remained relatively flat.

11. In looking back at your earlier response to our inquiries about SVP operations, it appears that as of today there are 37 data centers are connected to your five 60 kV loops. Do you have estimate of how this number changed from 2010 to 2019? What has been the build=out of data centers in the SVP service territory, i.e., there were 27 data centers connected in 2010, 28 in 2011 and so on, to arrive at 37 data centers in 2019.

    a. Year – Number of Data Centers

2011 – 32	2015 – 38	2019 – 49
2012 – 37	2016 – 40	
2013 – 37	2017 – 43	
2014 - 38	2018 – 49	

12. In looking back at your earlier testimony at the McLaren hearings, and in response to our inquiries, you discussed that SVP outage rates published on your SVP web site are targeted to residential users, and are generally just a status of the system rather than a reliability of the system. Do you have a SVP outage rates for you 60kV loops? (No.)

    a. How are these outage rates calculated?

        i. As of December 31, 2019, SVP's grid reliability statistics are as follows:

12 Month Outage Statistics			
Index	As of This Month	As of This Month Last Year	Current Month
ASAI (%)	99.9900	99.9904	99.99747
CAIDI (Long) (min)	96.57	103.04	22.04681
SAIDI (Long) (min)	52.59	50.50	1.12803
SAIFI (Long) (ints/tot cust)	0.54	0.49	0.05118
SAIFI (Short) (ints/tot cust)	0.49	0.24	0.05941

ASAI - Average Service Availability Index
(customer minutes available/total customer minutes, as a %)
CAIDI - Customer Average Interruption Duration Index
(average minutes interrupted per interrupted customer)
SAIDI - System Average Interruption Duration Index
(average minutes interrupted per customer for all customers)
SAIFI (Long) - System Average Interruption Frequency Index
(# of long interruptions per customer for all customers)
SAIFI (Short) - System Average Interruption Frequency Index
(# of short interruptions per customer for all customers)

    b. Do they consider the types of customers on the loops, the redundant feed to THOISE customers, and the isolation breakers used throughout the loops?

        i. No.

    c. Are the 60 kV outage rates published and how are they used in marketing to new commercial customers like data centers?

        i. No, and the outages are not marketed.

    d. Does SVP make any outage or reliability guarantees to commercial customers like data centers, or at least commitments to approach a certain outage or reliability rate?

        i. No.

Appendix C

Mailing List

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	860 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	880 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	850 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	870 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	858 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	810 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	812 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	785 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	711 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	661 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	701 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	691 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	651 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	705 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	627 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	621 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	631 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	625 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	601 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	611 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2709 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2705 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2711 LAFAYETTE STREET	SANTA CLARA	CA	95054

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	2775 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2707 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2715 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2725 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2765 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2755 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	651 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	631 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2555 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	801 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	881 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	851 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	821 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	831 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	614 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	630 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	750 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	764 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	760 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	668 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	664 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	680 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	688 WALSH AVENUE	SANTA CLARA	CA	95054

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	672 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	676 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	684 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	686 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	696 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	670 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	660 WALSH AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2825 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2845 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2805 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	650 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	680 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	640 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2435 LAFAYETTE STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	483 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	495 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	485 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	525 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	527 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	575 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	518 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	506 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	504 ROBERT AVENUE	SANTA CLARA	CA	95054

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	440 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	436 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	444 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	446 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	448 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	442 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	510 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	540 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	462 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	430 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	450 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	444 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	440 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	442 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	570 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	590 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	585 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2482 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2480 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2490 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2488 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2474 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2470 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	2468 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2466 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	535 MATHEW STREET	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	445 ROBERT AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2460 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2440 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2402 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2858 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2860 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2830 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2880 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2890 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2850 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2800 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2770 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2752 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2750 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	393 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	373 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2777 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2500 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2415 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2403 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	2405 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2439 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2441 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2433 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2437 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2435 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2495 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2491 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	390 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	392 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	402 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	412 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	410 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	416 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	398 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	406 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	400 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	408 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	396 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	404 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	394 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2465 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2455 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

CURRENT RESIDENT OR TENANT	2475 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2485 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	414 MARTIN AVENUE	SANTA CLARA	CA	95054
CURRENT RESIDENT OR TENANT	2600 DE LA CRUZ BLVD.	SANTA CLARA	CA	95054
L.A.W. LLC	330 COMMERCIAL ST	SAN JOSE	CA	95112-4403
FRANK MENACHO ET AL	15635 CALISTOGA DR	RAMONA	CA	92065
651 WALSH PARTNERS LLC	14573 BIG BASIN WY	SARATOGA	CA	95070-6013
WITKIN PROPERTIES LP	188 TWIN OAKS DR	LOS GATOS	CA	95032-5649
GAHRAHMAT FAM LP IILP	3476 EDWARD AVENUE	SANTA CLARA	CA	95054-2130
ESTANISLAO AND MARTHA HARO TRUSTEE	12395 COLUMBET AVENUE	SAN MARTIN	CA	95046
DJ SMITH FAM PARTNERSHIP LP	4208 CHABOYA RD	SAN JOSE	CA	95148-3707
PELIO 650 WALSH LLC	14573 BIG BASIN WY	SARATOGA	CA	95070-6013
DIGITAL LAFAYETTE LLC	16600 WOODRUFF AVENUE, STE 200	BELLFLOWER	CA	90706
DIGITAL BH 800 LLC	16600 WOODRUFF AVENUE, STE 200	BELLFLOWER	CA	90706
D & R MILLER PROPS LLC	630 MARTIN AVENUE	SANTA CLARA	CA	95050-2914
PENINSULA BUILDING MATERIALS CO	2490 CHARLESTON RD	MOUNTAIN VIEW	CA	94043-1627
WESCO PROPERTIES INC	936 E GREEN STREET, STE 108	PASADENA	CA	91106-2946
VANTAGE DATA CENTERS 7 LLC	2820 NORTHWESTERN PY	SANTA CLARA	CA	95051
MATHEW REALTY INVESTMENT LLC	2820 NORTHWESTERN PY	SANTA CLARA	CA	95051
DANIEL AND ARTEMISA VARGAS TRUSTEE	1616 CROW CT	SUNNYVALE	CA	94087-4623
525 ROBERT LLC	1985 HILL LN	COLORADO SPRINGS	CO	80904
RICHARD LONG TRUSTEE	17810 FOSTER RD	LOS GATOS	CA	95030-0000
3J RENTALS INC	2322 KLUNE CT	SANTA CLARA	CA	95054-1326
WILLIAM ESERINI TRUSTEE & ET AL	508 ROBERT AVENUE	SANTA CLARA	CA	95050-2955
JANE HARVEY TRUSTEE & ET AL	1490 OAK AVENUE	LOS ALTOS	CA	94024-5710
JOHN SCHAFER TRUSTEE	15710 MONTEBELLO RD	CUPERTINO	CA	95014-5409
SOUTHERN PACIFIC TRANSPORTATION CO	65 CAHILL ST	SAN JOSE	CA	95110

All contiguous owners and occupants within 1000 feet of the project site or 500 feet of project linears, including all contiguous owners and occupants (Sent Notice of Receipt and Notice of Intent).

JENIC	1500 UNIVERSITY AVENUE	SAN JOSE	CA	95126
540 MARTIN AVE LLC	127 AMANDA LN	LOS GATOS	CA	95032
JRDL ASSOCIATES LLC	5263 COLERIDGE CT	CARLSBAD	CA	92008
RICHARD N REESE FAMLIMITED LIABILITY CO E	9310 S 370 W	SANDY	UT	84070
CALVIN AND JEAN MCGILLIS TRUSTEE	100 LYELL ST	LOS ALTOS	CA	94022
RICHARD LONG TRUSTEE	17810 FOSTER RD	LOS GATOS	CA	95030-0000
DOREEN CALI TRUSTEE	1709 MULBERRY LN	SAN JOSE	CA	95125-4945
AXIS HOLDINGS LTD LLC	5477 HARVARD DR	SAN JOSE	CA	95118-3417
MORAN COMMERCIAL LLC	2464 DE LA CRUZ BLVD	SANTA CLARA	CA	95050-2923
NEWARK GROUP INDUSTRIES INC	525 MATHEW ST	SANTA CLARA	CA	95050-3001
CENTRAL PROPERTY OWNER LLC	260 CALIFORNIA STREET, STE 1100	SAN FRANCISCO	CA	94111
NATIONAL CAR RENTALSYSTS INC	130 S JEFFERSON STREET, STE 300	CHICAGO	IL	60661
SAN JOSE CITY OF	201 S ORANGE AVENUE, STE 1290	ORLANDO	FL	32801
EMF LLC	1875 BOOKSIN AVENUE	SAN JOSE	CA	95125-4502
MARILYN AND GERALD TABOR TRUSTEE	1053 LA CUESTA RD	HILLSBOROUGH	CA	94010
GILBERT AND ANN COCCHETTO ET AL	19302 VIA CRECENTE CT	SARATOGA	CA	95070
DE LA CRUZ PETROLEUM MKTG INC	401 SAN MATEO AVENUE	SAN BRUNO	CA	94066
GIULIO AND HAZEL CHIOINI TRUSTEE	19302 VIA CRECENTE CT	SARATOGA	CA	95070
DE LA CRUZ BSNS CTRLLC	4020 MOORPARK AVENUE, STE 218	SAN JOSE	CA	95117

Libraries (Sent Notice of Receipt and Notice of Intent; the local libraries in Santa Clara were sent a paper copy of the Initial Study/Proposed Mitigated Negative Declaration).

	CEC - ENERGY LIBRARY	1516 9TH ST	MS-10	SACRAMENTO	CA	95814-5504
GOV PUBLICATIONS	FRESNO COUNTY FREE LIBRARY	2420 MARIPOSA ST		FRESNO	CA	93721-2204
	HUMBOLDT COUNTY MAIN LIBRARY	1313 3RD STREET		EUREKA	CA	95501-0553
SERIALS DIVISION	LOS ANGELES PUBLIC LIBRARY	630 W 5TH ST		LOS ANGELES	CA	90071-2002
SCIENCE & INDUSTRY DIV	SAN DIEGO PUBLIC LIBRARY	330 PARK BLVD		SAN DIEGO	CA	92101-6478
GOVERNMENT INFORMATION CENTER	SAN FRANCISCO PUBLIC LIBRARY	100 LARKIN ST		SAN FRANCISCO	CA	94102-4733
GOV PUBS	STANLEY MOSK LIBRARY & COURTS BLDG	914 CAPITOL MALL	3RD FLR	SACRAMENTO	CA	95814
LIBRARIAN	NORTHSIDE BRANCH LIBRARY	695 MORELAND WAY		SANTA CLARA	CA	95054
LIBRARIAN	SANTA CLARA CENTRAL PARK LIBRARY	2635 HOMESTEAD ROAD		SANTA CLARA	CA	95051

Native American Tribes (Sent Notice of Receipt and Notice of Intent).

FIRST	LAST	TITLE	TRIBE NAME	ADDRESS	CITY	ST	ZIP
HONORABLE VALENTIN	LOPEZ	CHAIRPERSON	AMAH MUTSUN TRIBAL BAND	P.O. BOX 5272	GALT	CA	95632
HONORABLE IRENE	ZWIERLEIN	CHAIRPERSON	AMAH MUTSUN TRIBAL BAND OF MISSION SAN JUAN BAUTISTA	789 CANADA ROAD	WOODSIDE	CA	94062
HONORABLE ANN-MARIE	SAYERS	CHAIRPERSON	INDIAN CANYON MUTSUN BAND OF COSTANOAN	P.O. BOX 28	HOLLISTER	CA	95024
HONORABLE CHARLENE	NIJMEH	CHAIRPERSON	MUWEKMA OHLONE TRIBE OF THE SAN FRANCISCO BAY AREA	20885 REDWOOD ROAD, SUITE 232	CASTRO VALLEY	CA	94546
HONORABLE KATHERINE	EROLINDA PEREZ	CHAIRPERSON	NORTH VALLEY YOKUTS TRIBE	P.O. BOX 717	LINDEN	CA	95236
ANDREW	GALVAN		THE OHLONE INDIAN TRIBE	P.O. BOX 3388	FREMONT	CA	94539

Agencies (Sent the Notice of Receipt and Notice of Intent).

GREGORY	NUDD	DEPUTY AIR POLLUTION CONTROL OFFICER, EXECUTIVE	BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD)	375 BEALE STREET, SUITE 600	SAN FRANCISCO	CA	94105
DEBBY	FERNANDEZ	ASSOCIATE PLANNER	CITY OF SANTA CLARA PLANNING DIVISION	1500 WARBURTON AVENUE	SANTA CLARA	CA	95050
YEN	CHEN	STAFF LIAISON/ASSOCIATE PLANNER	HISTORICAL AND LANDMARKS COMMISSION	1500 WARBURTON AVENUE	SANTA CLARA	CA	95047
			CITY OF SANTA CLARA PLANNING DIVISION--COMMUNITY DEVELOPMENT DEPT	1500 WARBURTON AVENUE	SANTA CLARA	CA	95048
DEVON	TODA	COMPLIANCE MANAGER	CITY OF SANTA CLARA	1500 WARBURTON AVENUE	SANTA CLARA	CA	95049
DIANE	FORONDA	WATER RESOURCE PLANNER	CITY OF SANTA CLARA	1500 WARBURTON AVENUE	SANTA CLARA	CA	95050
FREDERICK	CHUN	ASSOCIATE FIRE MARSHAL/HAZARDOUS MATERIALS MANAGER	CITY OF SANTA CLARA--FIRE PREVENTION/HAZARDOUS MATERIALS	1675 LINCOLN STREET	SANTA CLARA	CA	95050
GERRY	HAAS		SANTA CLARA VALLEY HABITAT AGENCY	535 ALKIRE AVENUE	MORGAN HILL	CA	95307
RICHARD	MACEDO	BRANCH CHIEF	HABITAT CONSERVATION PLANNING BRANCH	PO BOX 94209	SACRAMENTO	CA	94244
GREGG	ERICKSON	REGIONAL MANAGER	CDFW, BAY DELTA REGION (REGION 3)	2825 CORDELIA ROAD, SUITE 100	FAIRFIELD	CA	94534
ROBERT	SCHLIPF	WATER RESOURCE CONTROL ENGINEER	SAN FRANCISCO BAY AREA REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)	1515 CLAY STREET, SUITE 1400	OAKLAND	CA	94612
ROY	MOLSEED	SENIOR ENVIRONMENTAL PLANNER	SANTA CLARA VALLEY TRANSPORTATION AUTHORITY	3331 NORTH FIRST STREET	SAN JOSE	CA	95134

Agencies (Sent the Notice of Receipt and Notice of Intent).

ARUNA	BODDUNA	ASSOCIATE TRANSPORTATION PLANNER	COUNTY OF SANTA CLARA ROADS AND AIRPORT DEPARTMENT	101 SKYPORT DRIVE	SAN JOSE	CA	95110
MARK	CONNOLLY	PLANNER	SANTA CLARA COUNTY AIRPORT LAND USE COMMISSION	70 WEST HEDDING STREET; EAST WING, 7TH FLOOR	SAN JOSE	CA	95110
KEVIN	KEATING	ELECTRIC DIVISION MANAGER	SILICON VALLEY POWER (CITY OF SANTA CLARA)	1500 WARBURTON AVENUE	SANTA CLARA	CA	95050
KATHRIN	TURNER	ASSISTANT ENGINEER II	SANTA CLARA VALLEY WATER DISTRICT--COMMUNITY PROJECTS REVIEW UNIT	5750 ALMADEN EXPRESSWAY	SAN JOSE	CA	95118
KATHERINE	KENNEDY	AIRPORT PLANNER	FEDERAL AVIATION ADMINISTRATION (FAA)	1000 MARINA BOULEVARD, SUITE 220	BRISBANE	CA	94005
			NORMAN Y. MINETA SAN JOSÉ INTERNATIONAL AIRPORT--ADMINISTRATIVE OFFICES, AIRPORT DEPARTMENT	1701 AIRPORT BOULEVARD, SUITE B-1130	SAN JOSE	CA	95110-1206
			DEPARTMENT OF PLANNING, BUILDING, AND CODE ENFORCEMENT--ENVIRONMENTAL REVIEW, PLANNING DIVISION	200 E. SANTA CLARA STREET	SAN JOSE	CA	95113
JENNIFER	NORRIS		SACRAMENTO FISH AND WILDLIFE OFFICE	2800 COTTAGE WAY, ROOM W-2605	SACRAMENTO	CA	95825
			SAN FRANCISCO BAY-DELTA FISH AND WILDLIFE	650 CAPITOL MALL, SUITE 8-300	SACRAMENTO	CA	95814
CARY	GREENE	AIRPORT PLANNER	CITY OF SAN JOSE AIRPORT DEPARTMENT	1701 AIRPORT BOULEVARD, SUITE B-1130	SAN JOSE	CA	95510

In addition, the following California State governmental agencies received notice of the commenting period for the Initial Study/Proposed Mitigated Negative Declaration via the State Clearinghouse Section 15073 distribution process for Reviewing Agencies:

AIR RESOURCES BOARD

CALIFORNIA HIGHWAY PATROL

CALTRANS DISTRICT #4

CALTRANS DIVISION OF AERONAUTICS

CALTRANS PLANNING

FISH & GAME REGION #3

NATIVE AMERICAN HERITAGE COMMISSION

REGIONAL WATER QUALITY CONTROL BOARD #2

RESOURCES AGENCY

STATE WATER RESOURCES CONTROL BOARD: WATER QUALITY

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

DEPARTMENT OF WATER RESOURCES

Appendix D

Letter Affirming City of Santa Clara Acceptance of Responsibility for Mitigation

City of Santa Clara
The Center of What's Possible

Planning Division

January 16, 2020

Leonidas Payne
CEQA Lead Project Manager
California Energy Commission
1516 Ninth Street, MS-40
Sacramento, CA 95814-5512

Re: Sequoia Data Center (2600 De La Cruz Boulevard) Proposed Mitigated Negative Declaration (MND)

Dear Leonidas Payne,

Thank you for keeping the City of Santa Clara involved with the environmental process for the project. It is our understanding that following the discussions at the evidentiary hearing the applicant agreed to the mitigation measures for Biological Resources and Geology/Soils in the Initial Study/Proposed Mitigated Negative Declaration. As the responsible agency, the City agrees to be responsible for mitigation monitoring as delegated by the California Energy Commission and to ensure the implementation of the proposed mitigation measures.

If you have any questions, please contact Elaheh Kerachian at (408) 615-2450 or ekerachian@SantaClaraCA.gov.

Thanks,

EK Kerachian for Gloria

Gloria Sciara AICP
Development Review Officer I Zoning Administrator
Planning Division I Community Development Department
1500 Warburton Avenue
Santa Clara, CA 95050