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# WALSH DATA CENTER

## Initial Study and Proposed Mitigated Negative Declaration



CALIFORNIA  
ENERGY  
COMMISSION  
Gavin Newsom,  
Governor

February 2020  
CEC-700-2020-002

DOCKET NUMBER 19-SPPE-02

# **Initial Study**

## **Walsh Data Center**

(19-SPPE-02)

Lead Agency

**California Energy Commission**



**February 2020**

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## **Section 1**

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### Proposed Mitigated Negative Declaration and SPPE Recommendation

CALIFORNIA ENERGY COMMISSION  
1516 NINTH STREET  
SACRAMENTO, CA 95814-5512  
www.energy.ca.gov



# **Proposed Mitigated Negative Declaration and SPPE Recommendation Walsh Data Center Project 19-SPPE-02**

## **1. Proposed Mitigated Negative Declaration**

### **1.1 Project Information**

Project: Walsh Data Center  
651 Walsh Avenue  
Santa Clara, California

Applicant: 651 Walsh Partners, LLC  
Represented by DayZen, LLC  
2501 Capitol Avenue, Suite 201  
Sacramento, CA 95816

651 Walsh Partners, LLC (Applicant) filed an application with the California Energy Commission (CEC) requesting a Small Power Plant Exemption (SPPE) for the Walsh Backup Generating Facility (WBGF), which would provide up to 80 megawatts (MW) of backup generation to support the Walsh Data Center (WDC), collectively the “project”, in Santa Clara, California.

The CEC is responsible for reviewing, and ultimately approving or denying, all thermal power plants, 50 megawatts (MW) and greater, proposed for construction in California. The SPPE process allows applicants with thermal power plants between 50 and 100 MW to obtain an exemption from the CEC’s jurisdiction and proceed with local permitting rather than requiring certification by the CEC. The CEC can grant an exemption if it finds that the proposed facility would not create a substantial adverse impact on the environment or energy resources. Section 25519(c) of the Public Resources Code designates the CEC as the California Environmental Quality Act (CEQA) lead agency, as provided in section 21165 of the Public Resources Code, for all thermal power plants that seek an exemption from the CEC’s power plant certification process. CEQA requires the lead agency to consider the whole of the action; therefore, CEC staff has included the construction and operation of the data center in the environmental analysis of the backup generation facility.

## 1.2 Introduction

Pursuant to the 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 CEC would 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 project in Santa Clara, California. The project proposes to demolish the existing improvements on the site and construct the WDC building, the associated WBGF generator equipment yard, and an electrical substation. The WBGF would consist of 33 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 of the WDC. The maximum electrical load of the WDC would be up to 80 MW.

The WDC building has two attached components—a four-story Data Center Building where client servers and associated electrical equipment would be housed, and a three-story Power Base Building located on the site's frontage with Walsh Avenue which would include support facilities such as the building lobby, restrooms, conference rooms, office space, and customer space. The total WDC building size is 435,050 square feet.

The 33 backup generators would be located in a generation yard adjacent to the north side of the WDC building. Thirty-two 3-MW generators would be deployed in a two-level stacked configuration. Half (16) of the generators would be placed on a concrete slab and the other half (16) would be on a second level directly above the ground with the

generators mounted on a steel support structure. Each backup generator is a fully independent package system with dedicated fuel tanks located on a skid below the bottom level generator. The top-level generators would each have a day tank, which is fed from the lower level belly fuel tank.

The generation yard would be electrically interconnected to the WDC building through a combination of underground and above ground cable bus to a location within the building that houses electrical distribution equipment. The additional 2-MW generator would be interconnected solely to the Power Base Building located on the WDC building southern side. The project includes the switchgear and distribution cabling to interconnect the generators to their respective interconnection points.

A new electrical substation would be constructed to the east of the data center, 17 feet from the eastern property line, which abuts the Union Pacific Railroad (UPRR) tracks. This new 90 megavolt amps (MVA) electrical substation would be a three-bay substation (three 30 MVA 60 kV-12kV step-down transformers). The substation would be capable of delivering electricity to the WDC from Silicon Valley Power (SVP) but would not allow any electricity generated from the WBGF to be delivered to the electrical 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 Walsh 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 project design measures, 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.

## **Air Quality**

**PD AIR-1:** To ensure that fugitive dust impacts are less than significant, the project will implement the BAAQMD's recommended BMPs during the construction phase. These BMPs are incorporated into the design of the project and will include:

- All exposed surfaces (soil piles, graded areas, and unpaved access roads) shall be watered at least two times per day.
- All haul trucks transporting material offsite shall be covered.
- All track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on unpaved surfaces shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks shall be paved as soon as possible. Building pads shall be completed as soon as possible after grading unless seeding or soil binders are used.
- Equipment idling times shall be minimized to 5 minutes per the Air Toxics Control Measure (ATCM). Idling time signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Information on who to contact, contact phone number, and how to initiate complaints about fugitive dust problems will be posted at the site.

## **Biological Resources**

**MM BIO-1: Nesting Bird Avoidance and Minimization Measures.** If construction, tree removal, or vegetation clearing occurs during the nesting season (February 1 through August 31), an ornithologist or other qualified biologist will conduct pre-construction nest survey(s) no more than 14 days prior to the initiation of the aforementioned activities within 500 feet of trees/vegetation. Surveys will be repeated if project activities are suspended or delayed for more than 14 days during the nesting season. The ornithologist or other qualified biologist (with at least a bachelor's degree in a biological science field and demonstrated field expertise in avian species) will be approved by the City of Santa Clara. The size of all buffer zones will initially be a 250-foot radius around the nest of non-raptors and a 500-foot radius around the nest for raptors. Any changes to a buffer zone must be approved by the City of Santa Clara in consultation with CDFW. The nests and buffers will be field checked weekly by the approved ornithologist or other qualified biologist. The approved buffer zone will be marked in the field with exclusion fencing, within which no construction, tree removal, or vegetation clearing will commence until

the ornithologist or other qualified biologist and the City of Santa Clara to verify that the nest(s) are no longer active.

**MM BIO-2: Nesting Bird Survey Report.** The qualified biologist shall submit a copy of the pre-construction nest survey report(s) to the City of Santa Clara Director of Community Development prior to demolition for review and approval. The report(s) will contain maps showing the location of all nests, species nesting, status of the nest (e.g. incubation of eggs, feeding of young, near fledging), and the buffer size around each nest. The report will be provided within 10 days of completing a pre-construction nest survey.

## **Cultural Resources**

**PD CUL-1:** The project proposes to implement the following measures to ensure the project's impacts to archaeological resources are less than significant:

- A Secretary of the Interior-qualified archaeologist and a Native American cultural resources monitor shall be on site to monitor grading of native soil once all pavement is removed from the project site. The project applicant shall submit the name and qualifications of the selected archaeologist and Native American Monitor to the Director of Community Development prior to the issuance of a grading permit. Preference in selecting Native American monitors shall be given to Native Americans with:
  - Traditional ties to the area being monitored.
  - Knowledge of local historic and prehistoric Native American village sites.
  - Knowledge and understanding of Health and Safety Code, Section 7050.5 and Public Resources Code, Section 5097.9 et seq.
  - Ability to effectively communicate the requirements of Health and Safety Code, Section 7050.5 and Public Resources Code, Section 5097.9 et seq.
  - Ability to work with law enforcement officials and the Native American Heritage Commission to ensure the return of all associated grave goods taken from a Native American grave during excavation.
  - Ability to travel to project sites within traditional tribal territory.
  - Knowledge and understanding of Title 14, California Code of Regulations, Section 15064.5.
  - Ability to advocate for the preservation in place of Native American cultural features through knowledge and understanding CEQA mitigation provisions.
  - Ability to read a topographical map and be able to locate site and reburial locations for future inclusions in the Native American Heritage Commission's Sacred Lands Inventory.
  - Knowledge and understanding of archaeological practices, including the phases of archaeological investigation.

After removal of pavement and prior to grading, the archaeologist shall conduct a pedestrian survey over the exposed soils to determine if any surface archaeological manifestations are present. The archaeologist will monitor full-time all grading and ground disturbing activities in native soils associated with construction of the proposed project. If the archaeologist and Native American monitor believe that a reduction in monitoring activities is prudent, then a letter report detailing the rationale for making such a reduction and summarizing the monitoring results shall be provided to the Director of Community Development. Department of Recreation 523 forms shall be submitted along with the report for any cultural resources encountered over 50 years old.

- In the event that prehistoric or historic 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 Secretary of the Interior-qualified archaeologist shall examine the find and record the site, including field notes, measurements, and photography for a Department of Parks and Recreation 523 Primary Record form. The archaeologist shall make a recommendation regarding eligibility for the California Register of Historical Resources, data recovery, curation, or other appropriate mitigation. Ground disturbance within the 50-foot radius can resume once these steps are taken and the Director of Community Development has concurred with the recommendations. Within 30 days of the completion of construction or cultural resources monitoring, whichever comes first, a report of findings documenting any cultural resource finds, recommendations, data recovery efforts, and other pertinent information gleaned during cultural resources monitoring shall then be submitted to the Director of Community Development. Once finalized, this report shall be submitted to the Northwest Information Center at Sonoma State University.
- Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program training to all existing and any new employees. This training should include: a discussion of applicable laws and penalties under the laws; samples or visual aids of artifacts that could be encountered in the project vicinity, including what those artifacts may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resources discovery, and notify the city-approved archaeologist and Native American cultural resources monitor.

**PD CUL-2:** The project proposes to implement the following measure to ensure the project's impacts to human remains are less than significant:

- In the event that human remains are discovered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall

notify the Native American Heritage Commission. All actions taken under this mitigation measure shall comply with Health and Human Safety Code § 7050.5(b).

## **Geology and Soils**

**PD GEO-1:** In order to ensure the project design conforms to the requirements of a final geotechnical engineering investigation and California and local building standards and codes, the following is proposed as mitigation incorporated into the project. Incorporation will ensure seismic hazards are reduced to less than significant levels.

- To avoid or minimize potential damage from seismic shaking, the project would be built using standard engineering and seismic safety design techniques. Building redevelopment design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which will be included in a report to the City. The report shall be reviewed and approved by the City of Santa Clara's Building Division as part of the building permit review and issuance process. The building shall meet the requirements of applicable Building and Fire Codes, including the 2016 California Building Code, as adopted or updated by the City. The project shall be designed to withstand potential geologic hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

**PD GEO-2:** The project proposes to implement the following measures to ensure impacts to paleontological resources are less than significant.

- Prior to the start of any subsurface excavations that would extend beyond previously disturbed soils, all construction forepersons and field supervisors shall receive training by a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, who is experienced in teaching non-specialists, to ensure they can recognize fossil materials and shall follow proper notification procedures in the event any are uncovered during construction. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate its significance.
- If a fossil is found and determined by the qualified paleontologist to be significant and avoidance is not feasible, the 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.

## Hazards and Hazardous Materials

**PD HAZ-1:** The project proposes to implement the following measures which would reduce potentially significant soil and or groundwater impacts to construction workers to a less than significant level.

- Prior to the issuance of grading permits, shallow soil samples shall be taken in areas where soil disturbance is anticipated to determine if contaminated soils with concentrations above established construction/trench worker thresholds may be present due to historical agricultural use and from historical leaks and spills. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division prior to initiation of work. Once the soil sampling analysis is complete, a report of the findings will be provided to the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division and other applicable City staff for review.
- Documentation of the results of the soil sampling shall be submitted to and reviewed by the City of Santa Clara prior to the issuance of a grading permit. Any soil with concentrations above applicable Environmental Screening Levels or hazardous waste limits would be characterized, removed, and disposed of off-site at an appropriate landfill according to all state and federal requirements.
- A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include: a detailed discussion of the site background; a summary of the analytical results from MM HAZ-1.1; preparation of a Health and Safety Plan by an industrial hygienist; protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected; worker training requirements, health and safety measures and soil handling procedures shall be described; protocols shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be implemented; notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction; notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction; on-site soil reuse guidelines; sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; soil stockpiling protocols; and protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division.
- If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures will be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils

found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either (1) managed or treated in place, if deemed appropriate by the oversight agency or (2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations and applicable local, state, and federal laws.

## **Hydrology and Water Quality**

**PD HYD-1:** The WDC will incorporate the following into the design and these measures should be treated as mitigation incorporated into the project. The following will reduce construction-related water quality impacts:

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

## **Noise and Vibration**

**PD NOI-1:** The project proposes to implement the following measures to reduce temporary construction noise to less than significant levels.

- The project applicant shall prepare a construction noise control plan, which shall be submitted for review and approval by the Director of Community Development prior to issuance of demolition, grading, and building permits. This plan shall include, at a minimum, the following measures
  - Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines should be strictly prohibited.
- Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
- A temporary noise control blanket barrier could be erected, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
- Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

## **1.6 Hazardous Waste Sites**

According to a review of the Envirostor and GeoTracker databases, the project site is listed on the hazardous materials sites compiled pursuant to Government Code section 65962.5. Volatile Organic Compounds (VOCs) were detected in the soil and soil vapor but were determined to have come from offsite along the eastern, western, and northern boundaries of the site. The sources of the VOCs from offsite have been successfully closed and remedied according to a Geotracker database search.

## **1.7 Airport Impacts**

CEQA requires that prior to adoption of a mitigated negative declaration for a project located within the boundaries of a comprehensive airport land use plan, the lead agency must first consider whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.<sup>1</sup>

The project site is located approximately 0.3 mile west of the Norman Y. Mineta San Jose International Airport. This location is within the Airport Influence Area and subject to the Comprehensive Land Use Plan (CLUP) for the airport. The IS concluded that, although the WDC and WBGF would be inside the Traffic Pattern Zone, Turning Safety Zone, and Inner Safety Zone identified in the CLUP, the project structures, including the diesel exhaust stacks would not exceed Federal Aviation Administration obstruction standards. Additionally, the project's thermal plumes would not result in hazards to aircraft.

The IS also determined that noise from the WBGF would not combine with the airport's noise to expose people to excessive noise levels. Further, staff found the project consistent with the policies of safety, height, and noise contained within the CLUP. Staff therefore concludes that the WBGF will not result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area.

## **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 Walsh Backup Generating Facility be exempted from CEC jurisdiction and that further permitting for the Walsh Data Center be handled at the local permitting level.

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<sup>1</sup> CEQA Guidelines, § 15074, subd. (e).

## **Section 2**

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### Environmental Determination

## 2. Environmental Determination

### 2.1 Environmental Factors Potentially Affected

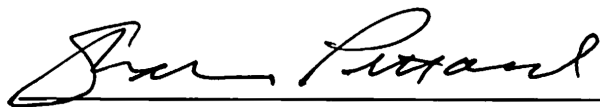
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" and requiring implementation of mitigation as indicated by the checklist on the following pages.

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture & Forestry Resources              | <input type="checkbox"/> Air Quality                   |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural and Tribal Resources                 | <input type="checkbox"/> Energy                        |
| <input type="checkbox"/> Geology/Soils                   | <input type="checkbox"/> Greenhouse Gas Emissions                      | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality         | <input type="checkbox"/> Land Use/Planning                             | <input type="checkbox"/> Mineral Resources             |
| <input type="checkbox"/> Noise                           | <input type="checkbox"/> Population/Housing                            | <input type="checkbox"/> Public Services               |
| <input type="checkbox"/> Recreation                      | <input type="checkbox"/> Transportation                                | <input type="checkbox"/> Utilities/Service Systems     |
| <input type="checkbox"/> Wildfire                        | <input checked="" type="checkbox"/> 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

2-18-20

Date

## **Section 3**

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### 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 thermal power plants between 50 and 100 MW to obtain an exemption from the CEC's jurisdiction and proceed with local permitting rather than requiring a CEC license. CEC can grant an exemption if it finds that the proposed facility 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, local permitting authorities - in this case the City of Santa Clara and Bay Area Air Quality Management District - 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 an SPPE, which would exempt the facility from CEC's power plant certification process.

#### **3.4 CEQA Analysis Format**

The environmental analysis of an 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 Walsh Data Center project consists of two primary components—the Walsh Data Center (WDC) and the Walsh Backup Generating Facility (WBGF)—which together represent the whole of the action. For a more complete description of the project, please see **Section 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	Land Use and Planning
Agricultural and Forestry Resources	Mineral Resources
Air Quality	Noise
Biological Resources	Population and Housing
Cultural and Tribal Resources	Public Services
Energy	Recreation
Geology and Soils	Transportation
Greenhouse Gases	Utilities and Service Systems
Hazards and Hazardous Materials	Wildfire
Hydrology and Water Quality	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**

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### Project Description

## 4. Project Description

651 Walsh Partners, LLC (WP LLC or Applicant) is seeking a Small Power Plant Exemption (SPPE) from the California Energy Commission's (CEC) jurisdiction to proceed with local permitting rather than requiring certification by the CEC for the Walsh Backup Generating Facility (WBGF) portion of its proposed Walsh Data Center (WDC or project).

### 4.1 Project Title

Walsh 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

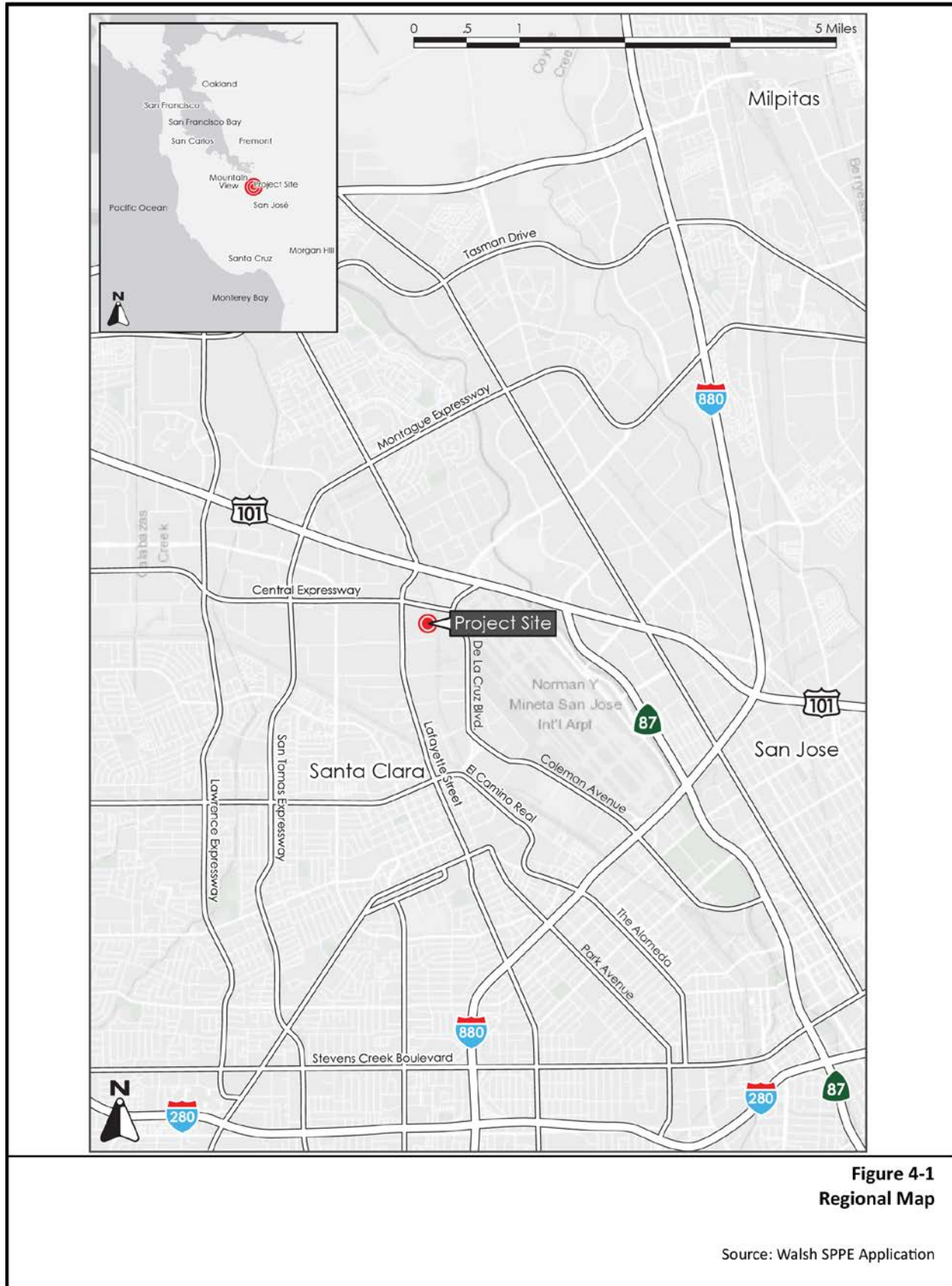
### 4.4 Project Location

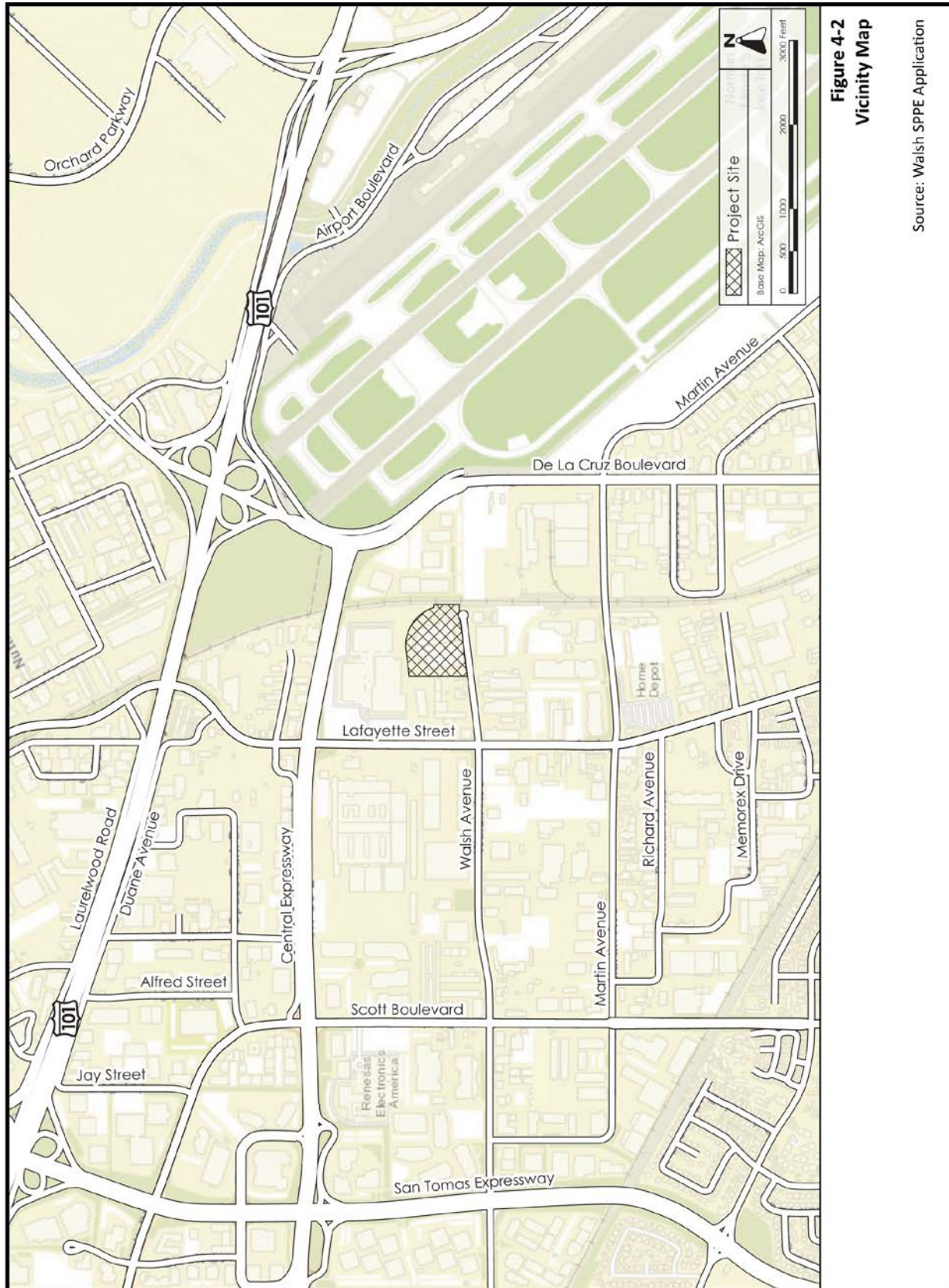
**Figure 4-1** shows the regional location and **Figure 4-2** identifies the project location.

### 4.5 Project Overview

The WDC is a data center development project proposed for construction on a 7.87-acre site at 651 Walsh Avenue in Santa Clara, California. The property is zoned Heavy Industrial, and the site is currently developed with a one-story 171,259-square foot warehouse complex and associated paved parking and loading areas. The project proposes to demolish the existing improvements on the site and construct the WDC building, an associated generator equipment yard, which the applicant refers to as the WBGF, and an electrical substation.

The WDC building has two attached components—a four-story Data Center Building where client servers and associated electrical equipment would be housed, and a three-story Power Base Building located on the site's frontage with Walsh Avenue which would include support facilities such as the building lobby, restrooms, conference rooms, office space, and customer space. The total WDC building size is 435,050 square feet. The WDC building would be approximately 87.5 feet in height to the top of parapet, with a metal louver screen wall extending to a height of 101 feet to screen mechanical equipment on the roof.





The building would also include an elevator penthouse reaching a height of 122.5 feet. The building would be located on the southwest portion of the site and would be set back at a minimum of 25 feet from the southern property line on Walsh Avenue and a minimum of 35 feet from the west property line.

Total WDC building load is estimated at approximately 80 megawatts (MW) (see **Appendix A**). The 32 backup generators would be located in a generation yard adjacent to the north side of the WDC building—this generation yard would be electrically interconnected to the WDC building through a combination of underground and above ground cable bus to a location within the building that houses electrical distribution equipment. The additional 2 MW generator would be interconnected solely to the Power Base Building located on the WDC building southern side. The project includes the switchgear and distribution cabling to interconnect the generators to their respective interconnection points.

The 32 generators in the generation yard would be deployed in a two-level stacked configuration. Half (16) of the generators would be placed on a concrete slab and the other half (16) would be on a second level directly above the ground with the generators mounted on a steel support structure. Each generator unit would be approximately 10 feet wide, 29-1/2 feet long and 12 feet high. Each generator would have an engine exhaust release height of approximately 52 feet 7 inches for the upper level or 45 feet 6 inches for the lower level. None of the engine exhaust stacks would have horizontal releases or rain caps (TN 230307). When placed on slab, they would be spaced approximately 10 feet apart horizontally, while the second level of generators would be mounted 30 feet 11 inches above the ground. The generator yard would be enclosed with 53 feet high precast concrete screen walls on the east and west ends, and a 10 feet high decorative metal fence on the north to separate them from the rest of the property.

Each backup generator is a fully independent package system with dedicated fuel tanks located on a skid below the bottom level generator. The top-level generators would each have a day tank, which is fed from the lower level belly fuel tank. The generators are electrically grouped into six groups of five or six to provide one redundant generator per group of four or five.

A new electrical substation would be constructed to the east of the data center, 17 feet from the eastern property line, which abuts the Union Pacific Railroad (UPRR) tracks. This new 90 megavolt amps (MVA) electrical substation would be a three-bay substation (three 30 MVA 60 kV-12kV step-down transformers) and would have an all-weather asphalt surface underlain by an aggregate base. A concrete masonry unit screen wall, 12 feet in height, would surround the substation. The substation would be capable of delivering electricity to the WDC from Silicon Valley Power (SVP) but would not allow any electricity generated from the WBGF to be delivered to the electrical grid.

The project would provide 109 parking spaces, five of which would be ADA accessible. Parking spaces would be located around the perimeter of the site, with the majority of the spaces being located along the western boundary.

A wrought iron security fence would be located around the North and East perimeter of the site. Access to the site would be provided by three driveways on Walsh Avenue.

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

## Electrical Supply

Electricity for the WDC would be supplied via a new Laurelwood Substation constructed on the project site, connecting through SVP's 60 kV South Loop. The substation would include three 50 MVA (60/12 kV) transformers, only two are required to supply the loads at the WDC. The four circuit breakers proposed in the Laurelwood Substation would allow one of the transformers to be taken out of service for repairs or maintenance while the other two can fully support customer load. 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.

## 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 WDC, 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 backup 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.

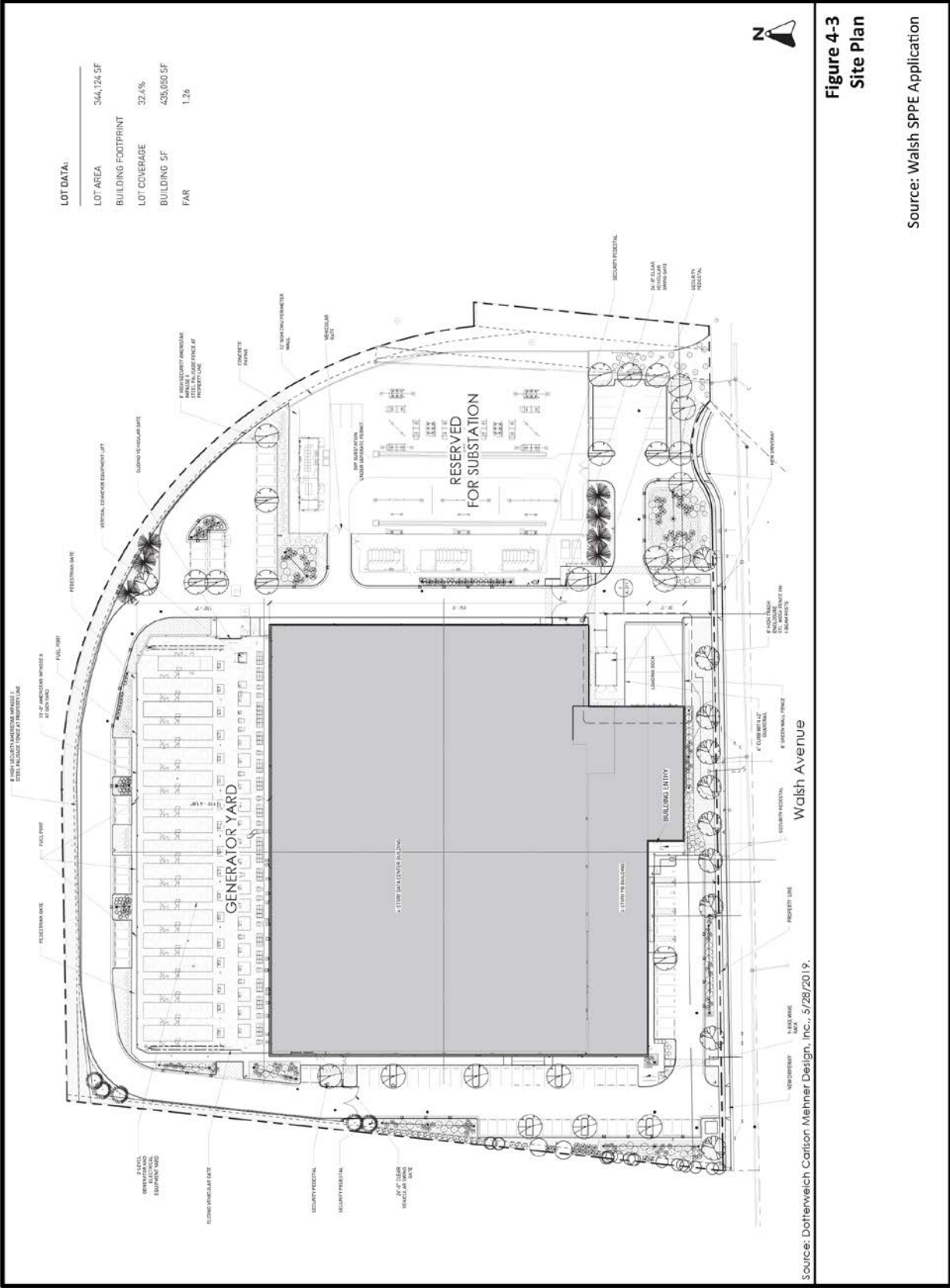
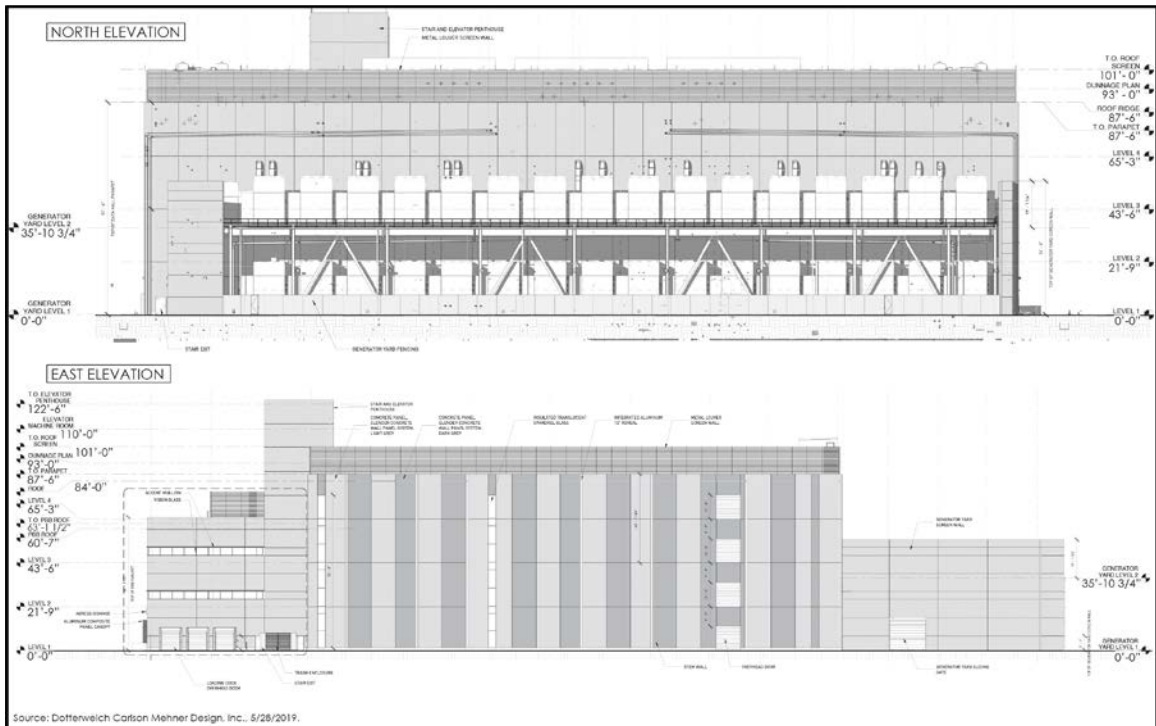


Figure 4-3  
Site Plan

Source: Walsh SPPE Application



**Figure 4-4**  
**North and East Building Elevations**

Source: Walsh SPPE Application

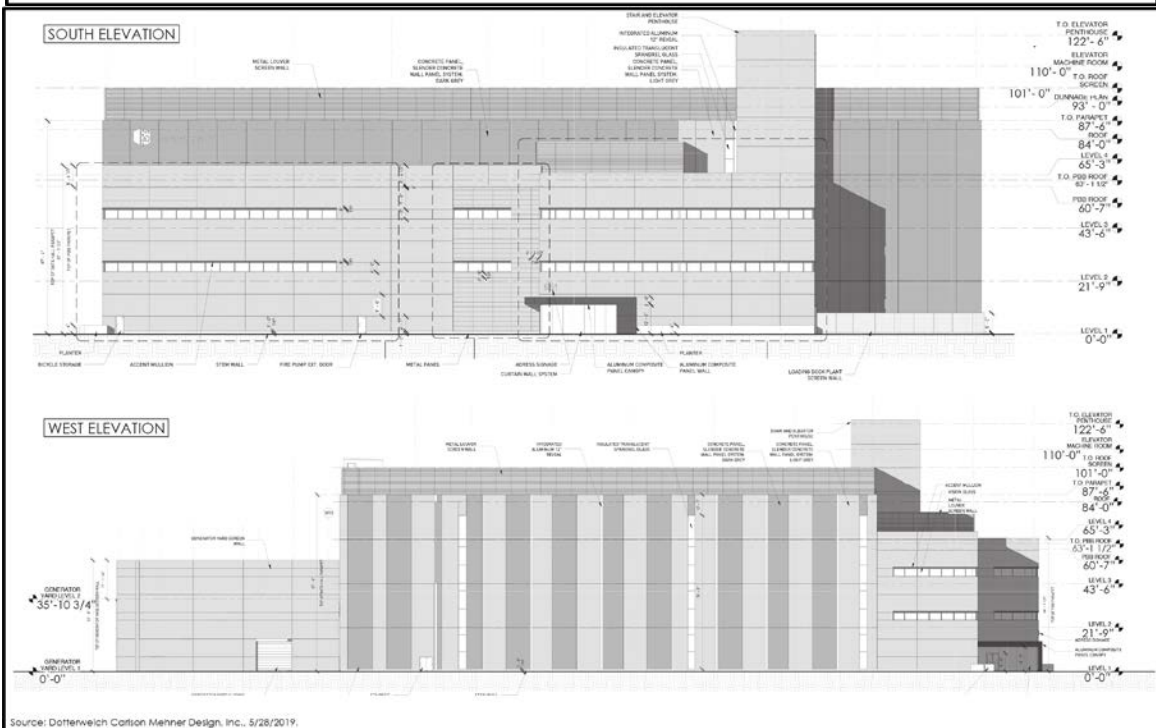


Figure 4-5  
South and West Building Elevations

Source: Walsh SPPE Application

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 WDC'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 WBGF was designed to provide backup electricity to the WDC only in the event electricity cannot be supplied from SVP and delivered to the WDC building. To ensure no interruption of electricity service to the servers housed in the WDC 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 WBGF 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 WDC from the grid and initiating operation of the WBGF. However, if the UPS sensed a complete loss of grid power, it would isolate WDC from the grid, supply power from its batteries to maintain data integrity while the standby generators in WBGF 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 SGBF to prevent SGBF power quality transients from damaging WDC equipment. 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 WDC would consist of two 1,000 kilovolt-amperes (kVA) UPS units which are paralleled together to provide “N Unit” of redundancy for a Critical Capacity of 2MW. The two UPS units would share a potential 2 MW of critical load by employing load sharing capabilities inherent to the UPS design. The power inputs of the two UPS units would be electrically connected to a single main switchboard. This main switchboard would be connected to a dedicated 3,750 kVA utility transformer as well as dedicated to one of the WGBF proposed backup generators.

Five 2 MW UPS systems would equally share a maximum 8 MW critical load. The system works as a distributive redundant (five-to-make-four) N+1 system such that if any single N system were to catastrophically fail, the surviving four would have sufficient capacity to provide power to the maximum critical load. There are four of these five-to-make-four systems in the WDC. Six 2 MW UPS systems would equally share a maximum 10 MW critical load. The system works as a distributive redundant (six-to-make-five) N+1 system such that if any single system were to catastrophically fail, the surviving five would have sufficient capacity to provide power to the maximum critical load. There are two of these six-to-make-five systems in the WDC.

## **Backup Electrical Generation Equipment**

Backup power for the servers would be supplied by 32 generators that are 3 MW in size. One additional 2 MW generator would serve the Power Base Building portion of the WDC building. Each of the 33 standby generators would be powered by a diesel engine certified to achieve Tier-2 exhaust standards and equipped with diesel particulate filters (DPF). Each of the 32 generators would be Cummins Model C3000 D6e with engine Model QSK95, and the Power Base Building generator would be a Cummins Model DQGAFF with engine Model QSK60. The maximum peak generating capacity of Model C3000 D6e is 3 MW with a steady state continuous generating capacity of 2.5 MW. The maximum peak generating capacity of Model DQGAFF is 2.0 MW with a steady state continuous rating of 1.6 MW. Specification sheets for each manufacturer and evidence of the steady state continuous ratings are provided in Application Appendix AQ 2.

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.

## **Backup Generator Fuel System**

The backup generators would use ultra-low sulfur diesel as fuel (< 15 parts per million sulfur by weight). Each of the 16 stacked units would have a 12,800-gallon diesel fuel storage tank that would serve both generators in the unit, along with a 600-gallon day tank that would serve only the upper-level generator. The 2 MW Power Base Building

generator would include a 4,000-gallon diesel fuel storage tank. The 33 generators would have a combined diesel fuel storage capacity of 218,400 gallons, designed to provide 24 hours of emergency generation at full demand of the WDC.

### **Backup Generator 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 WBGF.

### **Water Supply and Use**

Domestic water and fire water connections would be made from the city infrastructure systems located along Walsh Avenue as part of the construction of the WDC building. The WBGF would not require any consumption of water.

### **Waste Management**

The WBGF would not create any waste materials other than minor amounts of solid waste created during construction and maintenance activities.

### **Hazardous Materials Management**

The WBGF would prepare 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 tanks is continuously monitored electronically for the existence of liquids. This monitoring system is electronically linked to an alarm system in the security office that alerts personnel if a leak is detected. Additionally the standby generator units are 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 parks at the gated entrances to the generator yard for re-fueling.

There are no loading/unloading racks or containment for re-fueling events; however, a spill catch basin is 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 7.87-acre project site, located at 651 Walsh Avenue, is currently developed with a one-story 171,259-square foot warehouse complex and associated paved parking and loading areas. The site currently has six driveways on Walsh Avenue.

The initial development of the site appears to have begun in the late 1940s and early 1950s. The existing building complex is comprised of several adjoining warehouse structures of various heights and sizes that have been added to the original structure over time and have been subdivided into tenant spaces. The existing building consists of a mix of architectural styles and materials, including corrugated metal siding, wood, and stucco. The building facades are a mix of materials and architectural styles, including corrugated metal siding, wood and stucco.

A raised concrete loading dock extends along the west side of the building, which is adjoined by paved driveway, parking and loading areas. A second raised concrete loading dock with a ramp extends around the curvilinear northeastern to northern perimeter of the site, along an unpaved former railroad spur alignment. Smaller raised, concrete loading docks and asphalt-paved parking areas are located on the south side of the building, with an additional loading dock on the northeast corner of the building. The driveway, parking and outdoor storage areas on the east side of the building are asphalt-paved. The main entrance to the building is located on the southern side of the structure facing Walsh Avenue. Non-native trees and ornamental landscaping are located along a portion of the Walsh Avenue frontage of the property, as well as the northern and western property boundaries.

The property is bound to the north by 2805 Lafayette, an existing Digital Realty data center; to the south by Walsh Avenue; to the east by the UPRR rail line; and to the west by a pair of buildings with different industrial uses. The project area consists primarily of industrial land uses. Buildings in the area are similar in height and scale to the existing building on the project site. The Norman Y. Mineta San Jose International Airport is located approximately 0.3 miles east of the site.

## 4.7 Project Construction

### Schedule

The overall WDC construction schedule is estimated at 16 months with demolition and grading taking place in months 1 and 2 and building and substation construction taking place from months 3 through 16. Installation of the generators and electrical interconnection of the WBGF facilities would take place beginning in Month 11 and ending in Month 16. The total estimated peak project construction workforce is 175 and

would occur in month 10. The estimated average monthly project construction workforce is 90.

## **Demolition**

The existing improvements on the site would be demolished to allow for construction of the project. Roughly 51,000 cubic yards of soil and undocumented fill would be removed from the site, to be replaced by 60,000 cubic yards of fill to be purchased from an existing commercial fill provider and imported to the site. Excavation would reach a maximum depth of 13 feet for utility trenches.

## **Construction**

Access to the site would be provided by three driveways on Walsh Avenue at similar locations to the current driveways. From west to east, the driveways would be 25, 30 and 26 feet in width, with the eastern most driveway composed of gravel, and functioning only as a maintenance access driveway for the proposed substation.

The WDC proposes to remove 41 trees on-site and plant 49 on-site and 33 off-site replacement trees. New landscaping consisting of trees, large and medium shrubs, and groundcover would be installed along the property boundaries. Trees would be planted five feet away from new or existing water mains or utility lines.

The WDC proposes to construct stormwater treatment areas consisting of rock lined drainage swales and stormwater planters totaling approximately 11,612 square feet. A minimum slope of two percent for drainage would be provided in all planted areas. The stormwater treatment areas would be located around the perimeter of the site and adjacent to paved parking areas. The existing storm water lift station located on the southwest corner of the site would be removed, and a new storm water lift station structure, piping, and pump would be provided to transport the stormwater from the site drainage system to the existing storm water main located on Walsh Avenue. No storm drain pipe connections to the new building are proposed as the runoff from the new building is required to be treated in accordance with C.3 regulations (refer to Application Section 4.10 Hydrology and Water Quality for more information on C.3 requirements). Downspouts for the roof drainage would either discharge to raised flow through planters located adjacent to the building or be connected to curb-o-let or a similar structure and sheet flow to bioretention planters located along the perimeter of the site. Flow through planters and bioretention planters would include perforated underdrains and overflow structures that connect to the on-site storm drains system which eventually discharges to the city storm system in Walsh Avenue.

As part of the construction of the WDC building, sanitary sewer, fiber, and natural gas connections would be made from the city infrastructure systems located along Walsh Avenue. Since the site preparation activities for the WDC would include the ground preparation and grading of the entire WDC site, the only construction activities for the WBGF would involve construction of the generation yard. This would include construction

of concrete slabs, fencing, installation of underground and above ground conduit and electrical cabling to interconnect to the WDC Building switchgear, construction of the racking system to support the second level of generators, and placement and securing the generators.

WP LLC would construct a new distribution substation to support the WDC. The substation would be ultimately owned and operated by SVP as part of its distribution network. The proposed new substation would be interposed on SVP's South Loop between the 115kV receiving station and an adjacent 60kV substation. The South Loop terminal ends are comprised of 115kV receiving stations (#1 and #2) which are connected to the greater SVP Bulk Electric System (BES). Each 115kV receiving station steps the voltage down to SVP's service territory transmission voltage of 60kV. 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 BES would be an ACCR 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, SVP has estimated that one transmission line would come in to the site from the north and one from the south, both routes paralleling the existing UPPR rail lines. There may be up to six new transmission poles.

## **4.8 Facility Operation**

The backup generators would be run for short periods normally 60 minutes or less for testing and maintenance purposes and otherwise would not operate unless there is a disturbance or interruption of the utility supply. The applicant proposes to conduct routine readiness testing only between the hours of 7 AM to 5 PM daily, and only one engine will be tested at any one time. The BAAQMD's Authority to Construct and Permit to Operate would make the limitations on routine readiness testing enforceable, and the California Air Resources Board's Airborne Toxic Control Measure (ATCM) limits each engine to no more than 50 hours annually for reliability purposes (i.e., testing and maintenance).

## **4.9 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.

## 4.10 References

- Walsh 2019a** – Application for Small Power Plant Exemption: Walsh Data Center, dated June 28, 2019. (TN 228877-2). Available online at:  
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.
- Walsh 2019b** – Application for Small Power Plant Exemption: Walsh Data Center, Appendices A-E, dated June 28, 2019. (TN 228877-1). Available online at:  
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.
- Walsh 2019c** – Applicant responses to Data Request Set 1. (TN 229543, 229547-1-2, 229827, 230447, 230448). Available online at:  
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## **Section 5**

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### 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 project in the existing landscape.<sup>1</sup>

<b>AESTHETICS</b>				
Except as provided in Public Resources Code Section 21099 <sup>2</sup> , would the project:	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

<sup>1</sup> 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)

<sup>2</sup> 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]).

### 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 1,000 feet to the east and U.S. Highway 101 is 2,300 feet to the north, respectively.

Industrial uses in the city are the predominant land use between U.S. 101 and the Caltrain<sup>3</sup> 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.

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

The 7.87-acre project site has a one-story 171,259-square foot warehouse complex with associated loading and parking areas, and non-native trees along the perimeter. The original building, constructed beginning sometime between 1946 and 1951, has had a number of warehouses adjoined to it. Various tenants occupy the warehouses. The warehouse complex is to be demolished.

The WDC includes a 435,050-square foot building, one-quarter of the building three stories, the remainder four stories. The south façade of the building would include windows arranged horizontally across the mezzanine and level two, and windows arranged vertically on the eastern portion of the façade, spanning from level three to the roof. The remainder of the building would be precast concrete wall panel assembly with spandrel glass (opaque glass used as a façade material intended to give the appearance of a window). The project would have 32 standby generators located in a generation yard along the outside of the building, and a substation. The project includes planting of 49 onsite and 33 offsite 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

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<sup>3</sup> Commuter rail service between San Francisco and San Jose, with weekday commute-hour service to Gilroy.

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 2010)

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. They are discussed below under the header “Environmental Impacts and Mitigation”.

- 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 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 be reflected away from residential areas and public streets (Santa Clara 2019a, § 18.50.140(c)).
- The MH zoning district requires trash disposal areas 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 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 types (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 Measures:** None.

*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 thresholds for guidance when defining the visual impact standard for the purposes of CEQA.<sup>4</sup> The General Plan does not identify a distinct scenic vista or a specific related policy.

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<sup>4</sup> *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal. App. 4th 477.

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.<sup>5</sup> Review of aerial and street view imagery using Google Earth Pro shows the project site is not located within a scenic vista under any of these definitions. 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<sup>6</sup> 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

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<sup>5</sup> 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.

<sup>6</sup> 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).

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 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?*

The proposed project is within an urbanized area.<sup>7</sup> Based on information from the U.S. Census Bureau, the City of Santa Clara 2018-population estimate was 128,488 (US Census 2018). Greater than 100,000 constituting 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 32 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.

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<sup>7</sup> For the purposes of Public Resources Code section 21071 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."

The MH zoning district requires open landscaped area on a project site (Santa Clara 2019a, § 18.50.120). Specifically, “The following yards and areas shall be developed into and permanently maintained as open landscaped areas 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.” (Santa Clara 2019a, § 18.50.120)

The applicant has provided a site plan and landscape plan that show the approximate 7.87-acre project site would have open landscape area totaling about 18 percent. At least 10 percent of landscape area is within the parking area. New landscaping involving trees, large and medium shrubs, and groundcover and grasses would be installed along the perimeter. The project is to install a new separated sidewalk that includes a landscape planter strip on the project's frontage along Walsh Avenue consistent with the City's street design standards. Water efficient landscaping is to be installed/planted.

The MH zoning district requires new onsite lighting 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. 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 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)). However, through the City of Santa Clara Project Clearance Committee (PCC) process the Police Department commented it prefers any required enclosure fencing be see-through. The site plan and elevations show the trash disposal area enclosed by an 8-foot tall steel mesh fence on I-beam posts. In addition, the loading dock area would be screened from public view by an 8-foot tall green wall, a portion of the data center building, and perimeter landscaping. The current design to screen the trash disposal area from public view, while also accommodating the Police Department's security comment, would not conflict with the zoning regulation governing scenic quality.

The MH zoning district has a maximum building height 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 height of 87.5 feet for the data center. The height exceedance for the building being 17.5 feet, or 20 percent. The Zoning Administrator has the authority to grant a minor modification of the height requirement that does not exceed 25 percent, further

exceedance 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.

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 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 architectural 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 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 are to 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 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 WDC building would largely be precast concrete with a low-glare finish to 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 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.

**Santa Clara 1986** – City of Santa Clara (Santa Clara). City of Santa Clara Architectural Committee Policies Community Design Guidelines. Adopted 1986. Available online at: <http://santaclaraca.gov/home/showdocument?id=46963>.

**Santa Clara 2010** – City of Santa Clara (Santa Clara). City of Santa Clara 2010–2035 General Plan. Adopted November 16, 2010. Available online at: <https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan>. Accessed on: September 4, 2019.

**Santa Clara 2011** – City of Santa Clara (Santa Clara). City of Santa Clara 2010-2035 General Plan Integrated Final Environmental Impact Report. January 2011. Available online at: <http://santaclaraca.gov/home/showdocument?id=12900>.

**Santa Clara 2019a** – City of Santa Clara (Santa Clara). City of Santa Clara City Code. February 2019. Available online at: <https://www.codepublishing.com/CA/SantaClara>. Accessed on: September 4, 2019.

**Santa Clara 2019b** – City of Santa Clara (Santa Clara). Architectural Review. 2019. Available online at: <https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/architectural-review>. Accessed on: September 4, 2019.

**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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

### 5.2.1 Setting

The project site is located in the eastern part of the City of Santa Clara in an urbanized area consisting of industrial and office uses. The site is currently developed with a warehouse complex and paved parking and loading areas.

## Regulatory Background

### *Federal*

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

### *State*

**Williamson Act.** The Williamson Act, or California Land Conservation Act (California Government Code Section 51200 et seq.), is designed to preserve agricultural and open space land. It allows private landowners to enroll in contracts that voluntarily restrict land uses to agricultural and open space uses. In return, Williamson Act parcels receive a lower property tax rate consistent with agricultural and open space uses instead of with their market rate value. California Department of Conservation maps show that the project site is not subject to a Williamson Act contract (CDOC 2016a).

**Farmland Mapping and Monitoring Program.** The California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to assess the location, quantity, and quality of agricultural lands and conversion of these lands to other uses. Every even-numbered year, FMMP publishes a Farmland Conversion Report. FMMP data are used in elements of some county and city general plans, in regional studies on agricultural land conversion, and in environmental documents as a way of assessing project-specific impacts on farmland. The FMMP identifies and maps agricultural lands as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land.

The project site is within an extensive urban area designated as Urban and Built-up Land on the most recent (2016) Santa Clara County Important Farmland map. This designation applies to areas 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 land uses comprising the Urban and Built-up Land designation include residential, industrial, commercial, and institutional facilities. Santa Clara County is mostly designated Urban and Built-up Land, Grazing Land, and Other Land, and includes only minimal farmland (CDOC 2016b).

### *Local*

**City of Santa Clara General Plan/Zoning Ordinance.** The City of Santa Clara General Plan and Zoning Ordinance designate the project site for non-agricultural and non-forestland uses. The site's General Plan designation is Heavy Industrial, which "...allows primary manufacturing, refining and similar activities. It also accommodates warehousing and distribution, as well as data centers" (COSC 2019a). The site's zoning designation is also Heavy Industrial, which allows a variety of industrial and similar uses (COSC 2019b).

## 5.2.2 Environmental Impacts and Mitigation Measures

**Applicant Proposed 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 designated Urban and Built-up Land on the Santa Clara County Important Farmland 2016 map, and there is no farmland near the project site. Construction, operation, and maintenance activities would therefore not convert farmland to a non-agricultural use, and no impacts 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 Heavy Industrial, a non-agricultural zoning designation, and California Department of Conservation Maps show that the site is not subject to a Williamson Act contract. The project site is located in an urban area, and no farmland is located in the site vicinity. As a result, construction, operation, and maintenance activities would not conflict with existing zoning for agricultural use or a Williamson Act contract.

- 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 zoned Heavy Industrial, which allows a variety of industrial and similar uses (COSC 2019b). The project site and vicinity are developed with various urban uses, and no nearby land is zoned for forest land, timberland, or timberland production. As a result, construction, operation, and maintenance activities would cause no impacts.

- 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 an area where forest land is present; therefore, construction, operation, and maintenance would not result in the loss of forest land or conversion of forest land to non-forest use.

- 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 site and surrounding region are developed with urban uses. Therefore, project construction, operation, and maintenance would not cause other changes to the environment that would result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

## **5.2.3 References**

- CDOC 2016a** – California Department of Conservation (CDOC). 2016 Williamson Act Maps. Available online at: <ftp://ftp.consrv.ca.gov/pub/dlrp/wa/>. Accessed on: July 30, 2019.
- CDOC 2016b** – California Department of Conservation (CDOC). 2016 Farmland Mapping and Monitoring Program. County PDF Maps. Santa Clara County. Available online at: <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/scl16.pdf>. Accessed on: July 30, 2019.
- COSC 2019a** – City of Santa Clara Community Development Department, Planning Division. City of Santa Clara 2010–2035 General Plan: Chapter 5 Goals and Policies, Land Use Diagrams Phases I, II, and III. Available online at: <http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan>. Accessed on: July 31, 2019.
- COSC 2019b** – City of Santa Clara. City Code, Chapter 18.50: Regulations for MH-Heavy Industrial Zoning Districts. Available online at: <https://www.codepublishing.com/CA/SantaClara/#!/SantaClara18/SantaClara1850.html#18.50> Accessed on: July 31, 2019.

## 5.3 Air Quality

This section describes the environmental and regulatory setting and discusses impacts associated with the demolition/construction, readiness testing and maintenance, and potential emergency operation of the Walsh Data Center (WDC) and Walsh Backup Generating Facility (WBGF) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

### 5.3.1 Setting

#### Criteria Pollutants

The United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB) have established ambient air quality standards for several pollutants based on their adverse health effects. The U.S. EPA has set National Ambient Air Quality Standards (NAAQS) for ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), particulate matter less than or equal to 10 microns (PM<sub>10</sub>), fine particulate matter less than or equal to 2.5 microns (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), 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<sub>4</sub>), visibility reducing particles, hydrogen sulfide (H<sub>2</sub>S), 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 U.S. 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 <sup>a</sup>	National Standards <sup>b</sup>	
			Primary	Secondary
O <sub>3</sub>	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	—	Same as Primary Standard
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (137 µg/m <sup>3</sup> )	
PM <sub>10</sub>	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Mean	20 µg/m <sup>3</sup>	—	
PM <sub>2.5</sub>	24-hour	—	35 µg/m <sup>3</sup>	Same as Primary Standard
	Annual Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
CO	1-hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	—
	8-hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	—
NO <sub>2</sub>	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )	100 ppb (188 µg/m <sup>3</sup> ) <sup>c</sup>	—
	Annual Mean	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard
SO <sub>2</sub> <sup>d</sup>	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	75 ppb (196 µg/m <sup>3</sup> )	—
	3-hour	—	—	0.5 ppm (1,300 µg/m <sup>3</sup> )
	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (for certain areas) <sup>d</sup>	—
	Annual Mean	—	0.030 ppm (for certain areas) <sup>d</sup>	—

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

<sup>a</sup> California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded.

<sup>b</sup> National standards (other than O<sub>3</sub>, PM, NO<sub>2</sub> [see note c below], and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> 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 PM<sub>10</sub>, 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<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, 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.

<sup>c</sup> 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.

<sup>d</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> 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<sub>2</sub> 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 transports 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**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>State Designation</b>	<b>Federal Designation</b>
O <sub>3</sub>	1-hour	Nonattainment	—
	8-hour	Nonattainment	Nonattainment
PM <sub>10</sub>	24-hour	Nonattainment	Unclassified
	Annual	Nonattainment	—
PM <sub>2.5</sub>	24-hour	—	Nonattainment <sup>a</sup>
	Annual	Nonattainment	Unclassifiable/attainment <sup>b</sup>
CO	1-hour	Attainment	Attainment
	8-hour	Attainment	Attainment
NO <sub>2</sub>	1-hour	Attainment	Unclassifiable/Attainment
	Annual	Attainment	Attainment
SO <sub>2</sub>	1-hour	Attainment	Attainment/Unclassifiable <sup>c</sup>
	24-hour	Attainment	— <sup>d</sup>
	Annual	—	— <sup>d</sup>

**Notes:** <sup>a</sup> On January 9, 2013, U.S. EPA issued a final rule to determine that the Bay Area attains the 24-hour PM<sub>2.5</sub> national standard (U.S. EPA 2013). This U.S. 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 U.S. EPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour PM<sub>2.5</sub> standard until such time as the BAAQMD submits a "redesignation request" and a "maintenance plan" to U.S. EPA, and U.S. EPA approves the proposed redesignation.

<sup>b</sup> In December 2012, U.S. EPA strengthened the annual PM 2.5 NAAQS from 15.0 to 12.0 µg/m<sup>3</sup>. In December 2014, U.S. EPA issued final area designations for the 2012 primary annual PM 2.5 NAAQS (U.S. 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.

<sup>c</sup> On January 9, 2018, U.S. EPA issued a final rule to establish the initial air quality designations for certain areas in the US for the 2010 SO<sub>2</sub> primary NAAQS (U.S. EPA 2018). This final rule designated the SFBAAB as attainment/unclassifiable for the 2010 SO<sub>2</sub> primary NAAQS.

<sup>d</sup> See note "d" under **Table 5.3-1**.

**Sources:** ARB 2019a, BAAQMD 2019a, U.S. EPA 2011c, U.S. EPA 2013, U.S. EPA 2014, U.S. 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 4.7 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 this table that are marked in **bold** indicate that the most-stringent current standard was exceeded during that period.

The maximum concentration values listed above 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 above for 2017 and 2018, most of which occurred from September to mid-November during a period of extensive California-wide wildfire activity. The ozone<sup>1</sup> and PM in 2017 and 2018 strongly illustrate the effect of events like the extensive northern California wild-land fires. Even though they were 100s 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.

<b>Table 5.3-3 AMBIENT AIR QUALITY MONITORING DATA</b>							
<b>Pollutant</b>	<b>Averaging Time</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
O <sub>3</sub> (ppm)	1-hour	<b>0.093</b>	0.089	<b>0.094</b>	0.087	<b>0.121</b>	0.078
	8-hour	<b>0.079</b>	0.066	<b>0.081</b>	0.066	<b>0.098</b>	0.061
PM <sub>10</sub> (µg/m <sup>3</sup> )	24-hour	<b>58.1</b>	<b>54.7</b>	<b>58</b>	41	<b>69.8</b>	<b>155.8</b>
	Annual	<b>22.2</b>	20	<b>21.9</b>	18.3	<b>21.3</b>	<b>23.1</b>
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	24-hour (98th percentile)	<b>35</b>	28	30	24	27	<b>42</b>
	Annual	<b>12.4</b>	9.3	10.2	8.9	9.3	10.2
NO <sub>2</sub> (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 <sub>2</sub> (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, U.S. EPA 2019, BAAQMD 2019b

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

## **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 (NO<sub>x</sub>), including nitrogen dioxide (NO<sub>2</sub>). ROG and NO<sub>x</sub> are known as precursor compounds for O<sub>3</sub>. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight.

Ozone can cause the muscles in the airways to constrict, trapping air in the alveoli, potentially leading to wheezing and shortness of breath. 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. 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. 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.

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. 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. 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. 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 size 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<sub>2</sub> 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<sub>2</sub> (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<sub>2</sub>. NO<sub>x</sub> (NO<sub>2</sub> and NO – nitric oxide) reacts with other chemicals in air and sunlight to form both particulate matter and ozone.

### ***Carbon Monoxide***

CO is a 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<sub>2</sub> is produced through combustion of sulfur or sulfur-containing fuels such as coal. SO<sub>2</sub> 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 predominately released into the atmosphere primarily via the combustion of leaded gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead.

## **Toxic Air Contaminants<sup>2</sup>**

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<sup>3</sup> 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 WBGF are diesel engines, both during demolition/construction and readiness testing and maintenance. Diesel exhaust is a

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<sup>2</sup> 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).

<sup>3</sup> Ambient air quality standards for TACs exist for lead (federal and state standards), hydrogen sulfide (state standard), and vinyl chloride (state standard).

complex mixture of thousands of gases and fine particles and contains over 40 substances listed by the U.S. EPA as hazardous air pollutants and by ARB as toxic air contaminants. The solid material in diesel exhaust is known as diesel particulate matter (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 U.S. EPA as “likely to be carcinogenic to humans” (U.S. 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 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 WBGF include (BAAQMD 2012, Walsh 2019a, page 67 and 68, Table 4.3-17, and Table AQ5-1):

- Residential dwellings
- Schools
- Daycare centers
- 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).

The project site is approximately 7.87 acre (Walsh 2019a, page 61). **Table 4.3-17** and **Table AQ5-1** of the application include the 16 nearest sensitive receptors. There are no school receptors within a radius of 2,000 ft. from the project site. The applicant states that the nearest residences are located to the south of the site at a distance of approximately 3,350 ft. (Walsh 2019a, Page 67 and 68, Table 4.3-17, and Table AQ5-1). Staff did its own search and found there is a closer residence located to the north of the site at a distance of approximately 1,440 ft. from the project fence line. The second nearest residential receptor is located to the south of the site at a distance of approximately 2,580 ft. from the project fence line in the predominantly downwind direction. There is also a Bay Area Surgical Group located to the south of the site at a distance of approximately 3,040 ft. from the project fence line. There is a school located to the northeast of the site at a distance of approximately 3,100 ft. from the project fence line. No schools, residences, parks, playgrounds, day care centers, nursing homes, or

hospitals were found to be located within 1,000 ft. of the WBGF. 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.

## **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 U.S. 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 U.S. EPA for areas in nonattainment with NAAQS. The SIP, which is reviewed and approved by the U.S. 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 Standard 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 U.S. 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 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 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<sub>x</sub>) or Precursor Organic Compounds (POC), or more than 100 tpy of PM<sub>2.5</sub>, PM<sub>10</sub>, or SO<sub>2</sub>, are emitted. If the potential to emit for NO<sub>x</sub> 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 2019c, added to BAAQMD website on June 12, 2019). When determining the PTE for a facility with emergency backup power generators, the PTE 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). 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

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 to comply with 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 increases in regular and predictable emissions, not increases in emissions occurring infrequently when emergency conditions arise. An owner/operator may reduce hours of readiness testing and maintenance to achieve a PTE for ERC mitigation purposes or by installing emissions controls (BAAQMD 2019c).

The project as proposed 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. Their NO<sub>x</sub> emissions calculations identify NO<sub>x</sub> emissions of 34.9 tons. The applicant proposed 34.9 tons NO<sub>x</sub> ERCs by applying 1:1 offset ratio (Walsh 2019c). However, according to the new BAAQMD policy, the PTE calculation should include 100 hours of emergency operation, which makes Walsh NO<sub>x</sub> PTE above the threshold of 35 tons per year. Staff confirmed with the BAAQMD that the offset ratio of 1.15:1 should apply (CEC 2019c). Therefore, the total required NO<sub>x</sub> ERCs should be 40.1 tons. Final details regarding the amount and the source of the NO<sub>x</sub> 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 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 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 NO<sub>x</sub> 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, 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**

<b>Pollutant</b>	<b>Construction</b>	<b>Operation</b>	
	<b>Average Daily Emissions (lbs/day)</b>	<b>Average Daily Emissions (lbs/day)</b>	<b>Maximum Annual Emissions (tpy)</b>
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 <sup>3</sup> 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 <sup>3</sup> annual average (from all local sources) <u>Zone of Influence:</u> 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.<sup>4</sup> 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 WBGF. 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 PM<sub>10</sub>, the U.S. EPA PM<sub>10</sub> Significant Impact Levels (SILs) for 24-hour impacts (5 µg/m<sup>3</sup>) and for annual impacts (1 µg/m<sup>3</sup>) have been used.<sup>5</sup> Additionally, as shown above in **Table 5.3-4**, the BAAQMD significance threshold for a project level annual ambient PM<sub>2.5</sub> increase (0.3 µg/m<sup>3</sup>), along with the potential to cause a new exceedance of an AAQS, are both used to determine project significance for PM<sub>2.5</sub>.

For health risk evaluation purposes, 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 PM<sub>2.5</sub> 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 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 PM<sub>2.5</sub> concentration of greater than 0.3 micrograms per cubic meter (µg/m<sup>3</sup>)

The BAAQMD significance thresholds for cumulative impacts are also summarized below. A project would have a cumulative considerable impact if the aggregate total of all past,

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<sup>4</sup> Staff believes that 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>).

<sup>5</sup> BAAQMD does not have localized impact significance criteria for PM<sub>10</sub>, or 24-hour localized impact significance criteria for PM<sub>2.5</sub>. Comparable significance criteria, for an area with greater levels of particulate pollution, would be the SCAQMD project operation localized significant concentration threshold bases for PM<sub>10</sub> (24-hour = 2.5 µg/m<sup>3</sup>, and annual = 1.0 µg/m<sup>3</sup>) and PM<sub>2.5</sub> (24-hour = 2.5 µg/m<sup>3</sup>).

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 PM<sub>2.5</sub> concentration of greater than 0.8 µg/m<sup>3</sup>

### **5.3.2 Environmental Impacts and Mitigation Measures**

**Applicant Proposed Measures:** The applicant proposes to implement design measures to reduce impacts to reduce impacts to air quality. These measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020a).

**PD AIR-1:** To ensure that fugitive dust impacts are less than significant, the project will implement the BAAQMD's recommended BMPs during the construction phase. These BMPs are incorporated into the design of the project and will include:

- All exposed surfaces (soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting material offsite shall be covered.
- All track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.
- All vehicle speeds on unpaved surfaces shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks shall be paved as soon as possible. Building pads shall be completed as soon as possible after grading unless seeding or soil binders are used.
- Equipment Idling times shall be minimized to 5 minutes per the Air Toxics Control Measure (ATCM). Idling time signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications. All equipment shall be checked by a certified visible emissions evaluator.
- Information on who to contact, contact phone number, and how to initiate complaints about fugitive dust problems will be posted at the site.

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

#### **Construction, Readiness Testing and Maintenance**

LESS THAN SIGNIFICANT IMPACT. 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 consistent with the AQP if that project (BAAQMD 2017b, p. 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 questions “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.

**Required 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. Demolition/construction of the WDC and WBGF is estimated occur over approximately 21 months, or 462 work days (22 days/month).

Onsite demolition/construction emissions would result from demolition activities, site preparation and grading activities, building erection and parking lot construction activities, finish construction activities and the use of onsite construction equipment. Offsite construction emissions would be derived primarily from materials transport to and from the site, and worker travel. Emissions from the 21-month construction period were estimated using the California Emissions Estimator Model<sup>6</sup> (CalEEMod) program. Estimated criteria pollutant construction emissions are summarized in **Table 5.3-5**.

**TABLE 5.3-5 CRITERIA POLLUTANT EMISSIONS FROM PROJECT  
DEMOLITION/ CONSTRUCTION**

<b>Pollutant</b>	<b>Average Daily Emissions (lbs/day) <sup>a</sup></b>	<b>Maximum Project Emissions (tons)</b>	<b>BAAQMD Significance Thresholds for Construction-related Average Daily Emissions (lbs/day)</b>	<b>Threshold Exceeded?</b>
VOC	11.04	2.55	54	No
CO	8.83	2.04	None	N/A
NOx	18.1	4.18	54	No
Sox	0.045	0.0103	None	N/A
PM10 <sup>b</sup>	0.39	0.09 (exhaust) 0.414 (fugitives)	82	No
PM2.5 <sup>b</sup>	0.34	0.078 (exhaust) 0.111 (fugitives)	54	No

**Notes:** <sup>a</sup> The BAAQMD's thresholds are average daily thresholds. Accordingly, the results reported are the total project emissions averaged over the entire demolition and construction duration.

<sup>b</sup> The average daily PM emissions estimates only include exhaust emissions, as the BAAQMD's thresholds are specific to exhaust emissions only.

**Source:** Walsh 2019a

The average daily demolition and construction emissions shown in **Table 5.3-5** are based on the total project emissions averaged over the entire demolition and construction duration. Excluding fugitive dusts, these average daily demolition and 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

<sup>6</sup> 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 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.

compare with the BAAQMD's significance thresholds for PM10 and PM2.5 exhaust emissions.

**Table 5.3-5** shows that the average daily demolition and 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 4.3.2** at page 56 of the application, the applicant proposed to incorporate the BAAQMD's recommended construction BMPs as a project design feature. Staff determines the mitigation measures to be sufficient to reduce 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 demolition/construction emissions. 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 APMs during demolition and construction.

## Readiness Testing and Maintenance

LESS THAN SIGNIFICANT IMPACT. Emissions would result from readiness testing and maintenance of the standby diesel generators, offsite vehicle trips for worker commutes and material deliveries, architectural coatings, consumer product use, natural gas use for comfort heating, electricity use, and facility upkeep such as landscaping, water use, and waste generation. Each of these emission sources is described in more detail below.

**Stationary Sources.** The project would include 32 standby generators with an engine output of 4,307 horsepower per engine at full load with a maximum generating capacity of 3,212 kilowatts (KW) and 1 standby generator with an engine output of 2,922 horsepower at full load with a maximum generating capacity of 2,180 KW. These generators would be made by Cummins with a certified Tier 2 rating and equipped with Diesel Particulate Filters (DPF), which would reduce the diesel particulates to 0.01 grams/brake horse-power hour (g/bhp-hr). All standby generators would be tested routinely to ensure they would function during an emergency event. During routine readiness testing, criteria pollutants and TACs (as DPM) would be emitted directly from the generators. Maintenance and readiness testing usually occurs at loads ranging from 2 to 70% of full load. For the purposes of the application, the applicant assumes a composite readiness testing and maintenance scenario to estimate annual emissions, including 15 hours at 25% load, 15 hours at 50% load, 15 hours at 75% load and 5 hours at 100% load. 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 thus 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 below (BAAQMD 2019c).

**Miscellaneous Sources.** Miscellaneous emissions would occur from operational activities such as worker travel, deliveries, energy and fuel use for facility electrical, heating and cooling needs, periodic use of architectural coatings, landscaping, etc. The applicant estimated the miscellaneous operational emissions using CalEEMod.

**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 NO<sub>x</sub> 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 READINESS TESTING AND MAINTENANCE**

	Annual Emissions (tpy)					
	VOC	CO	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Miscellaneous Sources	2.1	1.9	1.05	0.0084	0.51	0.17
Standby Generators (Testing and Maintenance Only)	2.33	20.2	34.9	0.039	0.078	0.078
Diesel Storage Tanks	< 0.1					
Offsets <sup>a</sup>	--	--	(40.1)	--	--	--
Total Mitigated Emissions	4.53	22.1	(4.2)	0.047	0.59	0.25
BAAQMD Annual Significance Thresholds	10	--	10	--	15	10
Mitigated Emissions Exceed BAAQMD Threshold ? (Y/N)	N	N/A	N	N/A	N	N

**Notes:** <sup>a</sup> The applicant proposed NO<sub>x</sub> offset ratio of 1:1. Staff confirmed with BAAQMD that the correct offset ratio should be 1.15:1 based on the new BAAQMD policy on PTE calculation and determined that the amount of offsets should be 40.1 tpy rather than the 34.9 tpy identified by the applicant in in Table DR8-1 (Walsh 2019c). **Sources:** Walsh 2019a, Walsh 2019d.

**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 NO<sub>x</sub> 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 40.1 tpy of NO<sub>x</sub> offsets. The NO<sub>x</sub> emissions of the emergency generators during readiness testing and maintenance would be fully offset through the permitting process with the BAAQMD. Emissions from miscellaneous sources are not required to be offset under BAAQMD policy which only applies to stationary sources. However the offset of miscellaneous sources emissions will be required under CEQA. Since staff usually applies a 1:1 offset ratio when determining this CEQA requirement, the extra offsets from the standby generators (due to the BAAQMD's 1.15:1 ratio) can be used to offset the emissions of miscellaneous sources. Therefore, the project 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 an Air Quality Impact Analysis (AQIA), and toxic air contaminants in Health Risk Assessment (HRA). This section discusses criterial pollutant impacts from demolition/construction and readiness testing and maintenance. Then the section discusses HRA of TACs for both demolition/construction and readiness testing and maintenance. Finally, the section discusses issues associated with potential emergency operations.

**Criteria Pollutant Air Quality Impact Analysis**

Staff considers any new AAQS exceedance and substantial contribution 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 demolition and 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 so that impacts from fugitive dust emissions would be 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 demolition and 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 demolition and construction emissions (Walsh 2019c). The applicant found the maximum annual-average concentration of combustion-related PM<sub>2.5</sub> to be approximately 0.02 µg/m<sup>3</sup> with the remainder of the PM<sub>2.5</sub> impact being from fugitive dust. These modeled results, including combustion-related emissions and fugitive dust, have been included in the impacts shown in **Table 5.3-7**.

**TABLE 5.3-7 WALSH MAXIMUM IMPACTS DURING DEMOLITION AND CONSTRUCTION (µg/m<sup>3</sup>)**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>Project Impact</b>	<b>Background</b>	<b>Total Impact</b>	<b>Limiting Standard</b>	<b>Percent of Standard</b>
PM <sub>10</sub>	24-hour	6.2	<b>69.8</b>	<b>76.0</b>	<b>50</b>	<b>152%</b>
	Annual	1.5	<b>21.9</b>	<b>23.4</b>	<b>20</b>	<b>117%</b>
PM <sub>2.5</sub>	24-hour	1.9	30.0	31.9	35	91%
	Annual	0.5	10.2	10.7	12	89%
CO	1-hour	10.6	2,748	2,759	23,000	12%
	8-hour	5.0	2,061	2,066	10,000	21%
NO <sub>2</sub>	State 1-hour	29	128	157	339	46%
	Federal 1-hour	29	85	114	188	61%
	Annual	1.7	24.1	25.8	57	45%
SO <sub>2</sub>	State 1-hour	0.007	9.4	9.4	655	1%
	Federal 1-hour	0.007	6.1	6.1	196	3%
	24-hour	0.002	2.9	2.9	105	3%

**Notes:** Concentrations in **bold** type are those that exceed the limiting ambient air quality standard.

**Source:** Data Request Response 4 (Walsh 2019c).

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 demolition and construction period, and the impacts of criteria pollutant emissions during the demolition and 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 U.S. EPA's *Guideline on Air Quality Models* (U.S. 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 impact analysis for readiness testing and maintenance.

**Meteorological Data.** The applicant used the 5-year (2013-2017) record of hourly meteorological data available from the BAAQMD. 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 the meteorology at the project 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.

**Refined Analysis for 1-Hour NO<sub>2</sub> standards.** For comparison to the 1-hour NO<sub>2</sub> NAAQS and CAAQS, the applicant's modeling followed a third-tier approach using the Plume Volume Molar Ratio Method (PVMRM), as described in U.S. EPA's *Guideline on Air Quality Models* (U.S. EPA 2017). For the applicant's PVMRM modeling analysis, the applicant selected an in-stack NO<sub>2</sub>/NO<sub>x</sub> ratio (ISR) of 0.1, which is a typical ratio for diesel-fired internal combustion engines.

The applicant's use of PVMRM included 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<sub>2</sub> to add to the project's incremental NO<sub>2</sub> impact to predict the total NO<sub>2</sub> concentration. For seasonal NO<sub>2</sub> trends, the applicant used NO<sub>2</sub> data from the monitoring station at 158 Jackson Street in San Jose, California for a three-year period spanning December 2014 to November 2017. Seasonal Hour-Of-Day is determined by organizing all of the NO<sub>2</sub> concentrations by hour of day for each season of the year in descending order and selecting the first (for CAAQS) or second (for NAAQS) highest NO<sub>2</sub> concentrations for each hour of the day and season, resulting in 24 hourly background NO<sub>2</sub> values for each season for the NAAQS determination. For purposes of modeling for comparison to the CAAQS, the applicant conservatively assumed the highest hourly NO<sub>2</sub> background values from the three years of data apply to each modeled hour of the day for each season. For purposes of modeling for comparison to the NAAQS, the applicant used the second-highest hourly values in each season-hour averaged across the three years of data to represent the 98th percentile background, which is a more-conservative representation of background than the U.S. EPA recommended third-highest values (U.S. EPA 2011b).

For both 1-hour NO<sub>2</sub> NAAQS and CAAQS analysis, the applicant assumed only one generator would operate at a time for testing and maintenance purposes.

### ***Modeling Assumptions for Readiness Testing and Maintenance***

The Project Description for the generator yard (Walsh 2019a, p.13) indicates that the 32 (3-MW nameplate) standby engine-generator sets would be installed on two different levels. This means that 16 engines would be in the upper level (with a stack height of 52.6 feet), and 16 engines would be in the lower level (with a stack height of 45.5 feet). None of the engine exhaust stacks would have horizontal releases or rain caps (Walsh 2019d).

A screening analysis modeled engine loads from 25% to 100% load. Although each of the engines would typically only be tested individually for up to one hour at any one time, each engine was assumed to operate up to 10 hours/day, from 7:00 AM to 5:00 PM. This allowed a conservative representation of 10 different engines operating one hour each in any one day for 3-hour, 8-hour, and 24-hour averaging times.

**Testing Only a Single Generator at Any Given Time.** The applicant proposes to conduct routine readiness testing only between the hours of 7 AM to 5 PM daily, and only one engine would be tested at any one time. (Walsh 2019a).

**Hour of Day Factor.** The applicant uses an hour of day (HROFDY) factor in AERMOD to account for the applicant's plan that routine readiness testing and maintenance would not occur, and that emissions would be zero outside of the hours of 7 AM to 5 PM daily. Testing and maintenance would only occur between the hours of 7 AM to 5 PM daily (Walsh 2019a).

The short-term (i.e. 1-hour, 8-hour, and 24-hour) and long-term (annual) impacts of the project were all analyzed according to the averaging period of each standard and applicant's proposed testing and maintenance schedule for each hour, each day, and each year. The annual impacts were analyzed using the limit of 50 hours per generator per year for testing and maintenance purposes. **Table 5.3-8** shows that the impacts from standby generator engine testing during operation would not cause exceedances of the PM<sub>2.5</sub>, CO, NO<sub>2</sub>, or SO<sub>2</sub> standards. **Table 5.3-8** also shows that the existing 24-hour and annual PM<sub>10</sub> background concentrations are already above the CAAQS. The project would therefore contribute to existing exceedances of the 24-hour and annual PM<sub>10</sub> CAAQS. The modeled PM<sub>10</sub> and PM<sub>2.5</sub> concentrations from project standby generator engine testing are below the PM<sub>10</sub> SILs of 5 µg/m<sup>3</sup> for 24-hour impacts and 1 µg/m<sup>3</sup> for annual impacts, and the BAAQMD threshold for annual-average PM<sub>2.5</sub> of 0.3 µg/m<sup>3</sup>, for risk and hazards.

**TABLE 5.3-8 WALSH MAXIMUM IMPACTS DURING READINESS TESTING AND MAINTENANCE ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Project Impact	Background	Total Impact	Limiting Standard	Percent of Standard
PM <sub>10</sub>	24-hour	0.41	<b>69.8</b>	<b>70.2</b>	<b>50</b>	<b>140%</b>
	Annual	0.03	<b>21.9</b>	<b>21.9</b>	<b>20</b>	<b>110%</b>
PM <sub>2.5</sub>	24-hour	0.23	30.0	30.2	35	86%
	Annual	0.03	10.2	10.2	12	85%
CO	1-hour	472	2,748.0	3,220	23,000	14%
	8-hour	272	2,061.0	2,333	10,000	23%
NO <sub>2</sub>	State 1-hour <sup>a</sup>	---	---	299	339	88%
	Federal 1-hour <sup>a</sup>	---	---	152	188	81%
	Annual	10.8	24.1	34.9	57	61%
SO <sub>2</sub>	State 1-hour	0.91	9.4	10.3	655	2%
	Federal 1-hour	0.72	6.1	6.8	196	3%
	24-hour	0.2	2.9	3.1	105	3%

**Notes:** Concentrations in **bold** type are those that exceed the limiting ambient air quality standard. <sup>a</sup> The total 1-hour NO<sub>2</sub> impacts evaluated with PVMRM including project impact and seasonal hour of day background. This represents 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.

**Source:** SPPE Application Table 4.3-16 (Walsh 2019a)

The results provided in **Table 5.3-8** are the maximum impacts determined at any point at the project fence line or beyond. The impacts for sensitive receptors would be lower than these values because they are located further away from the stacks. The criteria pollutant concentrations in **Table 5.3-8** show that impacts during routine operation and maintenance would be less than significant.

### **Localized CO Impacts**

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 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.

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 emergency engine generators, during testing 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 for Toxic Air Contaminants**

The Health Risk Assessment (HRA) for the project was conducted separately for the construction and that of the standby generator readiness testing and maintenance.

### **Construction HRA**

LESS THAN SIGNIFICANT IMPACT. The demolition and construction (aka construction) period for WDC and WBGF is estimated to occur over approximately 21 months, or 462 work days (22 days/month) (Walsh 2019a, Table 4.3-6). Construction emissions are a result of demolition activities, site preparation and grading activities, building erection and parking lot construction activities, finish construction activities, and the use of onsite construction equipment (Walsh 2019a, Page 55). The only TAC considered in the HRA for construction activities was DPM, which is a surrogate for diesel exhaust (Walsh 2019c, page 28-30).

### ***Applicant's Construction HRA***

A screening HRA was conducted to evaluate the potential health risks due to construction of the WDC and WBGF. DPM was the only TAC modeled; its emissions result from exhaust of onsite diesel-fueled construction equipment and vehicles. Offsite construction emissions would be derived primarily from materials transport to and from the site, and worker travel (Walsh 2019a, page 55). Since DPM was assumed to be best represented by PM10 emitted as a result of onsite fuel combustion, fugitive dust emissions were excluded as they are not expected to include DPM.

Emissions during the 21-month construction period were estimated using the CalEEMod program (Walsh 2019a, page 55). The U.S. EPA approved AERMOD (version18081) air dispersion modeling program was used to derive the maximum annual ground-level concentrations. The modeled output (maximum ground-level concentrations) was used by HARP (ADMRT 19121) to prepare the construction HRA (Walsh 2019c, HARP output files).

The screening construction HRA estimated the cancer risks during a 2-year exposure duration (starting with exposure during the third trimester of pregnancy) for residential exposure and for worker exposure (from age 16 to 40), aligned with the expected construction duration, at the Maximum Impacted Receptor (MIR)<sup>7</sup>, Maximally Exposed Individual Sensitive Receptor (MEI SR)<sup>8</sup>, Maximally Exposed

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<sup>7</sup> The acronym MIR (maximum impacted receptor) is synonymous with the PMI (Point of Maximum Impact).

<sup>8</sup> The acronym MEI SR is synonymous with MESR (Maximally Exposed Sensitive Receptor)

Individual Resident (MEIR), and Maximally Exposed Individual Worker (MEIW). Chronic risks were also estimated for the MIR (PMI), MEI SR, MEIR and MEIW, based on the same emission rates and ground-level concentrations described above. To calculate chronic risk, the maximum annual ground-level concentration was divided by the DPM REL of 5 µg/m<sup>3</sup>. The ratio is characterized as a health index (HI) (OEHHA & CARB, 2018). Acute (non-cancer) health risks were not estimated because there is no acute inhalation REL for DPM, indicating that DPM is not known to result in acute health hazards (Walsh 2019c, page 26).

The results of the HRA for construction activities are presented in **Table 5.3-9** and show that the excess cancer risks, chronic HIs and acute HIs at the PMI (MIR). MEI SR, MEIR and MEIW are less than the BAAQMD's significance thresholds of 10 in 1 million and 1, respectively. The other risk values, for the specific receptor locations, are based on the conservative analysis approach without any additional refinement.

**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)
PMI (MIR) <sup>1</sup>	3.29	0.00226	NA
MEI SR <sup>2</sup>	0.0184	0.0000126	NA
MEIR <sup>3</sup>	0.0153	0.0000105	NA
MEIW <sup>4</sup>	0.0426	0.00226	NA
BAAQMD Threshold	10	1	NA

**Notes:** <sup>1</sup>Point of maximum impact (PMI) or Maximum Impacted Receptor (MIR). It is located on the southeast corner of the project fence line.

<sup>2</sup>Maximally Exposed Individual Sensitive Receptor (MEI SR). It is a school located to the northeast of the site at a distance of approximately 3100 ft. from the project fence line.

<sup>3</sup>Maximally Exposed Individual Resident (MEIR). It is located to the south of the site at a distance of approximately 2580 ft. from the project fence line. Note this receptor is the second nearest residential receptor staff mentioned above.

<sup>4</sup>Maximally Exposed Individual Worker (MEIW). Its location is the same as PMI.

**Source:** Walsh 2019c, Page 26.

## Readiness Testing and Maintenance HRA

LESS THAN SIGNIFICANT IMPACT. Project operation would include TAC emissions from the diesel-fired emergency standby engines. The only on-site emissions included in the applicant's HRA are the TAC emissions from testing and maintenance of the diesel-fueled emergency standby engines. Offsite vehicle trips for worker commutes and material deliveries were not included in HRA. The specific TACs evaluated in the project readiness testing and maintenance HRA were DPM. DPM emissions resulting from diesel stationary combustion were assumed equal to PM10/2.5 emissions. For conservative evaluation purposes, it was assumed that testing (weekly, monthly, quarterly, annual, and special testing) would occur for no more than 50 hours per year (Walsh 2019a, page 57).

### ***Applicant's Readiness and Maintenance HRA***

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 reference exposure levels (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).

Air was the dominant pathway for public exposure to chemical substances that would be released by the project. Emissions to the air would consist primarily of combustion by products produced by the standby generators. Potential health risks from combustion emissions would occur almost entirely by direct inhalation. Additional pathways were conservatively included in the health risk modeling; however, direct inhalation is considered the most likely exposure pathway. The risk assessment was conducted in accordance with guidance established by the OEHHA (OEHHA 2015) and the ARB (Walsh 2019a, page 67). 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 beef, dairy, pork, chicken, and eggs, were not included either. OEHHA default exposures were assumed for the mother's milk, homegrown produce, and soil exposure pathways (Walsh 2019d, HARP output files).

As mentioned above, DPM is the approved surrogate compound for diesel fuel combustion for purposes of health risk assessment. Annual emissions for each engine are based on the max allowed runtime of 50 hours per year (Walsh 2019a, Table 4.3-14). In response to staff's data request #69, the Applicant reran the HRA for 50 hours per year at 100% load scenario (Walsh 2019d, page 4). The updated results of the applicant's HRA for facility wide WBGF operation are presented in **Table 5.3-10**. The cancer risk of PMI (MIR) (30 year exposure) is 10.6 in a million located on the southeast corner of the project fence line. However, that receptor is not a residential receptor and it is not likely that any person would be subjected to this effect over 30 years. The incremental cancer risk and chronic and acute HI at each of the MEI SR, MEIR and MEIW locations are less than the BAAQMD's significance thresholds of 10 in 1 million and 1 in one million, respectively. Even though the cancer risk of PMI (MIR) is slightly higher than the BAAQMD threshold, considering the HRA was based on extremely conservative assumptions (30 year exposure, 50 hours per year at 100% load scenario), the PMI (MIR) is located at the fence line, and other sensitive receptors are all below the thresholds, staff considers the readiness testing and maintenance of the project to be a less than significant impact.

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

<b>Receptor Type</b>	<b>Cancer Risk Impact (in one million)</b>	<b>Chronic Non-Cancer Hazard Index (HI)</b>	<b>Acute Non-Cancer Hazard Index (HI)</b>
PMI (MIR) <sup>1</sup>	10.6	0.0035697	NA
MEI SR <sup>2</sup>	0.0378	0.000012774	NA
MEIR <sup>3</sup>	0.0381	0.000012896	NA
MEIW <sup>4</sup>	4.64	0.0035697	NA
BAAQMD Threshold	10	1	NA

**Notes:** <sup>1</sup>Point of maximum impact (PMI) or Maximum Impacted Receptor (MIR). It is located on the southeast corner of the project fence line. Although the Cancer Risk Impact exceeds the corresponding significance threshold, staff does not consider this to be a significant impact as described in the text above.

<sup>2</sup>Maximally Exposed Individual Sensitive Receptor (MEI SR). It is a school located to the northeast of the site at a distance of approximately 3,100 ft. from the project fence line.

<sup>3</sup>Maximally Exposed Individual Resident (MEIR). It is located to the south of the site at a distance of approximately 2583 ft. from the project fence line. Note this receptor is the second nearest residential receptor staff mentioned above.

<sup>4</sup>Maximally Exposed Individual Worker (MEIW). Its location is the same with PMI.

**Source:** Walsh 2019c, Page 26 and HARP output files.

## 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)) and section 15145.

Staff determined that assessing air quality impacts of emergency operation of the standby generators could 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 facilities.
- Grid upsets are variable and unpredictable, depending on cause and 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 generators 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 WBGF are indeterminate for a specific emergency scenario. Modeling results can be highly sensitive to even minor adjustments of 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 when the servers perform backup or mirroring activities could be higher than normal daytime commercial activity.

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 WBGF. Approximately 10 years of historical data of past outages of data centers in the SVP service territory are 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**.

<b>TABLE 5.3-11 SVP RELIABILITY STATISTICS FOR ALL CUSTOMER TYPES</b>				
<b>Year</b>	<b>ASAI (%)</b>	<b>SAIDI (minutes)</b>	<b>SAIFI (interruptions per customer)</b>	<b>Total Outages (number)</b>
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 WDC 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 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 generators would be "extremely rare" (CEC 2019a). Project-specific design factors include the site-specific substation that would connect WDC to the SVP looped 60 kV system, a limited number of commercial customers on the looped 60 kV system, redundant transformers to supply WDC, and WDC's proposed uninterruptible power supply (UPS) battery system to carry critical loads during short-term electric transients.

As shown in **Appendix B**, 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.

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

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

**Notes:** Data Center Minutes Interrupted per Interruption calculated by dividing total of data center-minutes interrupted by number of interruptions.

**Sources:** SVP 2018a; 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 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<sup>9</sup> 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 WDC, 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 WDC) 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 WBGF operating during a SVP outage and have asked SVP staff to provide a more refined estimate of 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 expect that future reliability would be worse than the past.

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<sup>9</sup> Recent information from SVP indicates that there were up to 49 data centers during this period in the SVP service territory. See Appendix B of this Initial Study. It is likely that naming conventions and how customers secure server bays within data centers, a single data center may show up in SVPs accounting as two or more data centers.

## 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 **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 WBGF'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 even how 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 Impacts 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, in whose jurisdiction WBGF would be located. Guidelines from U.S. 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 impact analysis at WBGF 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 both 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<sub>2</sub> 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 is one of the reasons for their providing 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 NO<sub>x</sub>. WBGF would have to perform readiness tests and maintenance 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 that these standby generators would run only a few hours during emergencies; and the unlikelihood that emergency emissions would occur during the same time as a peak background concentrations. Staff's review of the guidance suggests that modeling to evaluate ambient air quality impacts for criteria pollutants, specifically for the 1-hour NO<sub>2</sub> 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. SVP, 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 WBGF 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 information provided, staff concludes that, due to the high reliability of the SVP transmission system, WBGF would rarely enter into emergency operations. Accordingly, the potential for 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 high 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.

### **Standby Generator Emergency Operation Health Risk Assessment (HRA)**

This assessment also addresses the health impacts of toxic air contaminants emitted as a result of emergency operations. As described above, the health risk assessment of cancer risk, chronic non-cancer, and acute non-cancer all were evaluated assuming a total of 50 hours of operation per year for all 33 generators operating simultaneously.

The applicant's analysis of acute TAC impacts, shown in **Table 5.3-10** includes all standby generators in emergency operation. That analysis showed the acute impacts to be below the relevant significance thresholds. No additional impact analysis is required to evaluate emergency operations for acute risk because any emergency use is not likely to lead to more than 50 hours per year of total operation. Therefore, 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 5.3-10** are substantially below the significance threshold, and no reasonable emergency operation scenario would change that finding. Therefore, the project would also 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 demolition and construction activities include diesel exhaust from heavy-duty equipment. Odors from demolition and construction activities near existing receptors would be temporary in nature and dissipate as a function of distance. Accordingly, construction/demolition 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/demolition 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 operation 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 project with respect to biological resources that occur in the project area.

BIOLOGICAL RESOURCES		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

### 5.4.1 Setting

The project would occur on a 7.87 acre site in the city of Santa Clara, California. The property is zoned heavy industrial and is currently developed containing a warehouse complex, paved parking, and loading areas. Trees and ornamental landscaping are located along a portion of the Walsh Avenue site boundary as well as the northern and western property boundaries. There are a total of 41 trees, including liquidambar, tree of heaven, iron bark eucalyptus, and one walnut tree, within the site boundaries (Walsh

2019b, Appendix B). The majority of these trees are in poor condition with two in fair condition, however all are not suitable for retention and would be removed and replaced.

The adjacent properties consist of another data center to the north, several buildings to the west and south, and the Union Pacific Railroad right-of-way and rail line is directly to the east. East of the rail line are more buildings. Walsh Avenue is directly to the south of the site. The Norman Y. Mineta San Jose International airport is approximately 900 feet to the east and northeast of the proposed project. Located on the eastern side of the airport is the Guadalupe River, which generally runs from a southeast to a northwest direction and drains into the San Francisco Bay.

Northern coastal salt marsh has been identified as a sensitive natural community (CNDDDB 2019) and is located in the San Francisco Bay approximately 5.3 miles northwest of the proposed project. This community supports several special-status species such as California Ridgeway's rail (Federal Endangered, and State Endangered and Fully Protected), saltmarsh common yellowthroat (California Species of Special Concern), Alameda song sparrow (federal Bird of Conservation Concern and California Species of Special Concern), salt marsh wandering shrew (California Species of Special Concern), and salt marsh harvest mouse (Federal Endangered, and State Endangered and Fully Protected).

## Regulatory Background

### *Federal*

**Endangered Species Act (16 U.S.C., § 1530 et seq., and 50 C.F.R., part 17.1 et seq.).** The Endangered Species Act (ESA) designates and provides for protection of threatened and endangered plant and animal species, and their critical habitat. Its purpose is to protect and recover imperiled species and the ecosystems for which they depend. It is administered by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The USFWS is responsible for terrestrial and freshwater organisms while NMFS is responsible for marine wildlife such as whales and anadromous fish (salmon). Species may be listed as endangered or threatened. All species of plants and animals, except pest insects, are eligible for listing. Species are defined to include subspecies, varieties, and for vertebrates, distinct population segments. The ESA protects endangered and threatened species and their habitats by prohibiting the "take" of listed animals and the interstate or international trade in listed plants and animals, including their parts and products, except under federal permit. Take of federally listed species as defined in the Endangered Species Act is prohibited without incidental take authorization, which may be obtained through Section 7 consultation (between federal agencies) or a Section 10 Habitat Conservation Plan.

**Migratory Bird Treaty Act (16 U.S.C., §§ 703-711).** The Migratory Bird Treaty Act (MBTA) makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of

such a bird except under the terms of a valid federal permit. The USFWS has authority and responsibility for enforcing the MBTA.

**Clean Water Act Sections 401 and 404.** The Clean Water Act (CWA) (33 U.S.C., §§ 1251–1376) requires the permitting and monitoring of all discharges to surface water bodies. Section 404 (33 U.S.C., § 1344) requires a permit from the United States Army Corps of Engineers (USACE) for a discharge from dredged or fill materials into a water of the United States, including wetlands. Section 401 (33 U.S.C., § 1341) requires a permit from the regional water quality control board for the discharge of pollutants. By federal law, every applicant for a federal permit or license for an activity that may result in a discharge into a California water body, including wetlands, must request state certification that the proposed activity will not violate state and federal water quality standards.

### *State*

**California Endangered Species Act (Fish and G. Code, §§ 2050-2098).** The California Endangered Species Act (CESA) of 1984 states that all native species of fish, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected and preserved. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. The California Department of Fish and Wildlife (CDFW) may authorize the take of any such species if certain conditions 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).

**California Fish and Game Code Section 3503.** This section makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

**California Fish and Game Code Section 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.

**California Fish and Game Code Section 3513.** This section protects California's migratory birds by making it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame birds.

The administering agency for the Fish and Game Code sections discussed above is CDFW.

### *Local*

**City of Santa Clara 2010 – 2035 General Plan.** Goals and policies specific to the city of Santa Clara General Plan to protect and preserve the city's natural habitat and wildlife are described in Chapter 5 Goals and Policies, Section 10 Environmental Quality. These policies that are important with respect 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 The protection of fish, wildlife and their habitats, including rare and endangered species.
- 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-P11 Require use of native plants and wildlife-compatible non-native plants, when feasible, for landscaping on city property.
- 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 the removal, alteration, misuse of trees and trees hazardous to public safety. Special authorization for removal or alteration is required.

## 5.4.2 Environmental Impacts and Mitigation Measures

**Applicant Proposed Measures:** The applicant proposes to implement design measures to reduce impacts to reduce impacts to nesting birds. These measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020a).

**PD BIO-1:** If removal of the trees on-site would take place between January and September, a pre-construction survey for nesting raptors will be conducted by a qualified ornithologist to identify active nesting raptor nests that may be disturbed during project implementation. Between January and April (inclusive) pre-construction surveys will be conducted no more than 14 days prior to the initiation of construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys will be conducted no more than 30 days prior to the initiation of these activities. The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, and the ornithologist shall, in consultation with the

State of California Department of Fish and Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet) around the nest until the end of the nesting activity.

The applicant shall submit a report indicating the result of the survey and any designated buffer zones to the satisfaction of the Director of Planning and Inspection prior to the issuance of a tree removal permit by the City Arborist.

*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?*

The proposed project site is on developed land consisting of a warehouse complex, paved parking, and loading areas. The area adjacent and surrounding the site is also developed consisting of buildings, roads, parking lots, and a railroad line. Several (41) ornamental trees (liquidamber, tree of heaven, iron bark eucalyptus, and a walnut) are present and would be removed due to their poor condition. Protected migratory avian species could possibly use the trees and shrubs for nesting.

## Construction

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED. The proposed project requires the removal of 41 trees that provide habitat for nesting birds protected under the Migratory Bird Treaty Act (MBTA) and Fish and Game codes. Construction activities could disturb nesting and breeding birds in trees and shrubs on the proposed project site during the breeding season of February 1 through August 31. Potential impacts to migratory birds that could result from the construction activities and tree removal at the proposed project include the destruction of eggs or occupied nests, mortality of young, and the abandonment of nests with eggs or young birds prior to fledging. These impacts would be significant should they occur.

In the SPPE application, the applicant proposed project design measures requiring pre-construction raptor surveys if the trees would be removed during the breeding season. This includes an ornithologist to inspect all trees in and adjacent to the construction area. In addition, if nests are found the ornithologist would consult with CDFW to determine the appropriate buffer zone around the nest. A report would be provided of the results of the pre-construction survey.

These applicant proposed design measures (**PD BIO-1**) would not reduce potential impacts to less than significant. Conducting only raptor nest surveys does not protect all bird species under the MBTA and Fish and Game codes. In addition, some birds can complete a nest within 14 days, therefore 30 days is too long a time frame and would allow a bird to build a nest and lay eggs after a survey has been conducted and before tree removal or construction activity begins. While an ornithologist has the necessary avian experience, not all biologists conducting bird surveys are

ornithologists, so a qualified biologist is included. While buffers have been mentioned there are no details of what is used to protect the nests from construction and other activities. Also, there are no details of what will be provided in the report and when it would be provided. The report is required to be submitted for review and approval by the city of Santa Clara planning department prior to demolition (Fernandez, pers. comm, 2019). Due to these reasons the applicant-proposed measures would not protect nesting birds in the trees and shrubs prior to tree removal or reduce potential impacts to nesting birds to less than significant.

Implementation of **Mitigation Measures (MM) BIO-1** and **MM BIO-2**, discussed below and agreed to by the project applicant (Walsh 2020b) would reduce potential impacts to nesting birds resulting from implementation of the proposed project. Impacts would be less than significant with mitigation incorporated.

**MM BIO-1: Nesting Bird Avoidance and Minimization Measures.** If construction, tree removal, or vegetation clearing occurs during the nesting season (February 1 through August 31), an ornithologist or other qualified biologist will conduct pre-construction nest survey(s) no more than 14 days prior to the initiation of the aforementioned activities within 500 feet of trees/vegetation. Surveys will be repeated if project activities are suspended or delayed for more than 14 days during the nesting season. The ornithologist or other qualified biologist (with at least a bachelor's degree in a biological science field and demonstrated field expertise in avian species) will be approved by the city of Santa Clara. The size of all buffer zones will initially be a 250-foot radius around the nest of non-raptors and a 500-foot radius around the nest for raptors. Any changes to a buffer zone must be approved by the city of Santa Clara in consultation with CDFW. The nests and buffers will be field checked weekly by the approved ornithologist or other qualified biologist. The approved buffer zone will be marked in the field with exclusion fencing, within which no construction, tree removal, or vegetation clearing will commence until the ornithologist or other qualified biologist and the city of Santa Clara to verify that the nest(s) are no longer active.

**MM BIO-2: Nesting Bird Survey Report.** The qualified biologist shall submit a copy of the pre-construction nest survey report(s) to the city of Santa Clara Director of Community Development prior to demolition for review and approval. The report(s) will contain maps showing the location of all nests, species nesting, status of the nest (e.g. incubation of eggs, feeding of young, near fledging), and the buffer size around each nest. The report will be provided within 10 days of completing a pre-construction nest survey.

## **Operation and Maintenance**

LESS THAN SIGNIFICANT IMPACT. Operation of the project's backup diesel generators would result in emissions of oxides of nitrogen (NO<sub>x</sub>). Nitrogen deposition is the input of NO<sub>x</sub> and other pollutants including ammonia (NH<sub>3</sub>) and nitric acid (HNO<sub>3</sub>), from

the atmosphere to the biosphere. Vehicle and industrial emission sources are contributors of  $\text{NH}_3$  and  $\text{HNO}_3$  along with  $\text{NO}_x$ . Increased nitrogen deposition in nitrogen poor habitat allows the proliferation of non-native species that crowd out the native species. One approach for quantifying nitrogen deposition is through “critical load.” Critical load is defined as the input of a pollutant below which no detrimental ecological effects occur over the long-term.

Several special-status species (California Ridgway’s rail, salt marsh common yellowthroat, Alameda song sparrow, salt-marsh wandering shrew, and salt-marsh harvest mouse) occur in northern coastal salt marsh habitat within a 6-mile radius of the project site. Northern coastal salt marsh is considered a sensitive natural community by the California Department of Fish and Wildlife’s California Natural Diversity Database (CNDDB 2019).

Salt marsh habitat has a high tolerance of nitrogen input because of its open nutrient cycle (Pardo et. al. 2011, pg 3071). Critical load has been estimated to be in the range of 30-40 kilogram of nitrogen per hectare per year ( $\text{kg N/ha/yr}$ ) for early successional salt marsh (Bobbink et. al. 2002, pg 96; Bobbink et. al. 2010, pg 47), and 50-100  $\text{kg N/ha/yr}$  for intertidal wetlands and 63-400  $\text{kg N/ha/yr}$  for intertidal salt marshes (Pardo et. al. 2011, pg 3059).

According to the most currently available data, background nitrogen deposition at the northern coastal salt marsh for 2011 is estimated to be 7.6  $\text{kg N/ha/yr}$  (EnviroAtlas 2019) and for 2012 at 11.4  $\text{kg N/ha/yr}$  (CMAQ 2019). Staff acquired shape files for Community Multiscale Air Quality (CMAQ) modeling-predicted values of annual total deposition and used data from 2012. From the data, staff used the most conservative values to determine impacts to biological resources.

Conservative modeling using AERMOD, performed by Energy Commission staff for similar facilities in Santa Clara (Vantage Data Center at 651 Matthew Street, SC-1 Data Center at 555 Reed Street, and Laurelwood Data Center at 2201 Laurelwood Drive) at comparable distances (approximately 5.5 miles) from salt marsh habitat, yielded estimated levels of nitrogen deposition of between 0.01 and 0.09  $\text{kg N/ha/yr}$ . Nitrogen deposition attributed to the project combined with the background nitrogen values discussed above would be substantially below critical load for salt-marsh habitats. Thus, nitrogen deposition from the project would have a less than significant impact on the habitat of special-status species (California Ridgway’s rail, salt marsh common yellowthroat, Alameda song sparrow, salt-marsh wandering shrew, and salt-marsh harvest mouse).

### **Required Mitigation Measures: MM BIO-1 and MM BIO-2**

- 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**

LESS THAN SIGNIFICANT IMPACT. There are no riparian habitats or other sensitive natural communities within or adjacent to the proposed project. The closest riparian habitats to the project are the Guadalupe River, which is located approximately 0.72 mile to the northeast, and the San Tomas Aquino Creek, which is located approximately 1.15 miles to the east. On-site adherence to discharge requirements for the control of solids and pollutants leaving the construction area, as required in the local National Pollution Discharge Elimination System (NPDES) Permit, would ensure that impacts to natural waterways in riparian habitat are avoided. This includes a Storm Water Pollution Prevention Plan and storm water quality best management practices such as directing runoff into bioswales and replacing a portion of the existing paved parking area with pervious pavement.

### **Operation and Maintenance**

LESS THAN SIGNIFICANT IMPACT. The implementation of the NPDES requires Low Impact Development-based storm water treatment controls to treat post-construction storm water runoff intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using storm water as a resource. It also requires proper installation, operation, and maintenance of storm water treatment measures. Impacts from operation and maintenance of the project would be less than those anticipated during construction for storm water.

Northern coastal salt marsh is the only sensitive natural community, within 6 miles of the project, known to be sensitive to nitrogen deposition. As stated above, salt marsh habitat has a high tolerance of nitrogen input because of its open nutrient cycle (Pardo et. al. 2011, pg 3071) and thus higher critical load in the range of 30-40 kg N/ha/yr (Bobbink et. al. 2002, pg 96; Bobbink et. al. 2010, pg 47) for early successional salt marsh, 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). Current background nitrogen deposition at the northern coastal salt marsh for 2012 is estimated to be 11.4 kg N/ha/yr (CMAQ 2019). Since the nitrogen deposition attributed to the project combined with the background nitrogen would be considerably less than the lowermost critical load of 30-40 kg N/ha/yr for salt marsh, impacts from nitrogen deposition would be less than significant for this sensitive natural community.

**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.) 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 proposed project. Construction and operation would occur on a developed site, therefore there would be no impact to state or federally protected wetlands.

- 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. The proposed project would not occur in a wildlife movement corridor. It would have no impact on the movement of native resident or migratory fish or wildlife species. The Guadalupe River corridor, located approximately 0.72 mile northeast of the proposed project, is the closest area where movement or migration of native resident wildlife species would occur.

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

**Construction, Operation and Maintenance**

LESS THAN SIGNIFICANT IMPACT. A certified arborist conducted a survey and provided a report (Walsh 2019b, Appendix B) of the trees on the proposed project site. All 41 trees, which include 17 liquidambar, 21 tree of heaven, and two eucalyptus trees (all non-native) and one walnut tree (most likely a cultivar species), are proposed for removal because of poor health. None of the trees have a diameter greater than 36 inches at 48 inches above grade. New landscaping would be installed around the perimeter of the site, along the street frontage, and near the building. The landscape plan (Walsh 2019a, Figure 2-5) includes a variety of tree, shrub, perennial, grass, and vine species. Many of these are native or native hybrid species. General Plan Policy 5.3.1-P10 requires all new development to include new street trees and at least a 2:1 on or off-site replacement for removal of existing trees. Eighty-two trees would be planted as part of the proposed project. In addition, the project is consistent with General Plan Policy 5.10.1-P12, which requires the incorporation of native and non-native wildlife friendly plants. The removal of trees requires a permit from the superintendent of streets. The proposed project is consistent with General Plan policies 5.3.1-P10 and 5.10.1-P12 for tree removal and replacement and thus would not conflict with local policies or ordinances protecting biological resources.

**Required Mitigation Measures: None**

- 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 over a 519,000-acre study area encompassing the majority of land in Santa Clara County. While there is an adopted Habitat Conservation Plan, the proposed project is not within the permitting area of this plan. Therefore the proposed project is not subject to any local, regional, or state habitat conservation plans.

**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 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

### 5.5.1 Setting

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 City of Santa Clara is within the valley created by the Santa Cruz and Gavilan Mountains on the west and the Diablo Range on the east. The Santa Clara Valley is a structural valley (that is, the uplifting mountains formed the valley, as opposed to erosional forces) (NPS 2018).

The proposed project would be located in the western Santa Clara Valley, within the watersheds created by the Guadalupe River and creeks emanating from the western mountains. Historically, the Guadalupe River was about 0.75 mile east of the proposed project site, and an unnamed slough was about 2,350 feet east of the proposed project site. An analysis of historic maps and field notes identifies the area of the proposed project as having been a “wet meadow” historically, with willow groves along the sloughs that crossed the valley (SFEI 2010). Elevation at the proposed project site ranges from 30 to 64 feet above sea level. About 15,000 years before present (B.P.), the coast was about 25 kilometers(15.5 miles) farther west from where it is today, and slowly rose over time to its current level (Moratto 1984, page 219).

The proposed project site sits above unconsolidated soils about 500 feet thick that consist of estuarine deposits from the Alameda formation and younger alluvial fans (Walsh 2019a, page 92). The age and depositional nature of these deposits are such that the project area retains the potential for unknown, buried cultural resources despite previous ground-disturbing activities at the proposed site.

The proposed project site is located north of downtown Santa Clara, in an industrial area at 651 Walsh Avenue. Land use in the area is primarily industrial and commercial, with railroad tracks east of the site and Walsh Avenue to the south.

The archaeological record in the Santa Clara Valley began about 9000 B.P. with the Metcalf Creek Aspect, the local expression of the Millingstone cultural pattern. Archaeological deposits dating to this period are characterized by milling slabs and handstones, and large wide-stemmed and leaf-shaped projectile points. Groups during this period were mobile foragers and burials were typically flexed and placed beneath millingstone cairns (Milliken et al. 2007, page 114).

This Early Holocene culture extended until ca. 5500 B.P., when the Early Period began, characterized by developments in groundstone technology (that is replacing millingstones with the mortar and pestle), increased sedentism, regional symbolic integration between cultural groups, and increased trade. Also referred to locally as the Sandhill Bluff Aspect, this pattern lasted until ca. 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 ornaments (and a disappearance of the rectangular shell beads), and 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 instead of flexed, and grave goods were lacking. (Milliken et al. 2007, page 116.)

The Late Period began ca. 900 B.P. with groups increasing the intensity of the creation of wealth objects as seen in burials. Smaller projectile points for use in the bow and arrow were used 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.)

The first European in the Bay Area was Sir Francis Drake, who claimed the region for England on July 17, 1579. During this time the Russians were also exploring Northern California, coming south from Alaska and established Fort Ross in Mendocino because of worries about Spanish expansion north. More information regarding the historic period is available below.

## **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. The Costanoan language is similar to Miwok, and is part of the Utian language family within the Penutian stock. Tamyen (Santa Clara Costanoan) was spoken around the southern end of San Francisco Bay and the lower Santa Clara Valley (and would have been spoken by those in the area of the proposed project).

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. There were two tribelets in close proximity to the proposed project site, San José Cupertino and Santa Clara; both were presumably Tamyen speakers. (Levy 1978, Figure 1.) Kroeber (1976, Figure 42) indicates that two other settlements may have been within a few miles of the project site on the Guadalupe River, *Tamie-n* near Santa Clara, and *Ullis-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. Other nuts such as buckeye, California laurel,

and hazelnuts were also eaten. The Costanoans practiced a type of slash and burn agriculture 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 Chalon and Rumsen groups likely practiced inhumation, while the Chochenyo and Ramaytush usually cremated their dead. Cremations also entailed burning the deceased's 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 pinon pine nuts. The Miwok obtained olive snail shells from the Costanoans. Warfare was conducted both between Costanoan tribelets and among 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 last Costanoan village was subsumed within the mission system. 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 proposed 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 WWII and Silicon Valley
  - Project Site History

### **Spanish/Mission Period (1769 to 1821)**

The Spanish Period was characterized by several important developments, such as the establishment of Spanish Colonial military outposts (presidios), pueblos, and missions throughout Alta California. Nearest to 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 County 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 forty-three 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 County 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 is 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 County 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 the City 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 County 2012, page 46). A modern airport terminal, known as Terminal C, opened in 1965. Designed by a local architect, Hollis Logue, Jr., it was described by the San Jose Mercury News as a "palace of glass, concrete and steel" (SJM 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, 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 twentieth century. Nearly half of the world's supply of fresh, dried, and canned fruit through the end of World War II (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 2016, 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 industrial uses in the valley after WWII. A 1948 aerial photograph shows the plant under construction along Lafayette Street with agricultural uses surrounding it (Santa Clara 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 residents by 1970 (Fike 2016, page 2). Thus, 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 (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 a dozen existing or proposed data centers are within one mile of the proposed Walsh Data Center. This represents yet another contextual shift in the history of the Santa Clara/Silicon Valley.

### ***Project Site 651 (601–711) Walsh Avenue***

The area immediately surrounding the project site consisted of commercial and industrial uses during the late 1940s to early 1950s and has continued more recently with the 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. Immediately to the north of the project site are office/light-industrial buildings occupied by Hitachi Data Systems (2825 and 2845 Lafayette Street) and Digital Realty (2805 Lafayette Street), constructed sometime between 1982 and 1993, per aerial images (Walsh 2019b, Appendix C-1, page 5).

The project site (APN<sup>3</sup> 224-04-059) is a largely rectangular shaped parcel with a curved northeast corner where a rail spur defined the shape of the property. The 7.87-acre site contains a 171,259-square foot warehouse complex and associated paved parking and loading areas. The Keystone Steel & Wire Company constructed the original building on

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<sup>3</sup> Assessor's Parcel Number is a series of digits used as a file number to inventory or identify property.

site in 1946. The existing complex consists of a mix of architectural styles and materials, including corrugated metal siding, wood, and stucco. There are several raised loading docks. The main entrance is located on the southern side facing Walsh Avenue. The property is bounded to the north by 2805 Lafayette Street, to the east by the Union Pacific Railroad line, and to the west by a pair of buildings with industrial uses.

The original building was added onto many times over the years. It remained a wire manufacturing facility until 1974, when W. Leslie Pelio bought the property. The complex has since been subdivided into multiple tenant spaces and tenant improvements and changes to the building's exterior have continued through at least 1997. The property is currently owned by 651 Walsh Partners, LLC.

## 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. A PAA may or may not be one uninterrupted expanse. It could include the 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 discontinuous areas where the project could arguably affect cultural or tribal cultural resources.

The PAA for the proposed project 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, operate, and decommission the proposed project. This includes the proposed building sites, below-grade demolition of various facilities, areas slated for concrete and hardscape removal, removal and replacement of 41 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 remove roughly 51,000 cubic yards of soil with excavation proposed to a maximum depth of 13 feet below current grade for utility trenches (Walsh 2019a, pages 16–17).

For tribal cultural resources, the PAA takes into account sacred sites, ethnographic 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 the San José International Airport. California Energy Commission (CEC) staff therefore treats the ethnographic component of the PAA as coterminous with the archaeological component.

The proposed project site consists primarily of a warehouse complex, pavement, 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 1-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 (SPPE), and examination of pertinent literature concerning cultural resources in the northern Santa Clara Valley.

## Tribal Consultation

CEC staff contacted the NAHC on July 1, 2019 to obtain a search of the Sacred Lands File and a list of tribes who could potentially be interested in the project. The NAHC responded on July 5, 2019 (Totton 2019) that results of the Sacred Lands File search were negative and provided a list of six California Native American Tribes to contact. Staff sent letters to these groups on July 25, 2019 (**Table 5.51**). Follow-up phone calls occurred on August 7, 2019. None of the tribes requested formal consultation but one tribal representative expressed the need for archaeological and Native American monitors due to the relative close proximity of previously discovered human remains.

<b>TABLE 5.5.1 CALIFORNIA NATIBE AMERICAN TRIBES CONTACTED FOR THIS PROJECT</b>	
<b>Tribe</b>	<b>Cultural Affiliation</b>
Amah Mutsun Tribal Band	Ohlone/Costanoan, Northern Valley Yokuts
Amah Mutsun Tribal Band of Mission San Juan Bautista	Ohlone/Costanoan
Northern Valley Yokuts Tribe	Ohlone/Costanoan, Northern Valley Yokuts
Muwekma Ohlone Indian Tribe of the SF Bay Area	Ohlone/Costanoan
The Ohlone Indian Tribe	Ohlone/Costanoan, Bay Miwok, Plains Miwok, Patwin
Indian Canyon Mutsun Band of Costanoan	Ohlone/Costanoan

## Archaeological Survey

No pedestrian archaeological survey occurred due to the developed nature of the proposed site. Once the applicant demolishes existing structures and removes pavement and other surface constructions, a qualified archaeologist will survey the exposed ground surface.

## Historic Architectural Survey

The applicant completed a built environment survey of the project site on November 7, 2019. CEC staff conducted a reconnaissance survey of the site and adjacent parcels on December 11, 2019.

## Results

### Literature Review

The applicant identified no prehistoric or tribal cultural resources within the proposed project site. A records search conducted at the Northwest Information Center (NWIC) on July 9, 2018, identified two cultural resources with Native American components within 0.5 mile of the project site (Psota 2018, page 2). CA-SCL-000702/P-43-001080 is located north of the proposed project area and contained 10 flexed burials with associated grave goods, i.e., two grinding slabs, one handstone, and pieces of Franciscan and Monterey chert. The deposit was in the upper portion of alluvial deposits, ranging from 160 to 185 centimeters (63 to 73 inches) below the preconstruction ground surface. CA-SCL-000430/P-43-000433 is located east of the proposed project site and consists of projectile points, fire cracked rocks, and possible groundstone (Cartier 1980, page 1; Psota 2018, page 2).

In addition to reviewing the information in the SPPE application, CEC staff consulted the City of Santa Clara Historic Properties listing (Santa Clara 2018a), the City of Santa Clara Municipal Code (2018b), the City of Santa Clara General Plan (Santa Clara 2010), County of Santa Clara Historic Context Statement (Santa Clara County 2012), and the County of Santa Clara Heritage Resource Inventory (Santa Clara County 2015). CEC staff also consulted the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), Historic American Building Survey, Historic American Engineering Record, Historic American Landscape Survey, and internal CEC files. CEC staff identified 10 previously recorded built environment resources within 0.5 mile of the project site (see **Table 5.5.2**).

**TABLE 5.5.2 BUILT ENVIRONMENT RESOURCES 45 YEARS OR OLDER RECORDED WITHIN 0.5 MILE OF THE PROJECT**

	Resource Name	Address	Eligibility
1.	P2	2979 Lafayette Street	Not Evaluated
2.	Santa Clara Public Works Building Maintenance Facility	815 Comstock Street	Recommended Not Eligible
3.	651 Mathew Street	651 Mathew Street	Recommended Not Eligible
4.	725 Mathew Street	725 Mathew Street.	Recommended Not Eligible
5.	P3	810 Comstock Street	Not Evaluated
6.	Lafayette Street	Lafayette Street	Not Evaluated
7.	Newark-Kifer 115kV Transmission Line	Not Applicable	Recommended Not Eligible
8.	P1-2975 Lafayette St., Unit 4 Foundation	2975 Lafayette Street (815 Comstock Avenue)	Not Evaluated
9.	Pistol Range	2975 Lafayette Street	Not Evaluated
10.	Paragon Building	2460 De La Cruz Boulevard	Recommended Not Eligible

## Historic Architectural Survey

The built environment PAA used for this project includes properties within a one-parcel boundary of the project site. The study area was established to analyze the project's potential for impacts to built environment historical resources. CEC staff identified five properties with structures 45 years or older within this study area, inclusive of the project site. These include four commercial and warehouse facilities, as well as the Union Pacific/Southern Pacific Santa Cruz Division railroad tracks. These are identified in **Table 5.5-3** and described below in the Architectural Survey Results.

**TABLE 5.5.3 BUILT ENVIRONMENT RESOURCES 45 YEARS OR OLDER WITHIN ONE PARCEL OF THE PROJECT SITE**

Address	APN	Description	Year
651 Walsh Ave (project site)(addresses 601, 621, 623, 625, 627, 631, 661, 691, 701, 705, 711)	224-04-059	Warehouse building	1946
785 Walsh Ave	224-04-011	Single story office/warehouse	1950
650-694 Walsh Ave	224-04-077	Warehouse	1956
614/630 Walsh Ave	224-04-075	Warehouse	1946
Union Pacific/Southern Pacific Railroad-Santa Cruz Division	Not Applicable	Railroad tracks	1870s

The records search conducted at the NWIC indicates that neither the subject property nor the parcels within the one-parcel PAA have been previously recorded or evaluated.

In addition to the survey and evaluation of 651 Walsh Avenue provided by the applicant, CEC staff conducted an investigation of the four properties adjacent to and across the street from 651 Walsh Avenue with extant structures that are 45 years or older on site.

Methods employed included field reconnaissance, review of online permit information (Santa Clara 2019), review of topographic and Sanborn maps and aerial images (EDR 2016), and literature and historical accounts. CEC staff describes the properties below and, based on this research, recommends that the four properties do not constitute historical resources under the California Environmental Quality Act (CEQA), individually or as contributors to a district, per the Criteria of the CRHR. These buildings embody the common vernacular of post-war industrial and warehouse buildings that do not pertain to any significant regional or statewide historical movement or event (Criterion 1), are not associated with any person of significance regionally or statewide (Criterion 2), and are not the work of a master nor an example of a known and recognizable architectural style (Criterion 3). Additionally, the properties do not have the potential to yield important information related to prehistory or history unavailable in another form (Criterion 4).

CEC staff also evaluated the four properties for their potential eligibility for the City of Santa Clara's Historic Preservation and Resource Inventory using the Criterion for Historical or Cultural Significance, Criterion for Architectural Significance, and Criterion for Geographical Significance (see pages 5.5-20 to 22). The project site and the adjacent properties do not meet the criteria and staff recommends they are not eligible for local listing.

### ***651 Walsh (Project Site)***

651 Walsh Avenue (APN 224-04-059) is a 7.63-acre parcel with a 171,259-square foot warehouse complex and associated paved parking and loading areas. The parcel has 11 separate street addresses reflecting multiple tenant occupancies. Those addresses are 601, 621, 623, 627, 631, 661, 691, 701, 705 and 711 Walsh Avenue (Walsh 2019b, Appendix C-1, Figure 2). These multiple addresses also physically reflect the aggregation over time of multiple additions to the original warehouse structure. A full description of 651 Walsh Avenue is found above in the Historic Context section.

### ***614–630 Walsh Avenue***

614–630 Walsh Avenue (APN 224-04-075) is a 1.14-acre parcel. The two-story building (614 Walsh Avenue) at the front of the site was constructed in 1958 and was described in the permit records as a service building and bailing shed. A 2,952-square foot storage building was added to the rear of property in 1978 (630 Walsh Avenue). A steel canopy for equipment storage at the rear was added in 1998. Several alterations made to the property's buildings included a remodel and enclosure of the storage building in 1992, the addition of major electrical equipment to 630 Walsh Avenue in 1993, the addition of a boiler room to 630 Walsh Avenue in 1994, and a major roof repair in 1998 (Santa Clara 2019, BLD1992-092879, BLD1993-098071, BLD1994-099838). The 614 Walsh Avenue building has a roof behind a parapet wall and a tower that appears to be approximately four stories tall, offset from the center of the building. The tower has two windows. Both the main building and the tower are clad in corrugated metal vertical siding with no adornment. There does not appear to be any roof access from the tower and its function is unknown. The roof behind the parapet wall is composed of two barrel roofs, each with

two gabled vents. The exterior walls are perforated on the second story by a combination of original metal windows and replacement vinyl windows. There are two entrance doors on the front elevation. The front of the property is located in a cul-de-sac and features a curved landscaped planter with two palm trees. The planter is flanked by two curb cuts for access to the property. According to city directories, the property's uses included housing the Customer Utility Service Inc. Refuse Removers from at least 1960 to 1970, the Dahlhauser Manufacturing Company Wire Products Manufacturers in 1960, and the Service Corp Refuse Agency in 1970 (R.L. Polk & Co. 1960, page 76; and R.L. Polk & Co. 1970, page 151). The current occupant of 630 Walsh Avenue is Haro's Anodizing Specialist.

### ***650–694 Walsh Avenue***

650–694 Walsh Avenue (APN 224-04-077) is a 5.7-acre parcel with a very large warehouse building on site dating to 1956. Except for a grading permit issued for 50 yards of material in 1984, permit work on the property appears to have been largely for interior alteration and tenant improvements. The single-story warehouse has four parallel bays with gabled rooflines. One loading door services the front of each bay. Additional loading doors and docks are on the rear of the building. One or two doors for personnel or customer access are on each bay façade. The lot has a dogleg in the southeast corner where a former rail spur defined the southern boundary of the parcel with the neighboring property to the south. The building is a generic warehouse building clad in corrugated metal siding. Variations in the cladding indicate changes to openings over time. The building appears to house several businesses, some related to office furniture supply. A landscaped park strip is located in front along the street and three curb cuts provide access. According to city directories, the property housed Berryman Electroplating in 1960. According to Sanborn fire insurance maps and city directories, the building acted as a United States Products (USP) warehouse from 1961 to at least 1970. A USP cannery at 850 Walsh Avenue likely stored its products at this warehouse until sale and shipping to their final destination (651 Walsh Partners 2019, Appendix CRDR-13; R.L. Polk & Co. 1960, page 76; R.L. Polk & Co. 1970, page 151). USP was an independent, San Jose-based cannery company, notable for its use of Dutch techniques to reduce waste (The Evening News 1922, page 1). The company's flagship cannery operated on 570 Race Street, San Jose, California (McKay 2006). Building permits for 650-694 Walsh Avenue warehouse show that offices and office amenities were added between 1984 and 1994 (Santa Clara 2019, BLD1984-64990, BLD1984-66142, BLD1987-075678, BLD1987-075834, BLD1994-103380).

### ***785 Walsh Avenue***

785 Walsh Avenue (APN 224-04-011) is a nearly 1-acre lot with a single-story office and warehouse building. Permit records indicate the building was constructed in 1950. An office addition to the building was permitted in 1957 and a loading dock (22 feet wide x 70 feet long x 4 feet high) was added in 2010. Permit records do not indicate any other significant exterior alterations. The office addition faces the street and connects to the warehouse at the southeast corner. The warehouse building is a T-shaped structure, with

the top of the T extending south to north along the western property boundary with no apparent setback from the property line. The office addition is differentiated from the warehouse by roof color. Siding materials and paint color are similar between the two buildings. Rooflines are largely gabled. The eastern elevation of the office addition features four clerestory windows following the angled roofline of the gable end. Several canopy structures extend above the loading and staging areas of the warehouse building. Several trees and a plant bed are located along the front of the office addition on either side of the entrance, facing the street. An asphalt parking area fronts the office building. There is no identifying sign or address in view from the street. From its earliest listing in a city directory in 1956, until the present, the property housed the Barnhart Construction Company (R.L. Polk & Co. 1956, page 303). Currently, electrical equipment fabrication takes place on site related to the Redwood Electric Group, which has offices in Roseville, San Francisco, Santa Clara, and Vacaville, California.

### ***Southern Pacific Railroad-Santa Cruz Division/Union Pacific Railroad Tracks***

The railroad predates the warehouse operations on the project site. The removal of the railroad spur serving the property, as well as the pending demolition of the warehouse operations it served, degrades the historical integrity of the resource and its potential eligibility. Integrity has several aspects: 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. The railroad does not appear to retain sufficient integrity to its setting and association during the period of significance. The railroad changed from its initial use as a connector to the local railroad lines that eventually reached 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 lack of integrity to the period of significance makes it ineligible for listing under the NRHP, CRHR or City of Santa Clara's significance criteria. Thus, the resource does not qualify as a historical resource under CEQA.

## **Regulatory Background**

### ***Federal***

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

### ***State***

### ***California Environmental Quality Act***

Various laws apply to the evaluation and treatment of cultural and tribal cultural resources. CEQA requires the lead agency to evaluate cultural and tribal cultural resources by determining whether they meet several sets of specified criteria that make such resources eligible to the CRHR. Those cultural or tribal 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(s) 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 CRHR”, or “a resource listed in a local register of historical resources or identified as significant in a 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 our history;
- Criterion 2, is associated with the lives of persons significant in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, 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 to history or prehistory.

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 can 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 (CEQA defines historical resources to be a part of 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 significances 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), the State CEQA Guidelines, define a substantial adverse change as “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 for consultation with California Native American tribes about tribal cultural resources within specific timeframes, observant of tribal confidentiality, and—if tribal cultural resources could be impacted by a CEQA project—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).

### ***Local***

#### ***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 County 2018a). 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 Historic 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 Geographical 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 Measures:** The project proposes to implement design measures to ensure the project's impacts to archaeological and tribal cultural resources and human

remains are less than significant. These measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020a).

#### **PD CUL-1**

- A Secretary of the Interior-qualified archaeologist and a Native American cultural resources monitor shall be on site to monitor grading of native soil once all pavement is removed from the project site. The project applicant shall submit the name and qualifications of the selected archaeologist and Native American Monitor to the Director of Community Development prior to the issuance of a grading permit. Preference in selecting Native American monitors shall be given to Native Americans with:
  - Traditional ties to the area being monitored.
  - Knowledge of local historic and prehistoric Native American village sites.
  - Knowledge and understanding of Health and Safety Code, Section 7050.5 and Public Resources Code, Section 5097.9 et seq.
  - Ability to effectively communicate the requirements of Health and Safety Code, Section 7050.5 and Public Resources Code, Section 5097.9 et seq.
  - Ability to work with law enforcement officials and the Native American Heritage Commission to ensure the return of all associated grave goods taken from a Native American grave during excavation.
  - Ability to travel to project sites within traditional tribal territory.
  - Knowledge and understanding of Title 14, California Code of Regulations, Section 15064.5.
  - Ability to advocate for the preservation in place of Native American cultural features through knowledge and understanding CEQA mitigation provisions.
  - Ability to read a topographical map and be able to locate site and reburial locations for future inclusions in the Native American Heritage Commission's Sacred Lands Inventory.
  - Knowledge and understanding of archaeological practices, including the phases of archaeological investigation.

After removal of pavement and prior to grading, the archaeologist shall conduct a pedestrian survey over the exposed soils to determine if any surface archaeological manifestations are present. The archaeologist will monitor full-time all grading and ground disturbing activities in native soils associated with construction of the proposed project. If the archaeologist and Native American monitor believe that a reduction in monitoring activities is prudent, then a letter report detailing the rationale for making such a reduction and summarizing the monitoring results shall be provided to the Director

of Community Development. Department of Recreation 523 forms shall be submitted along with the report for any cultural resources encountered over 50 years old.

- In the event that prehistoric or historic 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 Secretary of the Interior-qualified archaeologist shall examine the find and record the site, including field notes, measurements, and photography for a Department of Parks and Recreation 523 Primary Record form. The archaeologist shall make a recommendation regarding eligibility for the California Register of Historical Resources, data recovery, curation, or other appropriate mitigation. Ground disturbance within the 50-foot radius can resume once these steps are taken and the Director of Community Development has concurred with the recommendations. Within 30 days of the completion of construction or cultural resources monitoring, whichever comes first, a report of findings documenting any cultural resource finds, recommendations, data recovery efforts, and other pertinent information gleaned during cultural resources monitoring shall then be submitted to the Director of Community Development. Once finalized, this report shall be submitted to the Northwest Information Center at Sonoma State University.
- Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program training to all existing and any new employees. This training should include: a discussion of applicable laws and penalties under the laws; samples or visual aids of artifacts that could be encountered in the project vicinity, including what those artifacts may look like partially buried, or wholly buried and freshly exposed; and instructions to halt work in the vicinity of any potential cultural resources discovery, and notify the city-approved archaeologist and Native American cultural resources monitor.

## **PD CUL-2**

- In the event that human remains are discovered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission. All actions taken under this defined mitigation measure shall comply with Health and Human Safety Code § 7050.5(b).

## Cultural Resources CEQA Checklist Questions

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

### Construction

LESS THAN SIGNIFICANT. A record search and literature review did not identify archaeological resources in the proposed project area. The applicant proposed measures to survey the exposed ground surface for archaeological resources once demolition of existing structures is complete. The applicant also proposed measures to avoid inadvertent discoveries of buried archaeological resources that could occur during construction by requiring cultural resources monitoring by a qualified archaeologist and Native American. These measures as proposed by the applicant as part of the project would ensure that there would be no impact to historical resources as defined in § 15064.5 during construction of the project.

### Operation and Maintenance

NO IMPACT. Operation and maintenance of the proposed project would not require excavation or other ground-disturbance. Therefore, there would be no impact to historical resources as defined in § 15064.5.

**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. A record search and literature review did not identify archaeological resources that could qualify as unique archaeological resources under CEQA in the proposed project area. The applicant proposed measures to survey the exposed ground surface for archaeological resources once demolition of existing structures is complete. The applicant also proposed measures to avoid inadvertent discoveries of buried archaeological resources that could occur during construction by requiring cultural resources monitoring by a qualified archaeologist and Native American. These measures as proposed by the applicant as part of the project would ensure that there would be no impact to archaeological resources that could qualify as unique archaeological resources under CEQA during construction of the project.

### Operation and Maintenance

NO IMPACT. Operation and maintenance of the proposed project would not require excavation or other ground-disturbance. Therefore, there would be no impact to archaeological resources that could qualify as unique archaeological resources under CEQA.

**Required Mitigation Measures:** None.

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

### **Construction**

LESS THAN SIGNIFICANT. Included as part of the project are measures the applicant would take in event of encountering human remains. In the event that human remains are discovered during on-site construction activities, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission. All actions taken under this project design measure shall comply with Health and Human Safety Code § 7050.5(b). Therefore, there would be no impact to human remains during construction.

### **Operation and Maintenance**

NO IMPACT. Operation and maintenance of the proposed project would not require excavation or other ground-disturbance. Therefore, there would be no impact to human remains.

**Required Mitigation Measures:** None.

## **Tribal Cultural Resources CEQA Checklist Questions**

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

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

### **Construction**

NO IMPACT. A records search and literature review did not identify listed or eligible tribal cultural resources in the proposed project area. The applicant proposed measures to survey the exposed ground surface for tribal cultural resources once demolition of existing structures is complete. The applicant also proposed measures to avoid inadvertent discoveries of buried tribal cultural resources that could occur during construction by requiring cultural resources monitoring by a qualified archaeologist and Native American. These measures as proposed by the applicant as

part of the project would ensure that there would be no impact to listed or eligible tribal cultural resources during construction of the project.

### **Operation and Maintenance**

NO IMPACT. Operation and maintenance of the proposed project would not require excavation or other ground-disturbance. Therefore, there would be no impact to listed or eligible tribal cultural resources.

**Required Mitigation Measures:** None.

- 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?*

### **Construction**

LESS THAN SIGNIFICANT. A records search and literature review did not identify tribal cultural resources in the proposed project area. The applicant proposed measures to survey the exposed ground surface for tribal cultural resources once demolition of existing structures is complete. The applicant also proposed measures to avoid inadvertent discoveries of buried tribal cultural resources that could occur during construction by requiring cultural resources monitoring by a qualified archaeologist and Native American. These measures as proposed by the applicant as part of the project would ensure that there would be no impact to tribal cultural resources during construction of the project.

### **Operation and Maintenance**

NO IMPACT. Operation and maintenance of the proposed project would not require excavation or other ground-disturbance. Therefore, there would be no impact to tribal cultural resources.

**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 project with respect to energy. 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	Less than Significant			
	Potentially Significant Impact	With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G

### 5.6.1 Setting

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

The WDC would include 32, 3-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 plus one 2-MW genset that would provide backup electricity for a three story administration building (Walsh 2019a, Section 2.2). The gensets would serve WDC 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 32 gensets would be Cummins Model C3000D6e and the genset dedicated to the administration building would be a Cummins Model 2000DQKAE. Staff has verified the output capacity of these generators from their product sheets (Walsh 2019b, Appendix A, AQ2). The maximum electrical load requirement of the WDC would be 80 MW, which includes the electrical power load of the Information Technology (IT) servers, the cooling load of the IT buildings, and 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) and Department of Energy (DOE) 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 WDC.

### *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. Examples of policies are:

- **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** aims 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** aims 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

**Applicant Proposed Measures:** None.

- 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. 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 (Walsh 2019a, Section 2.6). At this rate, the total quantities of diesel fuel used for all the generators operating at full load would be approximately 8,171 barrels per year (bbl/yr)<sup>1</sup>. Compared to California's

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<sup>1</sup> Calculated as: 208 gallons per hour x 50 hours per year x 33 generators = 343,200 gallons per year = 8,171 bbl/yr.

diesel fuel supply of approximately 341,036,000 bbl/yr<sup>2</sup>, this rate is insignificant (0.0024 percent). It is important to note that maintenance and readiness testing of the gensets are crucial to the project's viability. This includes the primary gensets as well as the redundant ones. Even though the redundant gensets are purposed to provide backup service to the rest of the gensets, their operational reliability is equally important. If any of the primary gensets fails to operate, a redundant genset must be ready to run to take up the lost load. So, it is crucial that the redundant gensets be regularly tested and maintained according to the same testing and maintenance requirements as the primary ones and as prescribed by the manufacturer's warranty conditions. The most important data center criteria 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 operational purpose would be limited to times when there is an interruption of SVP's electric service. Under emergency conditions, defined as the loss of electrical power to the data center, the generators could operate and use nonrenewable resources during infrequent outages and for short durations, as necessary to maintain data center operations. The Cummins Models selected for this project have efficiency ratings comparable to other popular 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 its computer systems. It is defined as the ratio of total facility energy draw (including all facility mechanical and electrical loads) to IT server power draw ( $PUE = \text{total facility source energy} / \text{IT source energy}$ ). 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 always larger than 1, the closer the PUE 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 measuring and comparing energy and power efficiencies associated with data centers since 2007 (ASHRAE 2016). The PUE metric was designed to compare facilities of similar size and within similar climatic conditions. PUE factors started at 2.0, but recent PUEs have since been migrating down to 1.25 or lower, demonstrating a significant improvement over the years. A PUE of 1.5-2.0 is considered "efficient", while a PUE of 1.2-1.5 is considered "very efficient". The average PUE for the WDC would be 1.53. This PUE estimate is based on design

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<sup>2</sup> The Energy Commission's Weekly Fuels Watch Report for 2018 (latest annual report available).

assumptions and represent worst case. The applicant states that its experience with operation of other data centers is that the actual PUE would be closer to 1.30 (Walsh 2019a, Section 2.2.3.2).

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<sup>3</sup> 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 4 kilowatts (Walsh 2019a, Page 107), 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 the value is, the higher the power density and also the more information it processes per unit of electricity consumed, resulting in more efficient use of energy. The WDC's low rack power rating shows that it would use energy efficiently.

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 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;
- 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, as well as 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 WDC's need for reliable standby generation. The space and resource requirements for 80 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. Similarly, gas-fired engines

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<sup>3</sup> 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.

are too slow to start or ramp up and down 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 WDC'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, WDC 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 less nonrenewable power would be provided to WDC.

WDC 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). 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 WDC's gensets would operate only 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, WDC 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>.

**Santa Clara 2010** – City of Santa Clara (Santa Clara). 2010–2035 General Plan. Adopted November 2010. Available online at: <http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan>.

**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>.

**Walsh 2019a** – Application for Small Power Plant Exemption: Walsh Data Center, dated June 28, 2019. (TN 228877-2). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

**Walsh 2019b** – Application for Small Power Plant Exemption: Walsh Data Center, Appendices A-E, dated June 28, 2019. (TN 228877-1). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## 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

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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? *	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

\*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 Methodology

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.

**TABLE 5.7-1: POTENTIAL FOSSIL YIELD CLASSIFICATION**

BLM PFYC Designation	Assignment Criteria Guidelines and Management Summary
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.
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 separated 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 site is mostly underlain extensively by the Mud Member of the Alameda Formation, which contains a high clay content and forms an extensive east-west aquitard across the area. This unit averages 25 to 50 feet thick with gravel and sand layers commonly encountered in the middle of the unit. Deeper geological units beneath the site consist of a sequence of alluvial fan deposits interbedded between older muds (Walsh 2019a).

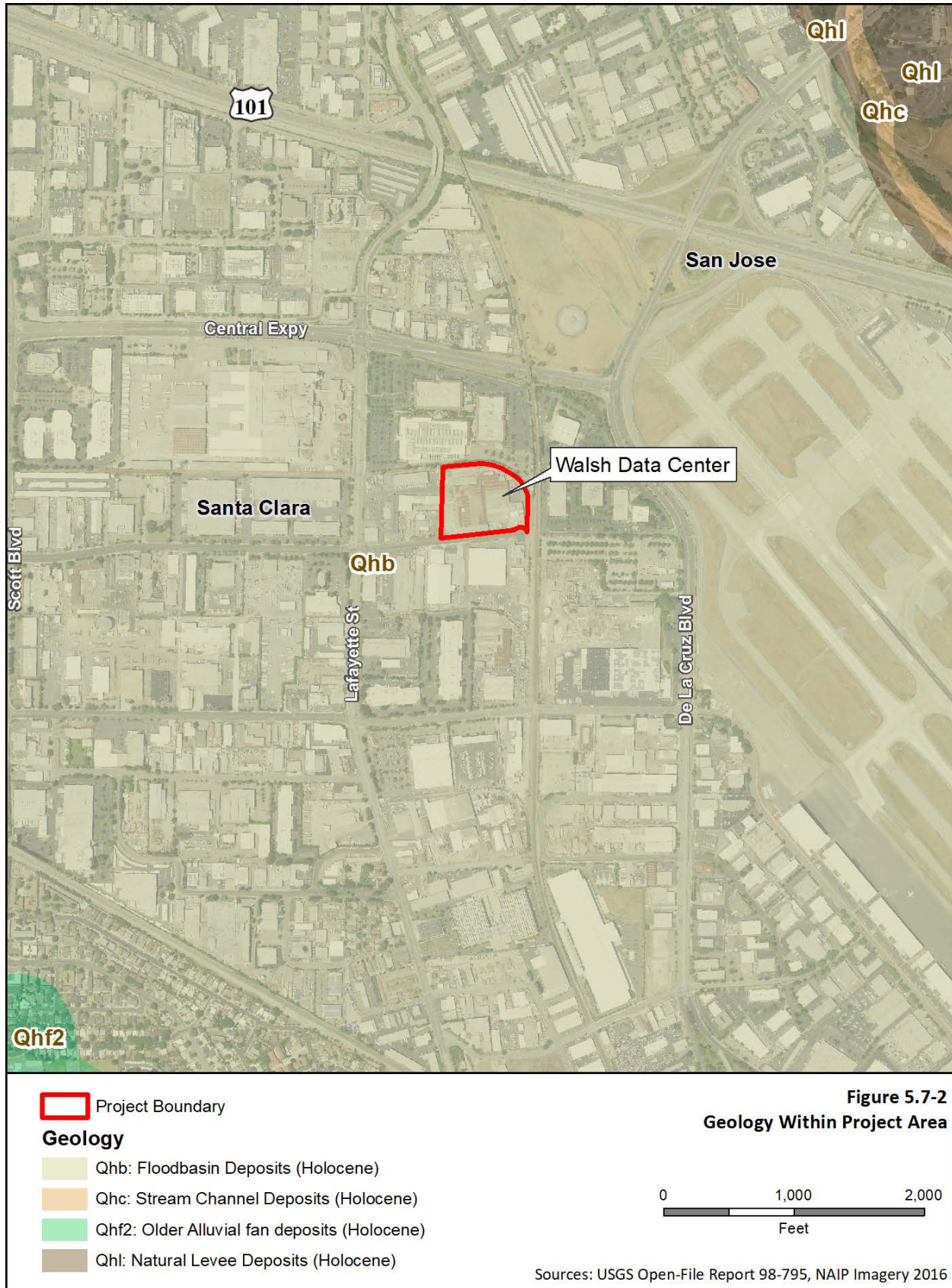
Holocene age sediments shown in **Figure 5.7-2** have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources. However, these recent sediments overlie sediments of older Pleistocene sediments with high potential to contain paleontological resources. These 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.



**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



The City of Santa Clara General Plan, 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 mean elevation is about 45 feet (NAVD88), and the surrounding area is relatively flat with elevations ranging from 30 to 64 feet above sea level (Walsh 2019b). Erosion hazards are limited and there are no landslide hazards (Figure 5.7-2) (Walsh 2019a).

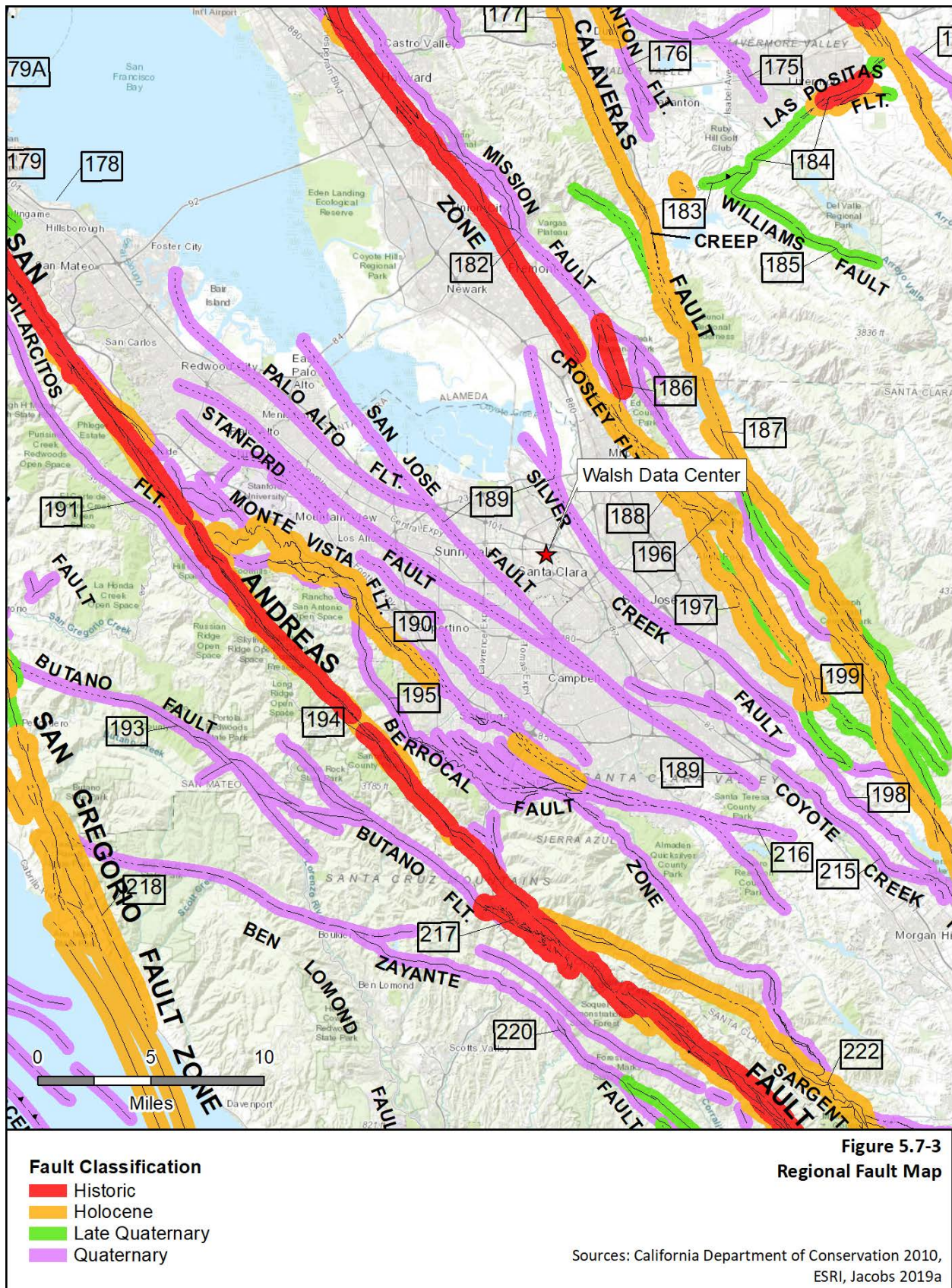
## Groundwater

Based on soil borings completed for the Limited Phase II Environmental Site Assessment (Walsh 2019b, Appendix C-2), depth to groundwater in the area is approximately 16 to 24 feet below ground surface (bgs). Fluctuations in the level of the groundwater may occur due to variations in rainfall, underground drainage patterns, and other factors not evident at the time measurements were made.

## 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 Fault, and the Calaveras Fault) that comprise the San Andreas Fault system extend through the Bay Area (CGS 2015). The Walsh 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 (Walsh 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 9.4 miles east of the site), the San Andreas Fault (approximately 11.3 miles west of the site), and the Hayward Fault (approximately 6.1 miles east of the site). 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 of the Mud Member of the Alameda Formation. Therefore, the potential for significant differential seismic settlement affecting the proposed project is presumed low.

## 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). Borings completed near the southern boundary of the site indicated there is two to three feet of generally coarse-grained fill overlying native silty clay soil (Walsh 2019b). 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).

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.

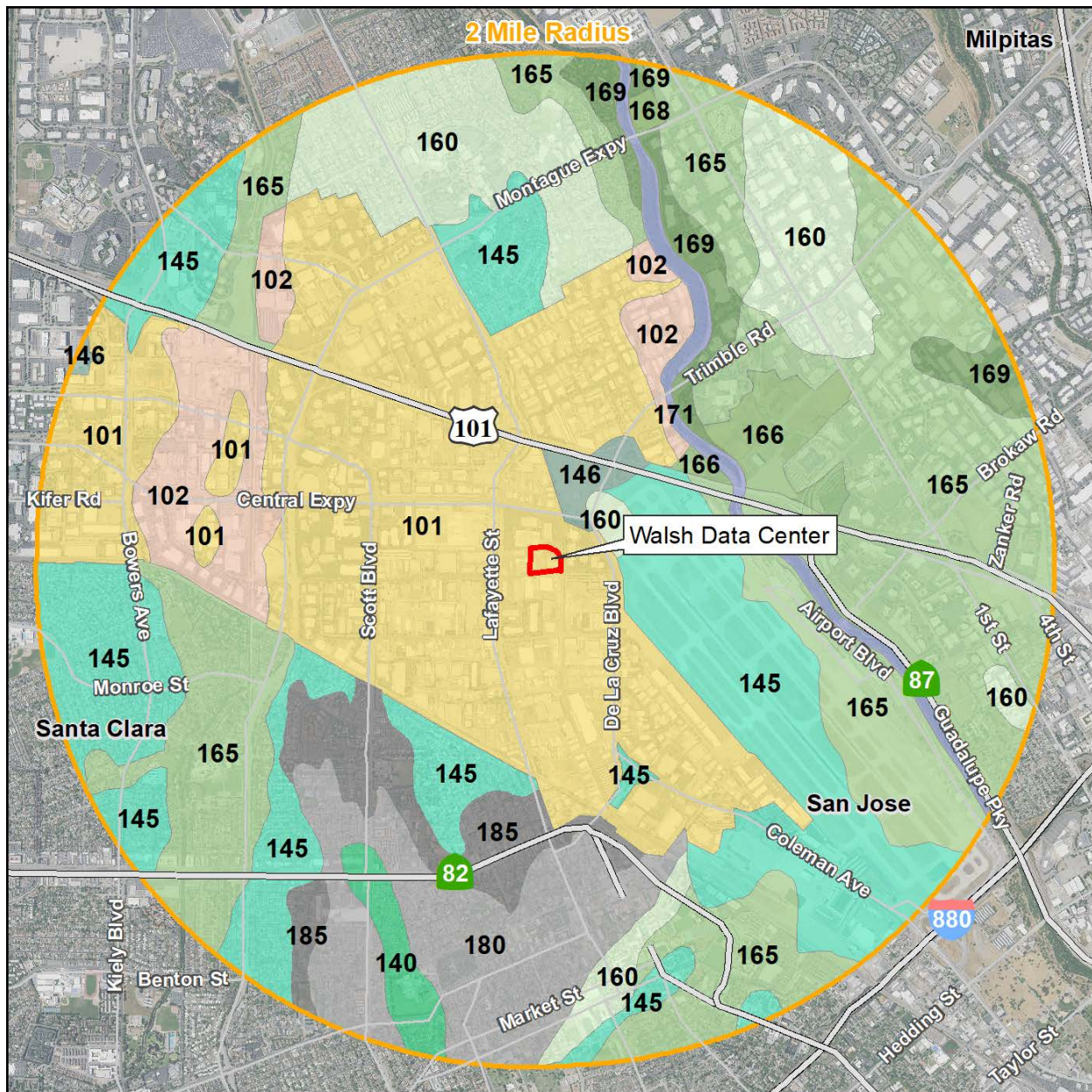
Excavations at the site would reach a maximum depth of 13-feet for utility trenches, and surficial material removed from the site would be replaced with fill imported to the site (Walsh 2019a).

## 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 project site is within a State- and County-designated Liquefaction Hazard Zone (Walsh 2019a). Proposed structures would be designed and constructed to account for this in accordance with the latest edition of the California Building Code.

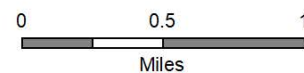
## Lateral Spreading

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 where the first tension crack would occur.



**Figure 5.7-4**  
**Soil Types Within Project Area**

- 101: Urban land, 0 to 2 percent slopes, basins
- 102: Urban land, 0 to 2 percent slopes, alluvial fans
- 110: Xerorthents, trash substratum, 0 to 2 percent slopes
- 140: Urban land-Flaskan complex, 0 to 2 percent slopes
- 145: Urbanland-Hangerone complex, 0 to 2 percent slopes, drained
- 146: Hangerone clay loam, drained, 0 to 2 percent slopes
- 160: Urbanland-Clear Lake complex, 0 to 2 percent slopes
- 165: Urbanland-Campbell complex, 0 to 2 percent slopes, protected
- 166: Campbell silt loam, 0 to 2 percent slopes, protected
- 168: Elder fine sandy loam, protected, 0 to 2 percent slopes
- 169: Urbanland-Elder complex, 0 to 2 percent slopes, protected
- 171: Elder fine sandy loam, 0 to 2 percent slopes, rarely flooded
- 180: Urbanland-Newpark complex, 0 to 2 percent slopes
- 185: Urban Land - Bayshore complex, 0 to 2 percent slopes, drained



Sources: U.S. Department of Agricultural  
SSURGO, 2018 ESRI, Jacobs 2019a

However, there are no stream channels on or adjacent to the site, therefore the project site would not be subject to lateral spreading (Walsh 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.

#### **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, section 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 (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 Measures:** The applicant proposes to implement project design measures to avoid or reduce potential impacts to geologic hazards, geologic resources, and paleontological resources. These measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020a).

**PD GEO-1:** To avoid or minimize potential damage from seismic shaking, the project would be built using standard engineering and seismic safety design techniques. Building redevelopment design and construction at the site shall be completed in conformance with the recommendations of a design-level geotechnical investigation, which would be included in a report to the City. The report shall be reviewed and approved by the City of Santa Clara's Building Division as part of the building permit review and issuance process. The building shall meet the requirements of applicable Building and Fire Codes, including the 2019 California Building Code, as adopted or updated by the City. The project shall be designed to withstand potential geologic hazards identified on the site and the project shall be designed to reduce the risk to life or property to the extent feasible and in compliance with the Building Code.

**PD GEO-2:** Prior to the start of any subsurface excavations that would extend beyond previously disturbed soils, all construction forepersons and field supervisors shall receive training by a qualified professional paleontologist, as defined by the Society of Vertebrate Paleontology, who is experienced in teaching non-specialists, to ensure they can recognize fossil materials and shall follow proper notification procedures in the event any are uncovered during construction. Procedures to be conveyed to workers include halting construction within 50 feet of any potential fossil find and notifying a qualified paleontologist, who shall evaluate its significance.

If a fossil is found and determined by the qualified paleontologist to be significant and avoidance is not feasible, the 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.

- 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 demolition followed by construction of the proposed project would have an impact on the risk of loss, injury, or death involving rupture of an earthquake fault during demolition or construction is remote. The project site is located within the seismically active San Francisco Bay region, and the nearest historically active fault, the Hayward Fault, is approximately 6.1 miles from the project site (**Figure 5.7-3**). However, the project site is not within a state of California Earthquake Fault Zone or within the trace of any known active fault. Several potentially active faults have been mapped outside of the general project area, the closest being the San Jose fault, which is mapped approximately 1.9 miles southwest of the proposed project (**Figure 5.7-3**). 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 at the proposed project site (Walsh 2019a).

### **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. 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 California Building Code. 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 seismic design guidelines per the California Building Code, as well as the anticipated project-specific

recommendations in the final geotechnical engineering report, the project would not expose people or property, directly or indirectly, to significant impacts associated with geologic or seismic ground shaking.

### **Operation and Maintenance**

LESS THAN SIGNIFICANT IMPACT. During operation and maintenance of the proposed project, the project facility could be subject to strong seismic ground shaking. However, with implementation of seismic design guidelines per the California Building Code, as well as the anticipated project-specific recommendations in the final geotechnical engineering report, 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 an earthquake-induced liquefaction hazard zone, and there is potential for soil layers at the site to liquefy during a seismic event. Therefore, the proposed structures would be designed and constructed to account for this in accordance with the California Building Code.

In addition, as discussed under question (a)(i), a project-specific design would be included within a geotechnical engineering report and provided to the City building department for review and approval prior to the issuance of a building permit. Therefore, with implementation of the seismic design guidelines for ground failure, and the recommendations in the final geotechnical engineering report, the project would not expose people or property to any significant direct or indirect impacts associated with geologic or seismic conditions onsite.

### **Operation and Maintenance**

LESS THAN SIGNIFICANT IMPACT. During operation and maintenance of the proposed project the project facility would be subject to strong seismic ground shaking. However, with implementation of seismic design guidelines per the California Building Code, as well as the anticipated project-specific recommendations in the final geotechnical engineering report, 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 (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 change materially 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 2010-2035 (Santa Clara 2011), no impact would occur.

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

**Construction**

LESS THAN SIGNIFICANT IMPACT. Demolition of existing structures, foundations, and underground utilities would be necessary to make way for the project. Construction activities associated with the project including excavation, trenching, and grading may temporarily increase sedimentation and erosion by exposing soils to wind and runoff until construction is complete and new vegetation is established. 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, coordinating with the City, and preparing and implementing a SWPPP. The SWPPP would include best management practices for storm water quality control, including soil stabilization practices, sediment control practices, and wind erosion control practices. When construction is complete, the project would file a Notice of Termination with the San Francisco Bay Regional Water Quality Control Board, documenting that all elements to the SWPPP have been implemented (Jacobs 2019a).

By complying with permits obtained for construction of this project, runoff from the project site would not violate the applicable waste discharge requirements or otherwise contribute to the degradation of storm water runoff quality. Therefore, impacts related to erosion and loss of topsoil would be less than significant and no mitigation is required.

## Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. 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. 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. Compliance with **PD GEO-1** would avoid or reduce impacts related to the stability of soil on-site. 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 Methodology** under the heading "Soils," 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.

The project site is located on expansive soil as defined in Section 1803.5.3 of the CBC. The project would be required to adhere to the SHMA and CBC, which would reduce impacts related to expansive soils to a less than significant level. The policies of the City of Santa Clara 2010-2035 General Plan have been adopted for the purpose of avoiding or mitigating environmental effects resulting from planned development within the city. Santa Clara General Plan Policy 5.10.5-P6 requires that new development be designed to meet current safety standards and implement appropriate building codes to reduce risk associated with geologic conditions (Walsh 2019a).

The project specific final geotechnical engineering report along with the final project design would address, as needed, any potential issues arising from highly and very highly expansive soils. With implementation of **PD GEO-1**, as well as the anticipated project-specific mitigation recommendations in the final geotechnical engineering report, the project would not create substantial direct or indirect risks to life or property.

### **Operation and Maintenance**

No 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.

- 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 or an alternative wastewater disposal system (Walsh 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 or an alternative wastewater disposal system (Walsh 2019a). Therefore, there would be no impact to soils as a result of sanitary waste disposal from the project during operation and maintenance.

- f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

## Construction

LESS THAN SIGNIFICANT IMPACT. 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) sediment 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 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). Excavation to depths of 13 feet below existing grade is anticipated during construction of this project (Walsh 2019a). In addition, foundations would be augered piles. Although unlikely, paleontological resources could be encountered during construction of the project. Implementation of **PD GEO-2** would ensure impacts to paleontological resources are less than significant. These measures 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.

## 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:** None.

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## 5.8 Greenhouse Gas Emissions

This section describes the environmental and regulatory setting and discusses impacts associated with the demolition/construction and operation of the project with respect to greenhouse gas (GHG) emissions.

### GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental checklist established 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<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), black carbon, and fluorinated gases (F-gases): hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). 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<sub>2</sub> 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<sub>2</sub>. The larger the GWP, the more that a given gas warms the earth compared to CO<sub>2</sub> over that time period. The time period usually used for GWPs is 100 years.

For example, CH<sub>4</sub> 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<sub>2</sub> 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<sub>2</sub>. The GWPs for these gases can be in the thousands or tens of thousands. The carbon dioxide equivalent (CO<sub>2</sub>e) 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<sub>2</sub>e.

## 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 United States Environmental Protection Agency (U.S. EPA) under the CAA.

In response to this Supreme Court decision, on December 7, 2009, the U.S. 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.

U.S. 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 signed 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<sub>2</sub>e (MMTCO<sub>2</sub>e). 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<sub>2</sub>e (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<sub>2</sub> suppliers, petroleum and natural gas system operators, and industrial facilities that emit 10,000 metric tons of CO<sub>2</sub>e (MTCO<sub>2</sub>e/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<sub>2</sub>e/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 (SB) 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 GHGs 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 (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<sub>2</sub>e (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<sub>2</sub>e (U.S. 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 (Santa Clara 2018).

**TABLE 5.8-1 CITY OF SANTA CLARA 2016 GHG EMISSIONS INVENTORY**

Sector	Carbon dioxide emissions (MMTCO <sub>2</sub> e)
Commercial Energy	1.0800
Residential Energy	0.1329
Transportation & Mobile Sources	0.5060
Solid Waste	0.0257
Water & Wastewater	0.0243
Total Emissions	1.7690

**Source:** City of Santa Clara 2018. Note, source displays value in MTCO<sub>2</sub>e, staff converted to MMTCO<sub>2</sub>e to be consistent with the State and Federal emission units.

## 5.8.2 Environmental Impacts and Mitigation Measures

**Applicant Proposed Measures:** None.

### Methodology

The applicant estimated GHG emissions for both demolition/construction and operation from the project demolition and construction equipment, vendor and hauling truck trips and worker vehicle trips.

Testing and maintenance GHG emissions from the project are a result of diesel fuel combustion from readiness testing and maintenance of the standby 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).

## Significance Criteria

BAAQMD CEQA Guidelines include recommended thresholds for use in determining whether projects would have significant adverse environmental impacts. BAAQMD has adopted a numeric threshold of 10,000 MTCO<sub>2</sub>e/yr for projects that require permits from the BAAQMD (BAAQMD 2017b). Given that the project would include standby generators requiring BAAQMD permits to operate, the significance threshold applicable to this project is 10,000 MTCO<sub>2</sub>e/yr.

This BAAQMD threshold 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<sub>2</sub>e/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<sub>2</sub>e/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<sub>2</sub>e/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 generators would be considered to have a less-than-significant impact if emissions are below the BAAQMD's threshold of 10,000 MTCO<sub>2</sub>e/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 on- 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 970 MTCO<sub>2</sub>e during the estimated 21 months of demolition and construction.

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 readiness testing and maintenance would consist of emissions from routine readiness testing and maintenance of the standby emergency generators, 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 Combustion Sources.** Table 5.8-2 shows the maximum potential annual GHG emission estimates for the standby generators routine testing and maintenance. The emissions are estimated based on a composite annual testing and maintenance scenario, including 15 hours at 25% load, 15 hours at 50% load, 15 hours at 75% load and 5 hours at 100% load.

**TABLE 5.8-2 GREENHOUSE GAS EMISSIONS FROM STANDBY GENERATORS TESTING AND MAINTENANCE**

Source	Maximum Annual Emissions (MTCO <sub>2</sub> e/yr)
Standby Generators – Testing and Maintenance	2,313
BAAQMD Threshold	10,000
Exceeds Threshold?	No

Sources: Walsh 2019a.

Table 5.8-2 shows that the estimated average annual GHG emissions from the project's stationary sources, the standby generators, for routine testing and maintenance are well below the BAAQMD GHG emissions significance threshold for stationary sources.

**SVP Electricity Generation.** As stated above, Silicon Valley Power (SVP) is owned by the City of Santa Clara. Electricity for WDC would be provided by SVP which currently has ownership interest, or has purchase agreements, for about 1,268 megawatts (MW) of electricity (SVP 2019a). This capacity far exceeds SVP'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 SVP's service territory to meet the near or projected future demand.

As stated in their 2018 Integrated Resource Plan (SVP 2020), 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, both the City and SVP encourage the use of renewable resources and clean distributed generation, and the local area has seen a significant increase in use of large and small rooftop photovoltaics. Demand displaced by customer-based renewable projects is also available to meet new loads.

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<sub>2</sub>e per MWh. 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.

**TABLE 5.8-3 COMPARISON OF SVP AND STATEWIDE POWER MIX**

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:** SVP 2019c

**Data Center Electricity Usage.** The primary function of the data center is to house computer servers, which require electricity and cooling 24 hours a day to operate. The projected maximum demand for the entire project is 80 MW. On an annual basis, the project would consume up to the maximum electrical usage of 700,800 MWh per year. SVP's power mix, with its 2017 estimate of 430 pounds of CO<sub>2</sub>e per MWh, has a much lower average GHG emissions factor than the California statewide average emissions

factor of 1,004 pounds of CO<sub>2</sub>e per MWh or the PG&E average emissions factor value of 644 pounds of CO<sub>2</sub>e per MWh that are provided in CalEEMod.

**Project Mobile Emission Sources.** Using standard trip generation rates for data centers published by the Institute of Transportation Engineers (ITE, Land Use Code 160), the WDC could generate up to 431 daily vehicle trips.

**Project 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. Indoor uses at the project site would generate a potable water demand of approximately 25.6 acre-feet per year.

**Summary of GHG Emissions.** GHG emissions from stationary combustion sources (standby generator testing and maintenance) are presented in **Table 5.8-2** above. GHG emissions from energy use, mobile sources, 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 project is estimated to generate 109,164 MTCO<sub>2</sub>e/yr from maximum possible electricity use and other non-stationary sources. As described above, electricity to the WDC would be provided by SVP, a utility that is on track to meet the 2030 GHG emissions reductions target established by AB 32. To reduce GHG emissions and the use of energy related to building operations, the WDC includes a variety of energy efficiency measures. The WDC 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, and the 2016 California Green Building Standards Code, commonly referred to as CALGreen (California Code of Regulations, Part 11). Because the WDC would: (1) receive electricity from a utility on track to meet the AB 32 2030 GHG emission reduction target, (2) would result in lower emissions than the statewide average for an equivalent facility (roughly 13 percent) due to SVP's power mix, (3) would include energy efficiency measures to reduce emissions to the extent feasible, and (4) would be consistent with applicable plans and policies adopted to reduce GHG emissions, the WDC would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

**TABLE 5.8-4. GHG EMISSIONS FROM ENERGY USE, MOBILE SOURCES, AREA SOURCES, WATER USE, AND WASTE GENERATION DURING PROJECT OPERATION**

Source	Annual Emissions (MTCO <sub>2</sub> e/yr)
Energy Use <sup>a</sup>	108,396
Mobile Sources <sup>b</sup>	472
Area Sources <sup>c</sup>	<1
Water Use <sup>c</sup>	25
Waste Generation <sup>c</sup>	271
Total <sup>e</sup>	109,164

**Sources:** Walsh 2019a

<sup>a</sup> Based on 2019 SVP carbon intensity factor of 341 pounds of CO<sub>2</sub>e per MWh.

<sup>b</sup> Based on ITE trip rates for Data Center (Land Use Code 160) applied to a 435,050 square foot data center with default CalEEMod mobile emission factors for Heavy Industrial land uses.

<sup>c</sup> Based on CalEEMod default emission factors for Heavy Industrial land uses applied to a 435,050 square foot data center.

## Conclusion

LESS THAN SIGNIFICANT IMPACT. The WDC's GHG emissions would be 970 MTCO<sub>2</sub>e during the demolition and construction period as noted earlier. Post-construction estimated emissions from the emergency generators during readiness testing and maintenance are estimated to be 2,313 MTCO<sub>2</sub>e/year as shown in **Table 5.8-2**. The GHG emissions for the demolition and construction period and the annual testing and maintenance emissions would be well below the BAAQMD significance thresholds of 10,000 MTCO<sub>2</sub>e/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 WDC's non-stationary source GHG emissions (109,164 MTCO<sub>2</sub>e/yr ) are determined to have less than significant impacts.

**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 demolition and construction GHG emissions would not interfere with the state's ability to achieve long-term GHG emissions reduction goals. The vehicles used during demolition and 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.

## Readiness Testing 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 total facility energy use divided by the critical Information Technology (critical IT) load (i.e., server load). Specifically,  $PUE = \text{Total Facility Source Energy} / \text{IT Source Energy}$ . A PUE of two means that the data center or laboratory must draw two watts of electricity for each watt of power consumed by the critical IT equipment. It is equal to the total energy consumption of a data center (for all fuels) divided by the energy consumption used for the critical IT equipment. The ideal PUE is one where all power drawn by the facility goes to the critical IT infrastructure. With implementation of the proposed mechanical and electrical design of the building and the anticipated data center occupancy, the PUE would be 1.25 or better at the WDC (Walsh 2019a).

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<sup>1</sup> 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 4 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 IS/PMND, 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

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<sup>1</sup> 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.

standard requirements for energy efficiency, based on the 2016 Energy Efficiency Standards requirements, and CALGreen. For the project, these measures would include:

- recycled or non-potable graywater for landscape irrigation
- water efficient landscaping with low water usage plant material to minimize irrigation requirements; and
- Use of ultra-low flow toilets and plumbing fixtures in the building

**Waste Reduction Measures.** Measure 4.2, Increased Waste Diversion, calls for an increase in solid waste diversion rate through recycling efforts, curbside food waste pickup, and construction and demolition waste programs. The project would divert construction and demolition waste during project construction to help the City reach its 80 percent waste diversion rate.

**Off-Road Equipment.** Measure 5.2 Alternative Construction Fuels requires construction projects to comply with BAAQMD best management practices, including alternative-fueled vehicles and equipment. The project would adopt BAAQMD best management practices.

**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 project would be required to have a 25 percent vehicle miles traveled (VMT) reduction, with 10 percent coming from TDM measures. An exception to these reduction requirements is made for projects located on properties with a General Plan designation of Heavy Industrial, such as the project site. Nevertheless, the project would be required to comply with General Plan Policy 5.8.5-P1, which requires new development to implement TDM programs that can include site-design measures, including preferred carpool and vanpool parking, enhanced pedestrian access, bicycle storage and recreational facilities.

**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** below. As shown, the project would be consistent with the applicable sustainability policies in the Santa Clara General Plan.

**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 emissions of GHG emissions to 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The WDC 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 WDC, energy efficiency measures are included in the design and operation of the onsite electrical and mechanical systems. This would be consistent with the general purpose of Energy and Climate Measure (ECM)-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 Sustainable Communities Strategy (SCS) with the adopted Plan Bay Area 2040 to achieve the Bay Area's regional GHG 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 has a low concentration of employment and 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.

**TABLE 5.8-5 PROJECT CONSISTENCY WITH SANTA CLARA GENERAL PLAN  
SUSTAINABILITY POLICIES**

Emission Reduction Policies	Project Consistency
<b><i>Air Quality Policies</i></b>	
Encourage implementation of technological advances that minimize public health hazards and reduce the generation of air pollutants.	Consistent. The project proposes to use emergency generators with advanced air pollution controls. The generator testing schedule includes measures to reduce local air quality impacts.
Encourage measures to reduce greenhouse gas emissions to reach 30 percent below 1990 levels by 2020.	Consistent. Water conservation and energy efficiency measures included in the project would reduce GHG emissions associated with the generation of electricity.
<b><i>Energy Policies</i></b>	
Promote the use of renewable energy resources, conservation, and recycling programs.	Consistent. The project would divert at least 50 percent of construction waste. The project would utilize 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 building would be installed to limit water consumption.
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.	
Provide incentives for LEED certified, or equivalent development.	
<b><i>Water Use Policies</i></b>	
Require installation of native and low-water consumption plant species with landscaping new development and public spaces to reduce water usage.	Consistent. The project would use water efficient landscaping with low water usage plant material to minimize irrigation requirements.

**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, will 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 incorporated into 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<sub>2</sub>e/yr, including both testing and maintenance and likely emergency operations.

**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 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

### 5.9.1 Setting

#### Hazardous Waste and Substances Sites

The project owner hired Rosso Environmental, Inc. (REI) 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 REI 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. REI'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. In addition, a limited subsurface Phase 2 ESA was conducted in 2017.

Before the commencement of the project, 651 Walsh Partners, LLC entered into a Remedial Action Agreement with The County of Santa Clara Department of Environmental Health (SCDEH). The Remedial Action Agreement required that the project determine the type and extent of contamination caused by released waste and the appropriate cleanup method to eliminate or mitigate the associated risk to human health and safety or the environment. As part of the Remedial Action Agreement, the project owner hired REI to conduct a more thorough subsurface investigation to determine the amount and extent of contamination on the site.

Past environmental work at the site included a remedial soil excavation in the late 1980's to address metals contamination in a former galvanizing operations area. The Santa Clara Fire Department oversaw the remediation of the former galvanizing operations area. Residual lead and zinc soil contamination reportedly remains under portions of the building where the soil could not be removed from the 1980's remedial soil excavation.

A site screening assessment by the California Department of Toxic Substances Control (DTSC) in 2005 determined that the project site was a low priority. The zinc and lead contamination was found to be under the Environmental Protection Agency's Preliminary Remedial Goals benchmark for residential use for the residual lead and zinc. The DTSC report conducted a vulnerability analysis noting it was an industrial site, more than 0.25 miles from any sensitive populations, not likely to have groundwater contamination and exposure to soil or air contamination was not likely. All of these factors contributed to a low priority assessment from DTSC (DTSC 2005).

The Phase 1 and 2 ESA found that the site is contaminated with post-remedial lead and zinc. The new subsurface investigation confirmed that lead and zinc contamination remain and need to be remedied.

There are also volatile organic compounds (VOCs) consisting of benzene and trichloroethene in the soil and soil vapor. However, the VOCs were found along the western, eastern, and northern boundaries of the site. According to the Geotracker database, there are nearby sites that had VOCs migrate offsite. The sites that had VOCs migrate offsite have been issued site closure determinations by the applicable regulatory agencies for these documented offsite releases. Based on the evidence, the site does not appear to be a known source of the VOCs and the VOCs appear to be an artifact of known chemical releases offsite.

The subsurface investigation also identified that the site is underlain by several feet of fill material of unknown origin. Potentially, there are contaminants that would need to be remedied during the project's planned redevelopment.

## **Airports**

The Norman Y. Mineta San Jose International Airport, a public airport, is located approximately 0.3 miles west of the proposed project and has two runways that exceed 3,200 feet in length (Air Nav 2019). The Santa Clara County Airport Land Use Commission Plan (CLUP) shows that the project falls within the Traffic Pattern Zone (TPZ), and is partially located within the Inner Safety Zone (ISZ) and the Turning Safety Zone (TSZ) as well. (See **Figure 5.9-1**) The TPZ is defined as the portion of the airport area routinely overflown by aircraft operating in the airport traffic pattern. 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 0.75 mile northwest of WDC, and the Scott Lane Elementary School that is approximately 0.9 mile 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 WDC would be located within Santa Clara County.

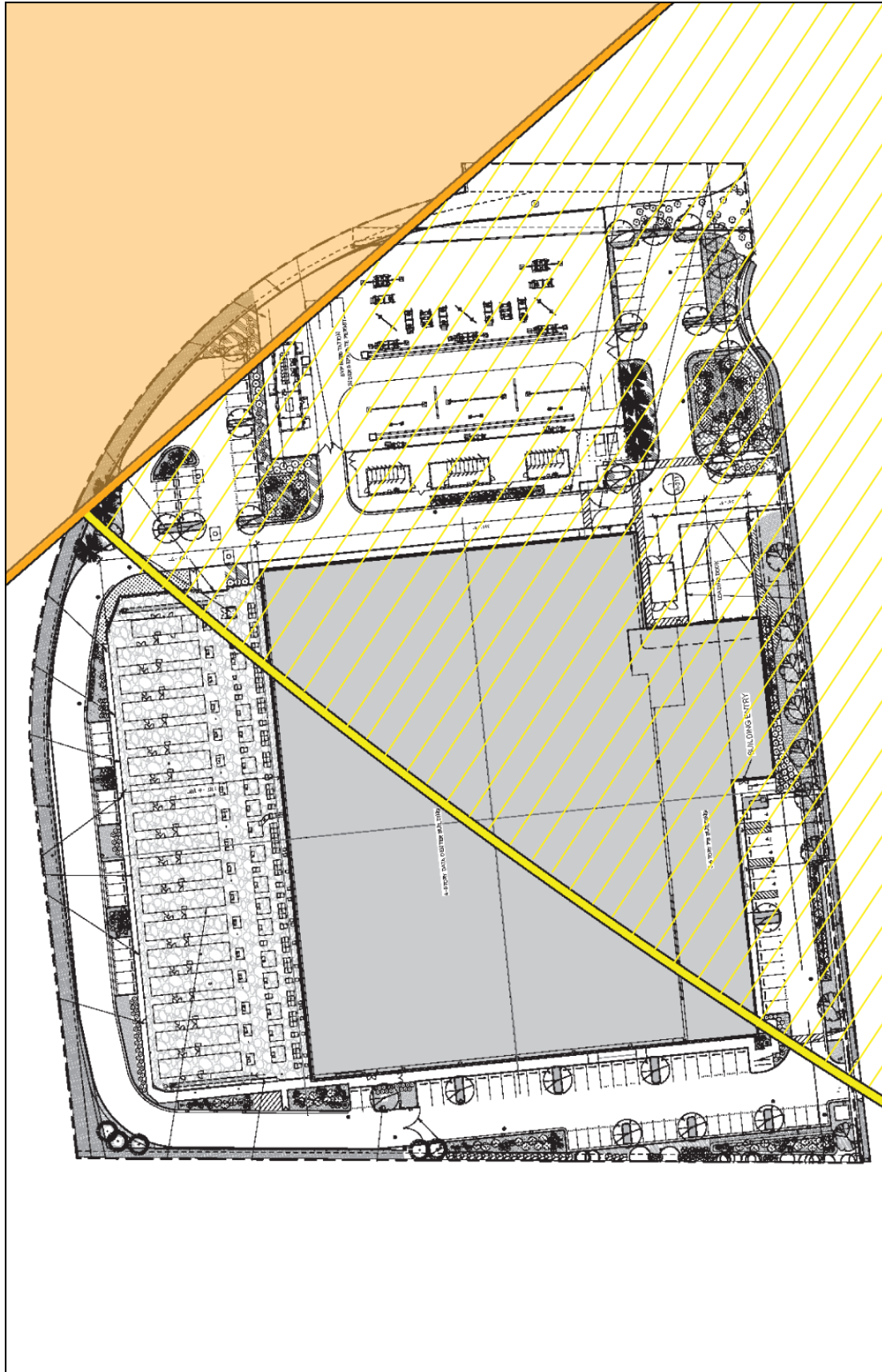


Figure 5.9-1  
Airport Safety Zones - ISZ & TSZ

Sources: Walsh SPPE Application Section 4.9 Hazards Figure 4.9-1

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.

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:** The project proposes to implement design measures which would reduce potentially significant soil and or groundwater impacts to construction workers to a less than significant level. These measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020a).

### **PD HAZ-1**

- Prior to the issuance of grading permits, shallow soil samples shall be taken in areas where soil disturbance is anticipated to determine if contaminated soils with concentrations above established construction/trench worker thresholds may be present due to historical agricultural use and from historical leaks and spills. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division prior to initiation of work. Once the soil sampling analysis is complete, a report of the findings will be provided to the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division and other applicable City staff for review.

- Documentation of the results of the soil sampling shall be submitted to and reviewed by the City of Santa Clara prior to the issuance of a grading permit. Any soil with concentrations above applicable Environmental Screening Levels or hazardous waste limits would be characterized, removed, and disposed of off-site at an appropriate landfill according to all state and federal requirements.
  - A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include: a detailed discussion of the site background; a summary of the analytical results from MM HAZ-1.1; preparation of a Health and Safety Plan by an industrial hygienist; protocols for conducting earthwork activities in areas where impacted soil and/or groundwater are present or suspected; worker training requirements, health and safety measures and soil handling procedures shall be described; protocols shall be prepared to characterize/profile soil suspected of being contaminated so that appropriate mitigation, disposal or reuse alternatives, if necessary, can be implemented; notification procedures if previously undiscovered significantly impacted soil or groundwater is encountered during construction; notification procedures if previously unidentified hazardous materials, hazardous waste, underground storage tanks are encountered during construction; on-site soil reuse guidelines; sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; soil stockpiling protocols; and protocols to manage groundwater that may be encountered during trenching and/or subsurface excavation activities. Prior to issuance of grading permits, a copy of the SMP must be approved by the Santa Clara County Environmental Health Department, and the Santa Clara Fire Department Fire Prevention and Hazardous Materials Division.
  - If contaminated soils are found in concentrations above risk-based thresholds pursuant to the terms of the SMP, remedial actions and/or mitigation measures will be taken to reduce concentrations of contaminants to levels deemed appropriate by the selected regulatory oversight agency for ongoing site uses. Any contaminated soils found in concentrations above thresholds to be determined in coordination with regulatory agencies shall be either (1) managed or treated in place, if deemed appropriate by the oversight agency or (2) removed and disposed of at an appropriate disposal facility according to California Hazardous Waste Regulations and applicable local, state, and federal laws.
- 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 33 diesel generator fuel tanks would have to be filled. The transportation of the diesel fuel to the site would take several trucks loads. 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 use diesel fuel during emergencies, testing, and maintenance. Since testing and maintenance is limited to no more than 50 hours of operation annually, routine deliveries of diesel fuel would be infrequent due to the limited amount of testing and use for each generator and would comply with existing LORS covering transportation of diesel fuel.

**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 worst-case spill to the quantity held within one tank. Each belly tank is capable of holding 12,800 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.

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 is listed on the hazardous materials sites compiled pursuant to Government Code section 65962.5. VOCs were detected in the soil and soil vapor but were determined to have come from offsite along the eastern, western, and northern boundaries of the site. The sources of the VOCs from offsite have been successfully closed and remedied according to a Geotracker database search.

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 contains residual lead and zinc. In addition, there are several feet of fill on site that could potentially contain contamination that would need to be addressed. The SCDEH has required that the project owner develop a Site Management Plan (SMP) to help protect workers and future building occupants from exposure to contamination in the soil and ensure proper handling of any contaminated soil found.

The SMP proposed by WDC would require preparation of a Health and Safety Plan, protocols for conducting earthwork activities in area where impacted soil and/or ground water are present or suspected, and notification procedures for previously undiscovered impacted soil or groundwater encountered during construction. If contaminated soils are found, then the soil would be managed or treated in place or removed to an appropriate disposal facility. In addition, the SCDEH would review and approve the SMP to that worker safety, public health, and the environment are protected. 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 0.3 miles 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 33-foot elevation of the project site AMSL, the WDC, at 122.5 feet AGL, would not exceed the FAA's height limit of 162 AMSL.

The project site is subject to Title 14, Part 77.9 of the Code of Federal Regulations, Construction or Alteration Requiring Notice. With a maximum project height of 122.5 feet AGL, the project would exceed the FAA notification 100:1 surface threshold of 14 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 applicant conducted a FAA obstruction analysis, which shows that the project would not penetrate any FAA protected surface (Walsh 2019e). The applicant has provided Form 7460-1 to the FAA and submitted a copy to staff. The FAA issuance of a "determination of no hazard" and compliance with any conditions of such determinations, would reduce the potential air safety hazard to less than significant. The City of Santa Clara, as the permitting agency for this project, would ensure compliance with the FAA's determination.

The project site also falls within the TPZ, ISZ, and TSZ zones. Figure 5.9-1 shows that the ISZ and TSZ would only cover half the site. The CLUP requires that the above ground storage of fuel or other hazardous materials shall be prohibited in the ISZ and the TSZ. However, the generators and the attached fuel tanks are located on the north side of the site. From Figure 5.9-1, the project shows that the ISZ and TSZ would bifurcate the site and generator and their fuel tanks would fall outside each zone. Therefore, WDC would be in compliance with the Santa Clara CLUP

The project has submitted the required Form 7460-1, Notice of Proposed Construction of Alteration to the FAA. The project would comply with the FAA issuance of a "determination of no hazard" or any conditions attached to such determinations. In addition, WDC would be compatible with the TPZ, 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, east, west and south. 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

**AirNav 2019** – AirNav. KSJC Norman Y Mineta San Jose International Airport. Available online at: <https://www.airnav.com/airport/KSJC>. Accessed on October 10, 2019.

**CalFire 2007** – California Department of Forestry and Fire Protection (CalFire). 2007 *Santa Clara County – Very High Fire Hazard Severity Zones in State Responsibility Area*. Department of Forestry and Fire Protection. Projection Albers, NAD 1927, Scale 1: 100,000 at 32" x 27".

**DTSC 2005** – Department of Toxic Substances (DTSC). May 26, 2005. *Site Screening Assessment*.

**DTSC 2018** – Department of Toxic Substances Control (DTSC). Envirostor Database. Available online at: <http://www.envirostor.dtsc.ca.gov/public/>. Accessed on: August 15, 2019.

**Santa Clara County 2017** – County of Santa Clara Emergency Management (Santa Clara County). October 15, 2017. *Santa Clara County Operational Area Hazard Mitigation Plan Volumes 1&2*.

**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](https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_SJC_CLUP.pdf). Accessed on: August 15, 2019.

**SWRCB 2018** – State Water Resources Control Board (SWRCB). GeoTracker Database. Available online at: <http://geotracker.waterboards.ca.gov>. Accessed on: August 15, 2019.

**Walsh 2019a** – Application for Small Power Plant Exemption: Walsh Data Center, dated June 28, 2019. (TN 228877-2). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

**Walsh 2019b** – Application for Small Power Plant Exemption: Walsh Data Center, Appendices A-E, dated June 28, 2019. (TN 228877-1). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

**Walsh 2019e** – Applicant responses to Report of Conversation TN 230445 – FAA Surfaces Analysis (TN 231293). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

**Walsh 2020a** – Numbered Project Design Measures, revising Application Section 2-7. (TN 231814). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## 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 project with respect to hydrology and water quality.

<b>HYDROLOGY AND WATER QUALITY</b>	<b>Potentially Significant Impact</b>	<b>Less than Significant With Mitigation Incorporated</b>	<b>Less than Significant Impact</b>	<b>No Impact</b>
Would the project:				
a. Violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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.

Since the site was occupied by another industrial manufacturing entity, it is developed and 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 encountered at 16 to 24 below bgs.

The project site's historic industrial uses resulted in groundwater and soil contamination. The primary contaminants identified are trichloroethylene (TCE), tetrachloroethylene (PCE), benzene, DDT, lead, mercury, and zinc. Contamination in soil vapor and groundwater has been adequately assessed and no additional mitigation is required at this time. Elevated levels of heavy metals exist within select areas of the site. A Site Management Plan will be implemented during development to address worker safety and soil management (SWRCB 2019).

## **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 AH. Zone AH is a special flood hazard area subject to inundation by the one percent annual chance of flood (100-year flood). Flood depths of one to three feet would be expected during the 100-year flood. The site is located near the Guadalupe River and San Tomas Aquino Creek.

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).

## 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 Regional Water Quality Control Boards (RWQCB) 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 model flood used nationwide as the standard for floodplain management is the flood with 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 FIRM is the official map created and distributed by 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 AH and therefore is susceptible to flooding from the 100-year 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**

**Applicant Proposed Measures:** The project will incorporate design measures to reduce construction-related water quality impacts. These measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020a).

## PD HYD-1

- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
  - Earthmoving or other dust-producing activities shall be suspended during periods of high winds.
  - All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
  - Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
  - All trucks hauling soil, sand, and other loose materials shall be required to cover all trucks or maintain at least two feet of freeboard.
  - All paved access roads, parking areas, and staging areas adjacent to the construction sites shall be swept daily (with water sweepers).
  - Vegetation in disturbed areas shall be replanted as quickly as possible.
  - All unpaved entrances to the site shall be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City.
- 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 depth of about 13 feet below grade. It is therefore possible to encounter groundwater and thereby dewatering might be necessary. 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 Urban Water Management Plan (UWMP) for 2015 shows that the city has sufficient supply to meet the project's demand of 26 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 (Walsh 2019b, Appendix

E). 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 FIRM 06085C0227H, effective May 18, 2009, the project site is located within Zone AH. Zone AH is a special flood hazard area subject to inundation by the one percent annual chance of flood (100-year flood). Flood depths of one to three feet would be expected during the 100-year flood.

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 26 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

- CEMA 2009** – California Emergency Management Agency (CEMA). Tsunami Inundation Map for Emergency Planning, Mountain View Quadrangle. Prepared by the California Emergency Management Agency. Published July 31, 2009.
- CGS 2002** – California Department of Conservation (CGS). Seismic Hazard Zone Report for the San Jose West 7.5-Minute Quadrangle, Santa Clara County, California. Seismic Hazard Zone Report 058. California Department of Conservation, 2001.
- Santa Clara 2014** – City of Santa Clara (Santa Clara). 2010-2035 General Plan. Approved December 9, 2014. Available online at: <http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan>. Accessed on: May 9, 2019.
- DWR 2003** – Department of Water Resources (DWR). Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001. California Department of Water Resources. October 8, 2003. Available online at: [https://water.ca.gov/LegacyFiles/pubs/use/sb\\_610\\_sb\\_221\\_guidebook/guidebook.pdf](https://water.ca.gov/LegacyFiles/pubs/use/sb_610_sb_221_guidebook/guidebook.pdf). Accessed on: August 15, 2019.
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- Santa Clara 2016** – City of Santa Clara 2015 Urban Water Management Plan (UWMP). Prepared by the City of Santa Clara Water and Sewer Utilities. Adopted November 22, 2016. Available online at: <http://santaclaraca.gov/government/departments/water-sewer-utilities/water-utility/urban-water-management-plan>. Accessed: August 15, 2019
- Walsh 2019a** – Application for Small Power Plant Exemption: Walsh Data Center, dated June 28, 2019. (TN 228877-2). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.
- Walsh 2019b** – Application for Small Power Plant Exemption: Walsh Data Center, Appendices A-E, dated June 28, 2019. (TN 228877-1). Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

**Walsh 2020a** – Numbered Project Design Measures, revising Application Section 2-7.  
(TN 231814). Available online at:  
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## 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	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

### 5.11.1 Setting

The project site is located in the eastern part of the City of Santa Clara in an urbanized area consisting of industrial and office uses. The site is currently developed with a warehouse complex and paved parking and loading areas. The Norman Y. Mineta San Jose International Airport is approximately 0.3 mile east of the project site, and the Union Pacific Railroad (UPRR) tracks are adjacent to the eastern boundary of the site.

### Regulatory Background

#### *Federal*

No federal regulations related to land use and planning apply to the project.

#### *State*

No state regulations related to land use and planning apply to the project.

#### *Local*

**Santa Clara County Airport Land Use Commission's Comprehensive Land Use Plan for 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 on May 25, 2011 and most recently amended it on November 16, 2016. The project site is located within the ALUC's designated Airport Influence Area (AIA) for the San Jose International Airport, meaning that it is subject to the policies in the CLUP. The CLUP shows that the project is located in the Traffic Pattern Zone of the airport, as well as partially in the Inner Safety Zone and Turning Safety Zone of the airport.

Relevant policies for this project include the following (Santa Clara County 2016):

- G-5: Where legally allowed, dedication of an aviation 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. All such easements shall be similar to that shown as Exhibit 1 in Appendix A of the CLUP.
- 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 Part 77, Objects Affecting Navigable Airspace (FAR Part 77) surfaces.
- 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.
- H-1: Any structure or object that penetrates the FAR Part 77 surfaces as illustrated in Figure 6 [in 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.
- H-2: Any project that may exceed an 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 Federal Aviation Regulations).
- O-1: All new projects within the AIA that are subject to discretionary review and approval shall be required to dedicate in compliance with state law, an aviation easement to the City of San Jose. The aviation easement shall be similar to that shown as Exhibit 1 in Appendix A of the CLUP.
- 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. 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 *City of Santa Clara 2010–2035 General Plan* (General Plan) was adopted on November 16, 2010. The project site is 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. The maximum FAR [floor area ratio] is 0.45" (Santa Clara 2010).

Other policies in the General Plan related to the project include:

- 5.3.5-P7: Require building heights to conform to the requirements of the Federal Aviation Administration, where applicable.
- 5.10.5-P32: Encourage all new projects within the Airport Influence Area to dedicate an aviation 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 Ordinance.** Under the City of Santa Clara's Zoning Ordinance, the project site is zoned Heavy Industrial, which allows a variety of industrial and similar uses (Santa Clara 2019a). Some of the uses the Zoning Ordinance allows within the Heavy Industrial zoning designation are:

- "Any use permitted in the MP [Planned Industrial] and ML [Light Industrial] districts, subject to the regulations set forth in this chapter."
- "Incidental and accessory buildings and uses on the same lot with and necessary for the operation of any permitted use."

In the Heavy Industrial zoning district, there is no maximum lot coverage. The street side front yard setback must be at least 15 feet. Rear and side yard setback regulations do not apply to the project because it is not adjacent to properties zoned or designated in the General Plan for residential use. The maximum permitted height is 70 feet (Santa Clara 2019a). According to Section 18.90.020 of the City of Santa Clara Zoning Ordinance, the Zoning Administrator shall have the authority to permit minor modifications to height that do not exceed 25 percent of the zoning district's maximum height (Santa Clara 2019b).

## 5.11.2 Environmental Impacts and Mitigation Measures

**Applicant Proposed Measures:** None.

### *a. Would the project physically divide an established community?*

#### **Construction, Operation and Maintenance**

No IMPACT. Project construction and operation activities would occur fully on site and would not physically divide an established community. Construction and operation would occur on a parcel that never served as a link between communities and that was previously used for similar uses. 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**

NO IMPACT. Construction activities would occur fully within a parcel previously developed with similar uses. To avoid hazards to aircraft, Policy 5.10.5-P33 in the General Plan states that the height of structures shall be limited in accordance with the FAA FAR Part 77 criteria (City of Santa Clara 2010). Policy H-2 in the CLUP is similar, stating that any project that may exceed an FAR Part 77 surface must notify the FAA with an FAA Form 7460-1, Notice of Proposed Construction or Alteration (Santa Clara County 2016). The City of Santa Clara, as the permitting agency for this project, would ensure consistency with these policies by requiring the applicant to provide FAA notification as necessary for construction cranes. (See **Section 5.17, Transportation** for more details.) For these reasons, project construction would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

### **Operation and Maintenance**

LESS THAN SIGNIFICANT. The project is generally consistent with the policies in the CLUP, the General Plan, and the Zoning Ordinance, as discussed below.

**Comprehensive Land Use Plan for Santa Clara County Norman Y. Mineta San Jose International Airport.** The project would be consistent with the following applicable policies in the CLUP for projects located within the AIA.

- G-5: Where legally allowed, dedication of an aviation 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. All such easements shall be similar to that shown as Exhibit 1 in Appendix A [in the CLUP].

The City of Santa Clara, as the permitting agency for this project, would ensure consistency with this policy by requiring dedication of an aviation easement to the City of San Jose.

- 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 FAA FAR Part 77 surfaces.

The project would not cause any of the above hazards to aircraft in flight. It would not create smoke, dust, electrical interference, or bird attractants. It also would not

create high intensity lighting, as discussed in a more detailed analysis in **Section 5.1, Aesthetics**. All trees proposed in the landscape plan would have mature heights lower than the project's total structure height of 122.5 feet (which includes the elevator penthouse) and would therefore not need individual FAA notification (CEC 2019).

- 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.

The project would not create a new source of substantial light or glare, as discussed in a more detailed analysis in **Section 5.1, Aesthetics**.

- H-1: Any structure or object that penetrates the FAR Part 77 surfaces as illustrated in Figure 6, 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.
- H-2: Any project that may exceed an 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 Federal Aviation Regulations).

The project's maximum structure height of 122.5 feet would not exceed the FAR Part 77 surface at the project site of 162 feet AMSL, shown in Figure 6 of the CLUP (Santa Clara County 2016). However, the project is subject to Title 14, Part 77.9 of the Code of Federal Regulations, Construction or Alteration Requiring Notice. The project has a maximum structure height of 122.5 feet above ground level, which includes equipment at the top of the data center building (such as the elevator penthouse) not counted in the calculation of building height for zoning ordinance purposes. This structure height would exceed the FAA notification 100 to 1 surface threshold of approximately 14 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 applicant submitted a report showing that the project's structure height would fall beneath the FAA's protected surfaces, and would therefore not be expected to cause significant hazards to aviation (Walsh 2019e). The applicant successfully submitted their Form 7460-1 to the FAA on January 9, 2020. The City of Santa Clara, as the permitting agency for this project, would ensure consistency with this policy and compliance with any of the FAA's conditions. (See **Section 5.17, Transportation**, for more details.)

- O-1: All new projects within the AIA that are subject to discretionary review and approval shall be required to dedicate in compliance with state law, an aviation easement to the City of San Jose. The aviation easement shall be similar to that shown as Exhibit 1 in Appendix A [in the CLUP].

The City of Santa Clara, as the permitting agency for this project, would ensure consistency with this policy by requiring dedication of an aviation easement to the City of San Jose.

- 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. In the Sideline Safety Zones and Outer Safety Zones, storage of fuel or other hazardous materials not associated with aircraft use should be discouraged.

The project's backup generators and their fuel tanks would be located outside of the portion of the property located within the Inner Safety Zone and Turning Safety Zone. Therefore, the project is consistent with this policy. See **Section 5.9, Hazards and Hazardous Materials** for more information.

**City of Santa Clara 2010-2035 General Plan.** The project is generally consistent with the City of Santa Clara's General Plan, and any minor inconsistencies would cause less than significant impacts. The project site's General Plan land use designation is 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). The project's proposed data center use is consistent with the description of uses allowed in the Heavy Industrial land use designation. However, the project would have a Floor Area Ratio (FAR)<sup>1</sup> of 1.26, which exceeds the General Plan's maximum FAR of 0.45 for the Heavy Industrial land use designation (Santa Clara 2010).

FAR regulations are often used by local governments to predict and limit the intensity of land uses and their resulting environmental impacts. A project with a higher than allowed FAR could result in environmental impacts unanticipated by the General Plan, such as a significant increase in vehicle miles travelled, or an increased height that could pose obstruction hazards to aircraft, both of which are transportation impacts under the CEQA Guidelines. Data centers have low employment density despite their large size, so an increase in FAR would not be expected to increase the number of employees and vehicle miles travelled beyond that anticipated by the City's General Plan. Furthermore, impacts of the project from vehicle miles travelled would be less

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<sup>1</sup> The floor area ratio, or FAR, of a development is the total square footage of each floor of the building(s) on the lot divided by the square footage of the lot area. To obtain the FAR for this project, the proposed total floor area of 435,050 square feet is divided by the total lot area of 344,124 square feet. The result is an FAR of 1.26.

than significant. (See **Section 5.17, Transportation**, for more details.) In addition, as discussed earlier, the applicant submitted the required FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA, along with a report showing that the project's structure height would fall beneath the FAA's protected surfaces, and would therefore not be expected to cause significant hazards to aviation (Walsh 2019e). See **Section 5.17, Transportation**, for more details. Because the project's increased FAR would not significantly increase vehicle miles travelled or result in a building or structure height causing aviation hazards, the project's inconsistency with the General Plan's maximum FAR would result in less than significant impacts.

Other policies in the General Plan related to the project include:

- 5.3.5-P7: Require building heights to conform to the requirements of the Federal Aviation Administration, where applicable.
- 5.10.5-P33: Limit the height of structures in accordance with the Federal Aviation Administration Federal Aviation Regulations, FAR Part 77 criteria.

As discussed earlier, the project's maximum structure height of 122.5 feet would exceed the FAA notification 100 to 1 surface threshold of approximately 14 feet at the project site. As a result, the applicant submitted the required FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA, along with a report showing that the project's structure height would fall beneath the FAA's protected surfaces, and would therefore not be expected to cause significant hazards to aviation (Walsh 2019e). See **Section 5.17, Transportation** for more details. The City of Santa Clara, as the permitting agency for this project, would ensure consistency with these policies.

- 5.10.5-P32: Encourage all new projects within the Airport Influence Area to dedicate an aviation easement.

The City of Santa Clara, as the permitting agency for this project, would ensure consistency with this policy by requiring dedication of an aviation easement to the City of San Jose.

**City of Santa Clara Zoning Ordinance.** Although the City of Santa Clara's Zoning Ordinance does not specifically list data centers as a permitted use under the Heavy Industrial zoning designation, the project would be consistent with this zoning designation. The Heavy Industrial zoning designation allows "[a]ny use permitted in the MP [Planned Industrial] and ML [Light Industrial] districts..." The listed permitted uses in the MP zoning district include: science, engineering, research, and testing offices and laboratories; light manufacturing; and professional, financial, and administrative offices. The Zoning Ordinance states that other permitted uses in the MP zoning district are "[activities] not dealing with large volumes of product handling, storage, and distribution and that, in the opinion of the Planning Commission, are similar in character and not more detrimental to the health, safety, and general welfare of the neighborhood than any other permitted uses" (Santa Clara 2019c). The

proposed data center would not deal with large volumes of product handling, storage, or distribution and would avoid creating nuisances in the MP zoning district, including objectionable noise, smoke, odor, dust, noxious gases, vibration, glare, heat, fire hazards, or other wastes. Therefore, the proposed data center use is consistent with the uses allowed under the MP zoning designation, and is therefore also consistent with the Heavy Industrial zoning designation.

The Heavy Industrial zoning designation also allows incidental and accessory buildings and uses on the same lot with and necessary for the operation of any permitted use, which would include the backup generating facility and future substation. Therefore, these components of the project would also be consistent with the Heavy Industrial zoning designation.

The project applicant would obtain a minor modification of the maximum building height regulation from the City's Zoning Administrator to allow a building height<sup>2</sup> of 87.5 feet (from the ground to the top of the parapet) for the proposed data center building, which would exceed the Heavy Industrial zoning district's maximum building height of 70 feet. A building height of 87.5 feet is the maximum that the Zoning Administrator can grant as a minor modification, as it represents a 25 percent increase from the permitted height of 70 feet (Santa Clara 2019b). Any further exceedance would be deemed a variance from the regulation, requiring Planning Commission approval. The applicant will file an application with the City's Zoning Administrator for this minor modification, and the applicant anticipates the granting of the minor modification prior to the building permit review. With City Zoning Administrator approval of a minor modification to the building height regulation, the project would be in conformance with the Heavy Industrial zoning designation. Furthermore, height regulations are generally intended to reduce environmental impacts to the aesthetic quality of a site or area, and despite the project's height, aesthetic impacts from this project would be less than significant, given that the project would not significantly affect a scenic vista or scenic resources. (See the **Section 5.1, Aesthetics** of this document for more information.) For these reasons, impacts from the project's increased height would be less than significant.

As stated earlier, in the Heavy Industrial zoning district, there is no maximum lot coverage, and rear and side yard setback regulations would not apply to the project because the project site is not adjacent to properties zoned or designated in the General Plan for residential use. The proposed project would meet the required street side front yard setback of at least 15 feet, as it would be located at least 25 feet from the southern property line on Walsh Avenue.

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<sup>2</sup> Although the total maximum structure height, which includes the elevator penthouse, is 122.5 feet, "height of buildings" as defined by the City of Santa Clara Zoning Code is "a vertical distance from the 'grade' to the highest point of the coping of a flat roof, or to the deck line of a mansard roof, or to the highest gable of a pitched or hipped roof" (Santa Clara 2019d). Total structure height is considered for aviation issues, while building height is considered for conformity with the Zoning Code.

For the above reasons, 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

- CEC 2019** – California Energy Commission (CEC). (TN 230445). Report of Conversation – Communication with City of San Jose Airport Planner Regarding FAA Notification, dated October 31, 2019. Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.
- Santa Clara 2010** – City of Santa Clara (Santa Clara). 2010–2035 General Plan: Chapter 5 Goals and Policies, Land Use Diagrams Phases I, II, and III. Adopted November 16, 2010. Available online at: <https://www.santaclaraca.gov/our-city/departments-a-f/community-development/planning-division/general-plan>. Accessed on: August 13, 2019.
- Santa Clara 2019a** – City of Santa Clara (Santa Clara). City Code, Chapter 18.50: Regulations for MH- Heavy Industrial Zoning Districts. Available online at: <https://www.codepublishing.com/CA/SantaClara/#!/SantaClara18/SantaClara1850.html#18.50>. Accessed on: August 13, 2019.
- Santa Clara 2019b** – City of Santa Clara (Santa Clara). City Code, Chapter 18.90: Zoning Administrator. Available online at: <https://www.codepublishing.com/CA/SantaClara/#!/SantaClara18/SantaClara1890.html#18.90>. Accessed on: August 14, 2019.
- Santa Clara 2019c** – City of Santa Clara (Santa Clara). City Code, Chapter 18.46: Regulations for MP- Planned Industrial Zoning Districts. Available online at: <https://www.codepublishing.com/CA/SantaClara/#!/SantaClara18/SantaClara1846.html#18.46>. Accessed on: August 13, 2019.
- Santa Clara 2019d** – City of Santa Clara (Santa Clara). City Code, Chapter 18.06: Definitions. Available online at: <https://www.codepublishing.com/CA/SantaClara/#!/SantaClara18/SantaClara1806.html#18.06>. Accessed on: December 16, 2019.
- Santa Clara County 2016** – Santa Clara County Airport Land Use Commission (Santa Clara County). Mineta San Jose International Airport Comprehensive Land Use Plan for Santa Clara County. Adopted May 25, 2011, amended 11/16/2016. Available online at: [https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC\\_SJC\\_CLUP.pdf](https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_SJC_CLUP.pdf). Accessed on: December 10, 2019.

**Walsh 2019e** – Applicant responses to Report of Conversation TN 230445 – FAA  
Surfaces Analysis (TN 231293). Available online at:  
<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## 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	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 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: July 23, 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: July 23, 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](https://water.ca.gov/LegacyFiles/floodmgmt/docs/misc_refs/Jensen_Silva_1988_minerallandclass.pdf). Accessed on: July 23, 2019

## 5.13 Noise

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

NOISE	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G.

### 5.13.1 Setting

The project area consists primarily of heavy industrial land uses. A data center facility is located directly north of the project site and is a heavy industrial use (Santa Clara 2014, §5.2.2). A building designated commercial use lies directly to the west of the site. The nearest residential area is located on Avila Avenue and is approximately 0.5 mile south of the project site boundary. The nearest airport is the Norman Y. Mineta San Jose International Airport located approximately 0.3 mile east of the site. The predominant ambient noise sources are attributed to the automobile traffic and from aircraft arriving to and departing from the airport. Additional ambient noise in the immediate project area includes mechanical noise from the data center to the north of the project site.

An ambient noise monitoring program was conducted in the areas surrounding the project site over a 72 hour period between February 22, 2019 and February 25, 2019 (Walsh 2019a, section 4.13.1.2). At the nearest residential area, to the south of the project site,

by the front yard of the home at 2262 Avila Avenue, daytime  $L_{eq}^1$  noise levels ranged between 55 and 58 dBA during the daytime hours and 43 to 49 dBA during the late nighttime hours. The large difference between the late night and morning  $L_{eq}$  values is due to airport operations, as the airport is relatively inactive between the hours of 11 PM and 6 AM but contributes significantly to the overall ambient noise at other times. At the data center property line directly north of the project, the measured  $L_{eq}$  noise levels averaged 67 dBA.

## 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 greater 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 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).

## 5.13.2 Environmental Impacts and Mitigation Measures

**Applicant Proposed Measures:** The project proposes to implement design measures to reduce temporary construction noise to less than significant levels. These

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<sup>1</sup>  $L_{eq}$  is a measurement of average energy level intensity of noise over a given period of time.

measures were first presented in the application's Project Description (Walsh 2019a) and then numbered in a separate filing (Walsh 2020).

### PD NOI-1

- The project applicant shall prepare a construction noise control plan, which shall be submitted for review and approval by the Director of Community Development prior to issuance of demolition, grading, and building permits. This plan shall include, at a minimum, the following measures
  - Construct temporary noise barriers, where feasible, to screen stationary noise-generating equipment. Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receiver and if the barrier is constructed in a manner that eliminates any cracks or gaps.
  - Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
  - Unnecessary idling of internal combustion engines should be strictly prohibited.
  - Locate stationary noise-generating equipment, such as air compressors or portable power generators, as far as possible from sensitive receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used reduce noise levels at the adjacent sensitive receptors. Any enclosure openings or venting shall face away from sensitive receptors.
  - Utilize "quiet" air compressors and other stationary noise sources where technology exists.
  - Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
  - A temporary noise control blanket barrier could be erected, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
  - Locate material stockpiles, as well as maintenance/equipment staging and parking areas, as far as feasible from residential receptors.
  - Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
  - The contractor shall prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.

- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.
- 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. In addition to construction of the WDC, the project would require demolition of existing foundations and removal of underground utilities. Demolition and construction activities would likely utilize equipment that could generate noise levels that exceed ambient noise, such as bulldozers and jackhammers. Typical equipment used for construction and demolition of similar projects produce noise levels between 82 (for trenching and foundation) and 91 dBA (for demolition) at 50 feet.

Sound levels from stationary noise sources attenuate at a rate of 6 dBA for every doubling of distance. At the data center directly to the north, the loudest level of 91 dBA (from project demolition) translates to an exterior level of 76 dBA. This is an increase of 9 dBA above the ambient level in this area (67 dBA) and is not considered significant because the use of the loudest equipment would not be frequent and would be for short durations (i.e., jackhammer to break up pavement and concrete). Also, if needed, quieter equipment or commonly used noise-reducing accessories that are readily available can be used to reduce noise. For example, jackhammers can be equipped with mufflers that reduce noise exposure.

Using the rate of 6 dBA for every doubling of distance, at the residences 0.5 mile away, the attenuation is about 34 dBA. Reducing the noise level of the loudest piece of equipment (91 dBA) by 34 dBA, the exterior sound that would be detected at the closest residence would be 57 dBA. This is equivalent to the average daytime ambient noise level at this residential area and would not have a noticeable impact. Moreover, the above calculation does not account for significant shielding due to intervening structures that separate the WDC project site from the residential receptors. These barriers would result in further reduction of the noise impact at the residential area. Also, demolition and construction activities would occur only during daytime hours.

The applicant plans to implement appropriate measures to reduce demolition and construction noise (Walsh 2019a, section 2.4.7). The applicant would prepare a construction noise control plan and would submit it for review and approval by the

city's Director of Community Development prior to issuance of the demolition permit. Examples of measures that would be included in this plan 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-sensitive receptors as feasible.

Thus, project demolition and 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 0.5 mile away.

## **Operation and Maintenance**

LESS THAN SIGNIFICANT IMPACT. The 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 WDC would include the backup generators, rooftop air-cooled chillers, makeup air units, and HVAC units. A sound-attenuating enclosure would be provided for each backup generator. The generator yard would be enclosed with 55-foot-high precast concrete screen walls on the east and west ends. A 14-foot tall rooftop parapet would be installed on top of the data center building to act as a noise screen. Examples of additional measures to further reduce noise levels at project perimeter, if needed, include low speed fans and duct and transition silencers.

As described above, 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 applicant performed computer noise modeling for each mode of project operation: 1) normal mode, with rooftop air-cooled chillers, makeup air units, and HVAC units operating; 2) testing mode, normal mode of operation and one generator operating at the same time; and 3) emergency mode, normal mode of operation and all of the generators operating at the same time. The rooftop parapet on top of the data center building and the precast concrete noise barriers on the eastern and western sides of the equipment yard were built into the model (Walsh 2019b, Appendix D, Page 9). The noise model assumed all 33 generators, rooftop air-cooled chillers, makeup air units, and HVAC units were operating at full load. For normal mode of operation, the results showed that project noise would be below the city's criteria at the nearest residential area located 0.5 mile away as well as at the data center directly to the north of the site and the commercial property directly to the west of the site.

For testing mode, the model showed the project noise to be 3 dBA below the city's noise limit of 75 dBA at the data center. For the same testing mode, the model showed a project noise level of 67 dBA at the nearest commercial property line (to the west),

exceeding the city's exterior noise limit of 65 dBA<sup>2</sup> by 2 dBA. However, because this increase is below 3 dBA, it would not be noticeable, and thus, not substantially above the city's standards. Note that generator testing would occur for short durations and be done infrequently.<sup>3</sup> The model showed the project noise to be well below the city's criteria at the nearest residential area.

Even though the city exempts the operation of the emergency generators from its noise limits, at the direction of the Energy Commission Committee for WDC, staff has evaluated emergency operation for CEQA noise impact determination, as described below.

The model showed that during emergency operation (worst-case scenario, where multiple engines operate simultaneously), the project noise would exceed the average exterior ambient level of 67 dBA by 15 dBA at the northern data center property line and by 10 dBA at the western commercial property line (Walsh 2019b, Appendix D, Figure 4). According to the CEQA guidelines, a noise level increase of greater than 5 dBA would be considered potentially significant. One of the factors considered in determining whether an increase is significant or not is how frequently the noise occurs. The emergency generators would serve WDC only during interruption of electric service from SVP, which is expected to occur very infrequently<sup>4</sup> (see **Appendix B**). Also, accounting for a sound transmission loss of 25 dBA due to a standard commercial/industrial building exterior to interior effect, the project's emergency operation would be expected to increase the interior noise levels at the industrial and commercial properties' office spaces only slightly. The potential impact would be less than significant. For the emergency operation, the model showed a noise level of 46 dBA at the nearest residence. This is lower than the average daytime ambient of 57 dBA and does not exceed the average nighttime ambient of 46 dBA at this residence.

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.

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<sup>2</sup> Daytime limit is used since generator testing is not anticipated to occur at night.

<sup>3</sup> Typical period of testing for each generator would be no more than five hours per year (typically in 15- to 30-minute durations (Walsh 2019a, Table 4.3-8). The total typical period of testing for all of the 33 generators combined would be no more than 155 hours annually.

<sup>4</sup> Data center customers on two of SVP's loops each experienced a total of 7.5 hours of outages over 10-years due to faults on the 60 kV system while data centers on the three other loops experienced no outages due to faults on the 60 kV system.

***b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?***

**Construction**

LESS THAN SIGNIFICANT IMPACT. Activities associated with demolition of the subgrade infrastructure would likely include vibration generating equipment such as jackhammers and vibratory rollers. 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.

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). At the nearest industrial and office buildings, 0.21 in/sec translates to about 0.03 in/sec; less than the threshold of human response. Also, no residential land uses are in the proximity of the project site; the nearest residence is located roughly 0.5 mile away.

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 (Walsh 2019a, section 3.13.5).

Construction and demolition equipment and activities would be similar to those used at similar projects and vibration impacts from project construction and demolition 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 HVAC units. These 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, it 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 0.3 mile to the east. It is located inside the Airport Noise Zone (the 65 CNEL<sup>5</sup> contour, as set forth by state law) as defined in the Comprehensive Land Use Plan for the airport. Aircraft-related noise is occasionally audible at the project site. The project's operational noise levels would not exceed the 24-hour ambient noise levels at the nearest residential receptors. The project site is surrounded with mostly industrial uses and the closest residence is about 0.5 mile away from both the project site and the airport. 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](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.

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<sup>5</sup> 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.

**Walsh 2019b** – Application for Small Power Plant Exemption: Walsh Data Center, Appendices A-E, dated June 28, 2019. (TN 228877-1). Available online at:  
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## 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	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 the cities of 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<sup>1</sup> 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 2019a).

**Table 5.14-1** shows the historical and projected population for the cities and communities within proximity of the project site, plus Santa Clara County. Population

<sup>1</sup> 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).

projections between 2019 and 2040 show a growth ranging from 9 to 42.8 percent or 0.4 to 2.0 percent per year in the cities within and around a 6-mile radius of the project site.

**TABLE 5.14-1 HISTORICAL AND PROJECTED POPULATION**

Area	2010 <sup>1</sup>	2019 <sup>2</sup>	2020 <sup>3</sup>	2040 <sup>3</sup>	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:** <sup>1</sup>US Census 2010; <sup>2</sup>CA DOF 2019a; <sup>3</sup>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 2019a).

**TABLE 5.14-2 HOUSING SUPPLY ESTIMATES IN THE PROJECT AREA**

Housing Supply		2019 Total	2019 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	1,4331
	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 2019a.

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 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 as the project does not propose new housing or land use changes nor does it facilitate growth by extending growth inducing infrastructure such as roads or water supply pipelines. While the project includes 32 backup generators, the electricity produced would directly serve the project if 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. The existing structures on the site would be demolished to allow for construction of the project. Demolition and construction activities would last approximately 16 to 19 months (CEC 2019d). Construction of the project would employ an average of 90 workers per month and reach a peak workforce of 175 in month 10 (Walsh 2019c).

The applicant anticipates all of the construction workforce for the project would be sourced locally from the greater Bay Area (Walsh 2019c). 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; thus, the construction workforce would not likely seek temporary lodging closer to the project site. Therefore, 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 (Walsh 2019a, Section 4.14, page 152). The applicant anticipates all of the operations workforce would come from locally in the greater Bay Area (Walsh 2019c). 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 in the project area indicate a sufficient supply of available housing units 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. 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 parcel currently occupied by industrial warehouses and therefore would not displace any people or housing. Construction of replacement housing elsewhere would not be necessary and no people or houses would be displaced by the project 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](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 2019a** – 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>.
- CEC 2019d** – Record of Conversation with CEC Staff, Lisa Worrall re Clarification of Project Construction Duration, dated October 23, 2019 (TN 230517)
- 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>.
- US Census 2010** – United States Census Bureau (US Census). P1: TOTAL POPULATION - Universe: Total population, 2010 Census Summary File 1.

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<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

**Walsh 2019c** – Applicant responses to Data Request Set 1. (TN 229543, 229547-1-2, 229827, 230447, 230448). Available online at:

<https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 site preparation would include the demolition of existing structures, ground preparation, and grading. The project would construct a 435,050 square foot four-story data center building, substation, generation equipment yard, surface parking, and landscaping. A transmission line with new poles would connect the project to the Silicon Valley Power electric system.

### 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 0.6 mile west of the project site (Santa Clara 2019b).

SCFD has approximately 167 fire service personnel 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 from 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. Police headquarters, located 1.3 miles southeast, is the closest station to the project site.

In 2018, there were 58,912 calls for service (police). 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 2019). 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: 2 alternative schools, 1 continuation high school, 1 community day school, 2 high schools, 3 middle schools, 17 elementary schools, and 1 K-8 school (CDE 2018). The nearest schools to the project site are Granada Islamic (private), approximately 0.87-mile northwest of the project and Scott Lane Elementary (public), 1.1-miles southwest of the project.

### **Parks**

The City of Santa Clara has total park acreage of 350 (made up of improved and unimproved acreage) (Santa Clara 2019d). 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 2014). 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).<sup>1</sup> With a combined total of 328 acres<sup>2</sup>, Santa Clara has approximately 2.6 acres per 1,000 residents and meets its park standards (Santa Clara 2019d, page 19).

The closest park to the project site is the Raymond G. Gamma Dog Park, located 0.8-mile southwest of the project site. However, it is temporarily closed in 2019-2020 for the construction of the new Reed and Grant Street Sports Park and city council-approved dog park improvements. It is a 1.5-acre park and is the only city park that allows dogs to run off-leash. (Santa Clara 2019e) 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 Northside Branch Library, which is located approximately 2.2 miles to the north (Santa Clara 2019f).

### Regulatory Background

No regulations related to public services apply to the project.

## 5.15.2 Environmental Impacts and Mitigation Measures

**Applicant Proposed Measures:** None.

*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 is currently developed with a one-story 171,259-square foot warehouse complex and associated paved parking and loading areas and is surrounded by commercial and industrial land uses. In addition, the project would be located on a site already 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 demolition and

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<sup>1</sup> 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.

<sup>2</sup> Total acres of improved and unimproved parkland that meets the Mitigation Fee Act Standard.

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 workers would be hired locally from the greater Bay Area (Walsh 2019c). 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 the service area would have a negligible effect on the ability of the fire stations that serve the project site to meet their emergency service and response standards.

Diesel fuel would be stored in above-ground tanks beneath each block of generators. The diesel tanks would be double-walled with leak detection (Walsh 2019a, Section 4.9, page 9). Diesel fuel deliveries would be on an as needed basis in a compartmentalized truck with a maximum capacity of 8,500 gallons. An emergency pump shut-off would be used if a pump hose breaks while fueling the tanks. (Walsh 2019a, Section 2.0, page 9). The project would be constructed in accordance with current fire codes. Also, the Fire Department would review the site development plans to ensure fire protection design features are incorporated and adequate emergency access is provided. (Walsh 2019a, Section 4.9, page 13) 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. Precast concrete screen walls, at 53 feet high, would be constructed on the east and west end of the generator yard, encompassing the yard. A 10-foot high decorative metal fence would be constructed on the north to separate the generator yard from the balance of the property (Walsh 2019a, Section 2.0, page 13). A wrought iron security fence would be located around the north and east perimeter of the project site. There would be a security office (Walsh 2019a, Section 2.0, page 9). 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 a 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 25 operations workers that would be employed by the project would have a negligible effect on the emergency response times of the stations that serve the project site and vicinity. This limited effect would be from the few workers who may choose to relocate closer to the project site. The project would be secured by fencing, as described in the construction analysis above. Due to the perimeter fencing and security office, criminal activity would be adequately deterred 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 (435,050 sq. ft. total), an estimated \$265,381 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 2.72 acres per 1,000 residents. Construction of the project would require an average of 90 workers and a peak of 175 in month 10 (Walsh 2019c, page 1). The construction needs of the project would not require an influx of new workers and would be met by the workforce from neighboring cities and counties within the greater Bay Area (see **Section 5.14, Population and Housing**). 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, demolition and construction of the project would not affect park standards or increase the demand for park facilities. The project demolition and 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 project 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 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. As discussed above, 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](https://osfm.fire.ca.gov/media/6764/fhszl_map43.pdf). Accessed on: September 11, 2019.

**CDE 2019** – California Department of Education (CDE). California Department of Education Educational Demographics Unit, Data Quest, Select District Level Data for the year 2018 - 2019, Enrollment by Ethnicity and Grade, Santa Clara Unified Report (43-69674). Available online at:

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## 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 98 acres of undeveloped parks (Santa Clara 2019a, pages 6-8). The closest recreational resource is the Raymond G. Gamma Dog Park, located 0.8-mile southwest of the project site. However, it is temporarily closed in 2019-2020 for the construction of the new Reed and Grant Street Sports Park and city council approved dog park improvements. It is a 1.5 acre park that is the only city park that allows dogs to run off-leash. (Santa Clara 2019b) This park is 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 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 90 workers during construction and a maximum of 175 workers during the peak construction period (month 10) (Walsh 2019c). Construction is expected to last for approximately 16 to 19 months (CEC 2019d). 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.<sup>1</sup> 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 who would be 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. Although, if 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 demolition and construction needs of the project would not require an influx of new workers and

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<sup>1</sup> 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.

would be supplied by the existing workforce from the surrounding greater Bay Area, including nearby cities and counties. Workers would commute to the project site during construction and they are not likely to temporarily relocate closer to the project. Therefore, project construction would have no impacts to recreational facilities.

### Operation and Maintenance

LESS THAN SIGNIFICANT IMPACT. Operation of the project would be conducted by 25 onsite employees (Walsh 2019a Section 4.14, page 152). 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

**CEC 2019d** – Record of Conversation with CEC Staff, Lisa Worrall re Clarification of Project Construction Duration, dated October 23, 2019 (TN 230517)

**Santa Clara 2019a** – City of Santa Clara (Santa Clara). City of Santa Clara Park and Recreation. Facilities Development Impact Fee Update Study – Administrative Draft, January 4, 2019, prepared by Willdan Financial Services. Available online at: <http://santaclaraca.gov/home/showdocument?id=62674>.

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## 5.17 Transportation

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

<b>TRANSPORTATION</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation Incorporated</b>	<b>Less than Significant Impact</b>	<b>No Impact</b>
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental checklist established by CEQA Guidelines, Appendix G

### 5.17.1 Setting

The project would be located in the City of Santa Clara on a 7.87-acre site at 651 Walsh Avenue. Direct motor vehicle access to the project site would be from three driveways on Walsh Avenue. Local roadways include Lafayette Street to the west, De La Cruz Boulevard to the east, and Martin Avenue to the south. Central Expressway and U.S. Highway 101 (US-101) would provide regional access from the north.

Other transportation infrastructure near the project site includes bicycle lanes, bus transit, Union Pacific Railroad (UPRR) tracks with passenger service, and the Norman Y. Mineta San Jose International Airport. The closest bike lanes on street are along Scott Boulevard terminating at Central Expressway to the northwest and along Monroe Street to the south (VTA 2016). The closest bus stop on a route served by the Santa Clara County Valley Transportation Authority (VTA) is on Scott Boulevard just south of Walsh Avenue, approximately 0.7 mile from the project site (VTA 2019). The UPRR tracks lie adjacent to the eastern side of the project site in a north-south orientation. Caltrain, Altamont Commuter Express (ACE), and Amtrak's Capitol Corridor provide longer-distance passenger train service to neighboring counties/regions on these tracks, which can be accessed approximately two miles south of the project site at the Santa Clara Transit Center (VTA 2019). The San Jose International Airport is located approximately 0.3 mile (as the crow flies) east of the project site and has two runways that exceed 3,200 feet in length (AirNav 2019). There are no sidewalks adjacent to the project site on Walsh Avenue.

## Regulatory Background

### *Federal*

Title 14, Part 77.9 of the Code of Federal Regulations requires Federal Aviation Administration (FAA) notification for any construction or alteration 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. The threshold for the FAA notification 100 to 1 surface exceedance height is approximately 14 feet for the project site. If a project's height, including temporary equipment (such as cranes used during construction) or any ancillary structures (such as transmission poles), exceeds the 100 to 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 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

**Applicant Proposed Measures:** None.

- 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. The project site is not immediately served by bus or rail transit. The project would utilize existing connections to connect to the City's storm water, electric, telecommunications, and waste systems. No relocation of existing or construction of new facilities for these systems are needed to serve the project. Construction activities would occur mostly on site, with possible exceptions of the modifications of project access driveways and the addition of a sidewalk along the project's frontage on Walsh Avenue. Project construction would not otherwise temporarily or permanently alter any public roadways or intersection (Walsh 2019c).

Construction of the project would remove three of the six existing driveways on the project site frontage along Walsh Avenue and would install a separated sidewalk along Walsh Avenue. There are no bike lanes on Walsh Avenue and no existing sidewalks along the project's frontage. Therefore, modifications to the site access would not conflict with bicycle facilities or pedestrian circulation. The City of Santa Clara, as the permitting agency, would ensure that the applicant obtains the proper permits for these activities to minimize disturbance to roadway 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 applicant to obtain all 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 therefore impacts would be less than significant.

## Operation and Maintenance

No IMPACT. Operation of the project would occur fully onsite and would not obstruct any transit, roadway, bicycle, or pedestrian 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 Walsh Avenue 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 (b), states that generally vehicle miles travelled (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, subdivision (b)(3)).

Project construction would involve a temporary increase in vehicle trips resulting from workers commuting to the project site, and delivery and truck haul trips of project materials. The 19-month construction period would generate 275 one-way worker trips and 10 one-way delivery and truck haul trips on average per day (Walsh 2019c). All workers would be from the greater Bay Area and would not be traveling long distances (Walsh 2019c). Estimated average one-way trip lengths are 10.8 miles for construction workers, 7.3 miles for delivery trips, and 20 miles for truck haul trips (Walsh 2019c).

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. Therefore, 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 backup 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 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 431 daily one-way trips (Walsh 2019c). Estimated average one-way trip lengths for operational employees are 9.5 miles, and 7.3 miles for commercial vehicles, including customers and deliveries.

The project would not be growth-inducing. The project site is currently a developed warehouse complex with an onsite workforce. The project's operation workers would all be from the greater Bay Area and local workers would be using the regional transportation network regardless of the project's approval (Walsh 2019c). Based on the limited number of employees and visitors, operation of the project would require relatively few VMT. Therefore, the VMT from 25 operations employees would not significantly increase the VMT in the project area.

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). 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 on site and not in the public right-of-way, with possible exceptions of the modifications of project access driveways and the addition of a sidewalk along the project's frontage on Walsh Avenue. Project construction would not otherwise temporarily or permanently alter any public roadways or intersection (Walsh 2019c).

Construction of the project would remove three of the six existing driveways on the project site frontage along Walsh Avenue and would install a separated sidewalk along Walsh Avenue. The City of Santa Clara, as the permitting agency, would ensure that the applicant obtains the proper permits for these activities, including encroachment permits, to minimize any hazards resulting from construction equipment or activities. The City of Santa Clara would also require the applicant 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 applicant 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 14 feet at the project site. Construction of the generator yard would include using a crane to place each of the 32 backup generators in the generator yard (Walsh 2019a, p. 15). The construction crane would exceed 14 feet in height, requiring the applicant to submit Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA. The applicant successfully submitted their Form 7460-1 to the FAA on January 9, 2020 for the permanent structures that would be constructed, and will file additional notification for temporary construction equipment, including the construction crane, as necessary once contractors are selected. 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 site is located approximately 0.3 mile 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. The highest point of the proposed project, the elevator penthouse, would be 122.5 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 a FAR Part 77 obstruction surface of 162 feet AMSL at the project site (Santa Clara County 2016). The Walsh Data Center, at a maximum structure height of 122.5 feet AGL, or 155.5 feet AMSL, would not exceed the FAA's obstruction surface of 162 AMSL.

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 height of 122.5 AGL, the project would exceed the FAA notification 100 to 1 surface threshold of approximately 14 feet at the project site, requiring the applicant to submit Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA. The applicant conducted an FAA obstruction analysis, which shows that the project would not penetrate any FAA protected surface (Walsh 2019e). The applicant successfully submitted their Form 7460-1 to the FAA on January 9, 2020. The FAA issuance of "determination of no hazard" and compliance with any conditions of such determinations, would reduce potential air safety hazards to a level of less than significant. The City of Santa Clara, as the permitting agency for this project, would ensure compliance with the FAA's determination.

The project site is located in the Traffic Pattern Zone, Turning Safety Zone, and Inner Safety Zone airport safety zones. Above ground storage of fuel or other hazardous materials is prohibited in the Turning Safety and Inner Safety zones (SCCALUC 2016). As discussed in **Section 5.9 Hazards and Hazardous Materials** and shown in **Figure 5.9-1**, the diesel fuel tanks located beneath each generator block would be located on the portion of the project site in the Traffic Pattern Zone where there is no prohibition of above ground storage of fuel or other hazardous materials.

The project's backup generators 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 2019). 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.

The applicant modeled the plume velocity of the project's backup generators and rooftop chillers to determine whether the project's thermal plumes would exceed 10.6 m/s at altitudes where aircraft would fly. The applicant's analysis was independently reviewed and accepted by the Energy Commission Air Quality staff. Staff calculated that under worst-case weather conditions and calculation methods, the vertical velocity of the plumes from the backup generators would not drop below 10.6 m/s, and therefore not hazardous to aircraft, until an altitude of 93 feet AGL. The vertical velocity of the plumes from the chillers would not drop below 10.6 m/s, and therefore not hazardous to aircraft, until an altitude of 170 feet AGL. (Walsh 2019c)

Considering the elevation of the project site is 33 feet AMSL, the chillers would produce a worst-case plume reaching hazardous velocities of 10.6 m/s up to altitudes of 203 feet AMSL over the project site. This would encroach into FAA obstruction surface (shown in Figure 6 of the CLUP), which starts at 162 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. The traffic pattern at the San Jose International Airport is much higher than 203 feet AMSL (942 feet AGL for single-engine aircraft and 1,442 feet AGL for multi-engine and turbine powered aircraft) making it unlikely that aircraft would be flying at low altitudes over the project site (AirNav 2019). 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 IMPACT. Emergency access to the site would be provided by three two-way driveways on Walsh Avenue. The driveways would allow emergency access to the data center building, generator yard, and substation. The site would be accessible by three driveways at similar locations to current driveways. The City of Santa Clara standards require two-way driveways providing access to all properties be a minimum width of 22 feet (20-foot pavement with one-foot clearance on each side) (Santa Clara 2019, § 18.74.050). From west to east, the driveways along Walsh Avenue would be 25, 30 and 26 feet in width, with the eastern most driveway

composed of gravel. The final site design would be required to be consistent with regulatory requirements for fire truck access (Walsh 2019a, p. 164). Additionally, 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

**AirNav 2019** – AirNav. KSJC Norman Y Mineta San Jose International Airport. Available online at: <https://www.airnav.com/airport/KSJC>. Accessed on: December 2019.

**Caltrans 2019** – California Department of Transportation (Caltrans). Comments on the Laurelwood Initial Study (19-SPPE-01, TN 229939), dated October 1, 2019. Available online at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=229939&DocumentContentId=61416>. Accessed on: January 2020

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**FAA 2019** – Federal Aviation Administration (FAA). Aeronautical Information Manual, Chapter 7. Safety of Flight, Section 5: Potential Flight Hazards, Subsection 7-5-15: Avoid Flight in the Vicinity of Exhaust Plumes (Smoke Stacks and Cooling Towers), August 15, 2019, [https://www.faa.gov/air\\_traffic/publications/media/aim\\_basic\\_8-15-19.pdf](https://www.faa.gov/air_traffic/publications/media/aim_basic_8-15-19.pdf). Accessed on: October 2019.

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**Santa Clara 2019** – City of Santa Clara (Santa Clara) Santa Clara City Code. Current through Ordinance 2006, passed October 8, 2019. Available online at: <https://www.codepublishing.com/CA/SantaClara>. Accessed on: January 2020.

**Santa Clara County 2016** – Santa Clara County Airport Land Use Commission (Santa Clara County). Norman Y. 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](https://www.sccgov.org/sites/dpd/DocsForms/Documents/ALUC_SJC_CLUP.pdf). Accessed on: August 2019.

**VTA 2016** – Santa Clara Valley Transportation Authority (VTA), Santa Clara Valley Bikeways Map (Countywide Bikeways Map), dated April 2016, current effective December 28, 2019. Available online at: <http://www.vta.org/go/maps>. Accessed on: January 2020.

**VTA 2019** – Santa Clara Valley Transportation Authority (VTA), VTA's New Service System Map (Bus and Rail) – VTA Transit Map, dated December 28, 2019. Available online at: <http://www.vta.org/go/maps>. Accessed on: January 2020.

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**Walsh 2019e** – Applicant responses to Report of Conversation TN 230445 – FAA Surfaces Analysis (TN 231293). Available online at:  
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## 5.18 Utilities and Service Systems

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of project with respect to utilities and service systems.

UTILITIES AND SERVICE SYSTEMS		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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).

### **Recycled Water Supply**

Recycled water is supplied to the City of Santa Clara through the South Bay Water Recycling (SBWR) program. The SBWR obtains advanced tertiary treated water from the San Jose-Santa Clara Regional Wastewater Facility (RWF), formerly known as the San Jose-Santa Clara Water Pollution Control Plant. In 2015, the RWF treated 14,770 AF of wastewater, of which 3,529 AF was treated to title 22 recycled water standards for use by the City of Santa Clara, and the remaining 11,241 AF of treated wastewater was discharged to the San Francisco Bay (Santa Clara 2016). The recycled water purchased from the SBWR made up approximately 17 percent of the overall water use in the city. The City of Santa Clara uses recycled water for the non-potable needs of businesses, industries, parks, and schools located along pipeline routes. The state of California Water Code sections 13550 and 13551 include strong language prohibiting the use of potable water where recycled water can be used, such as cooling, if recycled water is available and economically feasible. The Santa Clara City Code also has similar requirements. A recycled water connection that can serve the proposed project is located at the intersection of Lafayette Street and Walsh Avenue, less than 1,000 feet west of the southwest corner of the project site (Santa Clara 2012).

### **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 underneath Walsh

Avenue (Walsh 2019), which discharges to Guadalupe River and ultimately the San Francisco Bay (Santa Clara 2016).

## **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, for comfort heating, 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 Regional Water Quality Control Boards (RWQCB) 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 in 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 the project's demand of 25.6 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 (Walsh 2019), the project does not meet Section 10912's criteria and does not require a WSA.

**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 the project (Santa Clara 2014).

## **5.18.2 Environmental Impacts and Mitigation Measures**

**Applicant Proposed Measures:** None.

- 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 SVP. 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, which 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's 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 12 acres of the project site every day of the 19 months of construction (approximately 420 work days), that would add up to approximately 4.2 million gallons, or about 13 AF. This overly conservative estimate is still less than the project demand for one year of operation. The impact of construction water demand would therefore be less than significant.

The proposed project would have an operational demand of 25.6 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 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 originally used for industrial manufacturing operation and later converted to warehousing and office space. 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 25.6 AFY would constitute a substantial reduction in water use compared to typical historic consumption by previous industrial and commercial uses 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 (Walsh 2019, Appendix E).

Although a recycled water connection is less than 1,000 feet away from the project, the cost of modifications necessary to make the cooling equipment run on recycled water, combined with the small amount of water needed for cooling, makes it economically infeasible for the project to use recycled water at this time.

**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 the WDC would not be expected to generate more than 0.5 mgd, which is less than 1.0 percent of the available treatment capacity of the RWF. Implementation of the proposed project would 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<sup>1</sup> 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. Demolition and 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, typically less than 0.1 ton per day for similar projects. 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. Though no information was provided on the rate of solid waste generation during operation of the WDC, the WDC would be expected

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<sup>1</sup> By removing some of the existing impervious land cover and replacing it with pervious areas such as planting areas and swales.

to generate solid waste at rates similar to typical data centers. Solid waste generation rates by typical data centers are substantially smaller than the maximum daily amount of solid waste of 3,260 tons per day allowed at the Newby Island Landfill. Also, the rate of solid waste generated by the new project would be significantly smaller than what has been historically generated by the office and commercial operation facilities that existed at the site. 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 (Walsh 2019). Similar to typical data centers, the WDC 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

- DWR 2003** – Department of Water Resources (DWR). Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001. California Department of Water Resources. October 8, 2003. Available online at: [https://water.ca.gov/LegacyFiles/pubs/use/sb\\_610\\_sb\\_221\\_guidebook/guidebook.pdf](https://water.ca.gov/LegacyFiles/pubs/use/sb_610_sb_221_guidebook/guidebook.pdf). Accessed on: August 15, 2019.
- Santa Clara 2012** – City of Santa Clara recycled water system map, July 2012 update. Available online at: <http://santaclaraca.gov/home/showdocument?id=14883>. Accessed on August 13, 2019.
- Santa Clara 2016** – City of Santa Clara 2015 Urban Water Management Plan. Prepared by the City of Santa Clara Water and Sewer Utilities. Adopted November 22, 2016. Available online at: <http://santaclaraca.gov/government/departments/water-sewer-utilities/water-utility/urban-water-management-plan>. Accessed: August 15, 2019.
- Santa Clara 2014** – City of Santa Clara 2010-2035 General Plan. Approved by City Council November 16, 2010 and updated December 9, 2014. Available at: <http://santaclaraca.gov/government/departments/community-development/planning-division/general-plan>. Accessed: July 25, 2019.
- Walsh 2019a** – (TN 228877-2). Application for Small Power Plant Exemption: Walsh Data Center, dated July 5, 2019. Available online at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SPPE-02>.

## 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 project site 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 of this code section 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

**Applicant Proposed 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 substation would contain two receiving stations for stepping down the voltage from Silicon Valley Power from 115 kV to 60 kV. 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.

- 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 the **Section 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*. Available online at: [https://frap.fire.ca.gov/media/6228/fhszs\\_map43.pdf](https://frap.fire.ca.gov/media/6228/fhszs_map43.pdf). Accessed August 5, 2019.

## 5.20 Mandatory Findings of Significance

MANDATORY FINDINGS OF SIGNIFICANCE	Less than Significant			
	Potentially Significant Impact	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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.** With mitigation, the project would not substantially degrade the quality of the environment, 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 a rare, threatened, or endangered species.

The project site and surrounding properties are highly developed with office, industrial buildings, and paved parking. The potential to degrade environmental quality is minimal, as the project site and surrounding properties do not support natural

vegetation that would entice wildlife foraging or occupancy. However, landscaping trees and shrubs provide nesting opportunities for protected migratory bird species. Proposed mitigation measures to buffer and protect nesting birds would ensure the project impacts on nesting birds protected by the Migratory Bird Treaty Act (MBTA) and the Fish and Game Code would be less than significant.

The project and surrounding area is developed and the new buildings would not fragment the natural landscape or interfere with the movement of fish or wildlife.

**Section 5.4, Biological Resources**, identifies the following mitigation measures:

- **MM BIO-1**, which requires pre-construction nesting bird surveys, prescribes avoidance buffers for nesting birds discovered on the site, and requires a qualified and approved biologist.
- **MM BIO-2**, which requires a survey report to be provided to the City of Santa Clara and California Department of Fish and Wildlife.

To ensure compliance with the MBTA and California Fish and Game Code, mitigation measures **MM BIO-1** and **MM BIO-2** would be implemented to reduce potential impacts on nesting migratory birds including raptors to less than significant.

**Cultural and Tribal Cultural Resources.** Important examples of the major periods of California history or prehistory represented by historical, unique archaeological, or tribal cultural resources are not 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. Implementation of applicant proposed measures (**PD CUL-1** and **PD CUL-2**) included in **Section 5.5, Cultural and Tribal Cultural Resources** would reduce the impacts to buried cultural resources to a less-than-significant level. The proposed project therefore is unlikely to eliminate important examples of major periods of California history or prehistory, therefore the impact would be less than significant.

- 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 fine particulate matter 2.5 microns or less (called "PM<sub>2.5</sub>") 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 10 microns or less (called "PM<sub>10</sub>") 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 demolition and 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 a project design feature (see **PD AIR-1**). Additionally, the implementation

of **PD HYD-1** would also include fugitive dust measures. Therefore, the project's demolition and construction emissions would not be cumulatively considerable.

During readiness testing and maintenance, the oxides of nitrogen (NOx) emissions of 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 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.

Due to the very high reliability of the Silicon Valley Power (SVP) system, 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 demolition and 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 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 and surrounding properties are highly developed with office space, industrial buildings, and paved parking. 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 entice wildlife foraging or occupancy. However, ornamental landscaping (that is, trees and shrubs) and other features on and near the project site could provide nesting opportunities for birds protected under the MBTA. Effects could include disruptions during the breeding season from construction and tree removal. To ensure impact avoidance, **Section 5.4, Biological Resources** identifies the following mitigation measures: **MM BIO-1**, which requires pre-construction bird nesting surveys and prescribes avoidance buffers for nests discovered on the site, and

**MM BIO-2**, which requires a nesting survey report. Biological resources impacts from the proposed project would be less than significant with mitigation measures in place and 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 for cultural resources presented in the 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 mitigation included in the project description (**PD CUL-1** and **PD CUL-2**) would prevent, minimize, or compensate for impacts on buried, tribal cultural resources. Project impacts to tribal cultural resources therefore would not be cumulatively considerable.

The General Plan EIR identified the following significant environmental impacts:

- ***Climate Change*** – Contribution to greenhouse gas (GHG) emissions 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 to these environmental resources, the following discussion demonstrates how the project’s contribution to these impacts would be less than cumulatively considerable.

### ***Climate Change Impacts***

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 and not cumulatively considerable.

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<sub>2</sub>e/yr). As a stationary source, the project is subject to BAAQMD permitting and the 10,000 MTCO<sub>2</sub>e/yr threshold would apply to the proposed project. The standby generators would not have a cumulatively considerable contribution to GHGs if emissions are below the BAAQMD's threshold of 10,000 MTCO<sub>2</sub>e/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 less than significant 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 to be a qualified GHG reduction strategy.

The GHG emissions of the standby generators of the project are expected to be less than the 10,000 MTCO<sub>2</sub>e/yr threshold and would not be cumulatively considerable. 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 SVP. 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 cumulatively considerable.

### ***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 construction workers commute, and trucks deliver construction materials, to the project site. These trips would be temporary in nature; therefore, they would not significantly add to regular traffic. Implementation of **PD NOI-1** would reduce noise from construction vehicles to less than significant levels. The 25 operational employees would generate minimal daily trips and would not substantially increase the traffic or associated traffic-related noise levels 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 approximately 25 employees. 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 the jobs-housing imbalance 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**, traffic from the project would not have a significant impact on surrounding roadways and the transportation network. The project would contribute vehicle trips during the construction period as construction workers commute, and 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 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 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. During operation 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 less than significant temporary impacts to human health during construction, including changes to air quality, and exposure to geologic hazards, noise, and hazardous materials. As discussed in **Section 5.3, Air Quality**, with implementation of the applicant's mitigation incorporated into the project design, **PD AIR-1**, which includes the BAAQMD's recommended BMPs for fugitive dust and construction equipment emissions, 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, as required by **PD GEO-1**, would ensure the project would not expose people or property to significant impacts associated with geologic or seismic conditions onsite. The project would result in temporary noise impacts to humans during construction and intermittently during operation. As discussed in **Section 5.13, Noise**, noise impacts would be less than significant with the implementation of **PD NOI-1**. As discussed in **Section 5.9, Hazards and Hazardous Materials**, hazards impacts would be less than significant with the implementation of **PD HAZ-1**. As discussed in **Section 5.10, Hydrology and Water Quality**, water quality impacts would be less than significant with the implementation of **PD HYD-1**. 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: <https://www.santaclaraca.gov/our-city/departments-a-f/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 data from the California Environmental Protection Agency’s (CalEPA) California Communities Environmental Health Screening Tool (CalEnviroScreen). 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 analysis in 10 technical areas<sup>1</sup> and Mandatory Findings of Significance 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 California 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

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<sup>1</sup> The 10 technical areas are Aesthetics, Air Quality, Cultural and Tribal Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, and Utilities and Service Systems. Cultural and Tribal Cultural Resources considers impacts to Native American populations.

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
- 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**

CalEnviroScreen is a science-based mapping tool used by CalEPA to identify disadvantaged communities<sup>2</sup> 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).

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<sup>2</sup> 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 (75<sup>th</sup> percentile) (CalEPA 2017).

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 indicators.

CalEnviroScreen scores are calculated by combining the individual indicator scores within each of the four components, then multiplying the Pollution Burden and Population Characteristics groups 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.

<b>TABLE 5.21-1 COMPONENTS THAT FORM THE CALENVIROSCREEN 3.0 SCORE</b>	
<b>Pollution Burden</b>	
<b>Exposure Indicators</b>	<b>Environmental Effects Indicators</b>
Diesel particulate matter (PM) emissions	Cleanup sites
Drinking water contaminants	Groundwater threats
Ozone concentrations	Hazardous waste
PM 2.5 concentrations	Impaired water bodies
Pesticide use	Solid waste sites and facilities
Toxic releases from facilities	
Traffic density	
<b>Population Characteristics</b>	
<b>Sensitive Populations Indicators</b>	<b>Socioeconomic Factors Indicators</b>
Asthma emergency department visits	Educational attainment
Cardiovascular disease (emergency department visits for heart attacks)	Housing burdened low income households
Low birth-weight infants	Linguistic isolation
	Poverty
	Unemployment

**Notes:** PM= particulate matter. PM 2.5= fine particulate matter 2.5 microns or less.

**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:

- For air quality, these indicators are; asthma, cardiovascular disease, diesel PM emissions, low birth-weight infants, ozone concentrations, pesticide use, PM 2.5 concentrations, toxic releases from facilities, and traffic density.
- For hydrology and water quality, these indicators are; drinking water contaminants, groundwater threats, and impaired water bodies.
- For hazards and hazardous materials discusses the cleanup sites indicator.
- For utilities and service systems, these indicators are; cleanup sites, hazardous waste, and solid waste sites and facilities.

When these technical areas have identified a potential project 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.

There are several limitations with CalEnviroScreen that are important to note (OEHHA 2017, pages iii, 1-3, 6, 12). These limitations and items to note 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; and,
- 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 EJ, 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 projects.

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, EJ organizations, local chamber of commerce, schools and school districts, community centers, daycare centers, park departments, religious organizations, local hospitals, and asthma clinics within a six-mile radius of the proposed project.

Energy Commission staff docketed and mailed to the project mail list, including EJ organizations and similar interest groups, a Notice of Receipt of the Walsh Data Center (or project) Small Power Plant Exemption (SPPE) Application on July 12, 2019. A Request for Agency Participation was docketed and mailed to the agencies on the project mail list also on July 12, 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 project 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 August 22, 2019 and August 24, 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 Initial Study (IS)/Proposed Mitigated Negative Declaration (PMND) to property owners and occupants within 1,000 feet of the project and 500 feet of the linears.

## Environmental Justice Project Screening

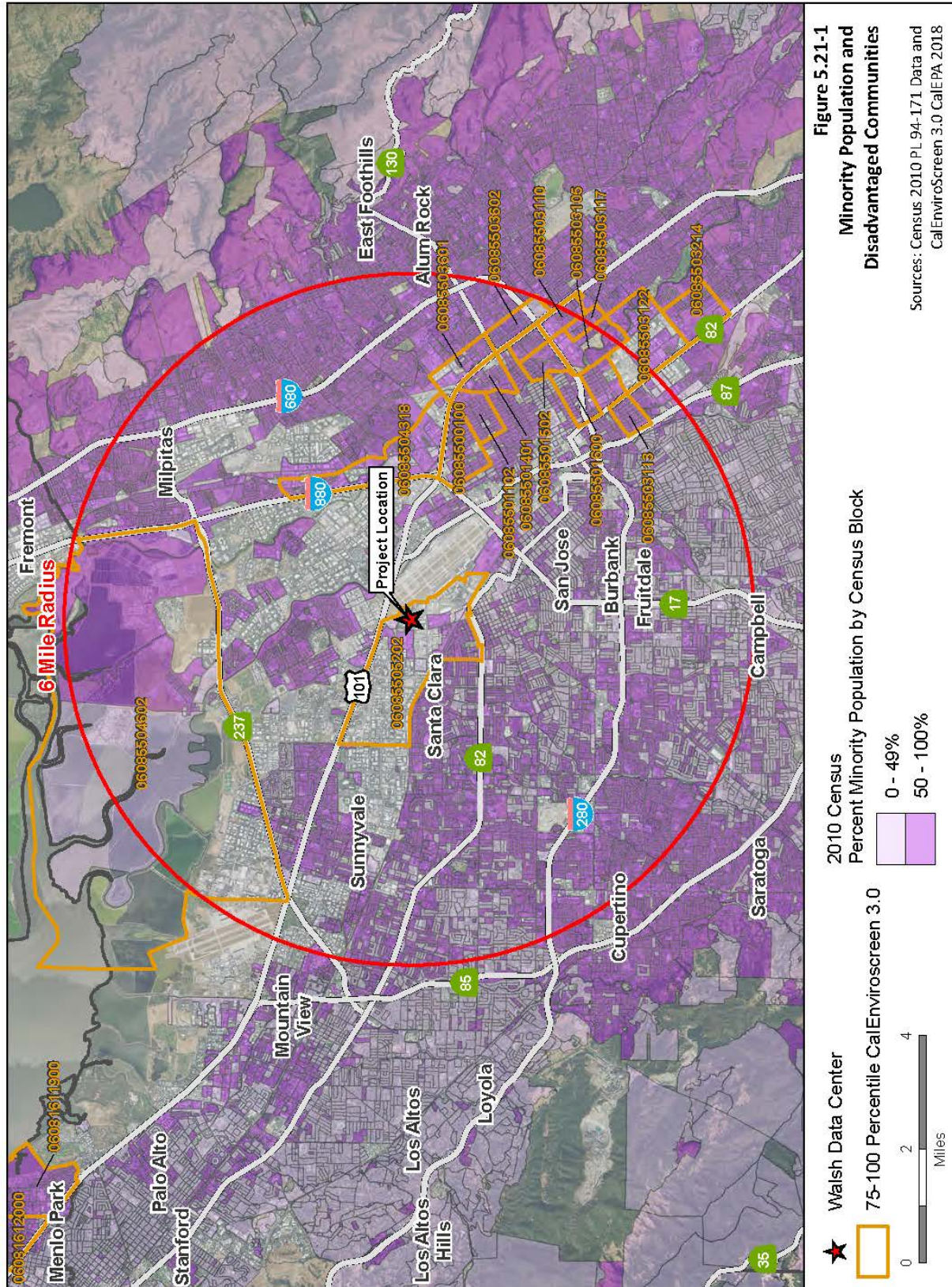
**Figure 5.21-1** shows 2010 census blocks in a six-mile radius of the project with a minority population greater than or equal to 50 percent (U.S. Census 2010). The population in these census blocks represents an EJ population based on race and ethnicity as defined in the U.S. EPA's *Guidance on Considering Environmental Justice During the Development of Regulatory Actions* (U.S. EPA 2015).

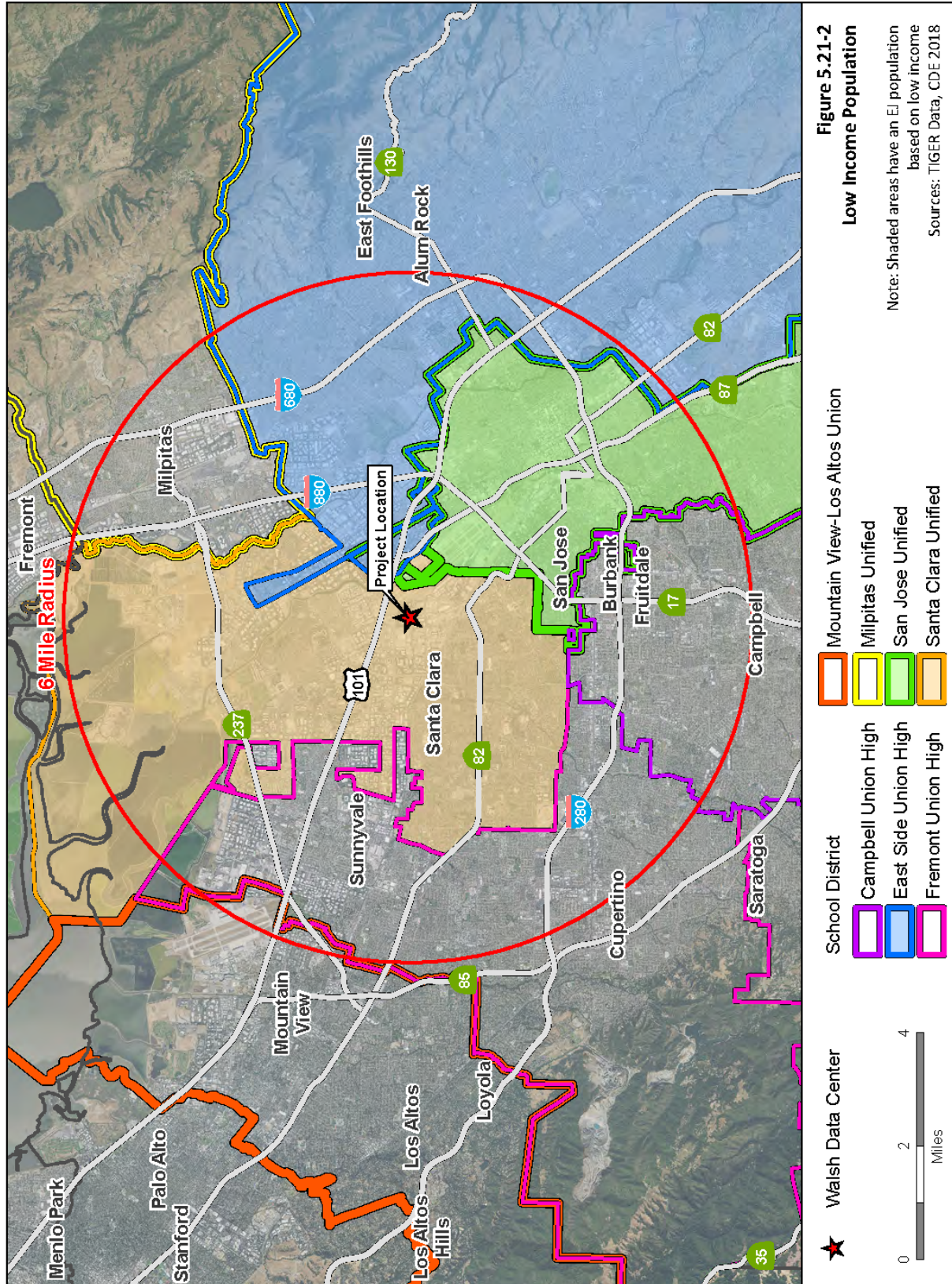
Based on California Department of Education data in **Table 5.21-2** and presented in **Figure 5.21-2**, staff concludes that the percentage of those living in the school districts of East Side Union High, San Jose Unified, and Santa Clara Unified (in a six-mile radius of the project site) and enrolled 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*.

<b>TABLE 5.21-2 LOW INCOME DATA WITHIN THE PROJECT AREA</b>			
<b>School Districts in a Six-Mile Radius of the Project Site</b>	<b>Enrollment Used for Meals</b>	<b>Free or Reduced Price Meals</b>	
Campbell Union High	8,043	1,996	24.8%
<b>East Side Union High</b>	<b>27,263</b>	<b>14,560</b>	<b>53.4%</b>
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%
<b>San Jose Unified</b>	<b>31,713</b>	<b>14,479</b>	<b>45.7%</b>
<b>Santa Clara Unified</b>	<b>15,509</b>	<b>6,402</b>	<b>41.3%</b>
<b>Reference Geography</b>			
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.





## 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<sup>3</sup> for pollution impacts in communities (OEHHA 2017). Staff used CalEnviroScreen to identify disadvantaged communities<sup>4</sup> 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 within a six-mile radius of the proposed project site.

**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

**Notes:** Disadvantaged communities by census tract in the project's 6-mile radius. Shaded row indicates census tract where project is located.

**Source:** Cal/EPA 2018

<sup>3</sup> 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.

<sup>4</sup> 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** 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 combined pollution burden percentile is 90 or above and 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 combined population characteristics percentile is 90 or above and 11 census tracts where individual population characteristics indicators are in the 90 or above percentile.

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	<b>96.90</b>	29.25	<b>95.47</b>
06085500100	<b>93.17</b>	16.94	52.61	<b>91.75</b>	51.02	0.00	47.78	82.20	<b>98.74</b>	<b>96.94</b>	<b>97.41</b>	41.15	<b>97.24</b>
06085504318	<b>94.51</b>	16.94	52.61	<b>91.74</b>	56.64	0.00	53.89	88.43	<b>99.80</b>	<b>98.39</b>	<b>99.68</b>	29.25	<b>99.79</b>
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	<b>90.99</b>
06085503122	83.58	22.34	52.61	89.97	51.02	0.00	32.10	43.50	85.52	<b>94.19</b>	<b>99.28</b>	29.25	<b>99.34</b>
06085501600	77.61	16.94	52.61	89.00	51.02	0.00	37.32	<b>96.20</b>	53.19	<b>92.04</b>	25.76	41.15	80.55
06085503110	68.67	22.34	52.61	88.29	51.02	0.00	36.46	<b>97.04</b>	52.46	37.92	60.50	29.25	52.16
06085504602	88.30	16.94	42.86	25.50	51.02	38.47	35.40	88.24	<b>99.42</b>	<b>91.91</b>	88.36	<b>91.47</b>	<b>99.98</b>
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	<b>92.74</b>
06085503602	50.45	22.34	52.61	88.79	30.45	0.00	39.87	<b>91.50</b>	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	<b>90.96</b>	51.02	0.00	32.90	75.89	53.03	<b>93.53</b>	88.84	41.15	85.86
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	<b>99.84</b>	<b>98.30</b>	<b>99.11</b>	41.15	<b>95.02</b>
06085501502	81.27	16.94	52.61	89.00	51.02	0.00	39.47	<b>95.94</b>	49.53	87.95	60.50	29.25	86.42

**Notes:** Disadvantaged communities by census tract in the project's 6-mile radius. Shaded row indicates census tract where project is located. **Bold** indicates a percentile is 90 or above. **Source:** CalEPA 2018

TABLE 5.21-5 CALENIROSCREEN 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	<b>98.87</b>	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	<b>95.35</b>	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	<b>92.16</b>	14.00	73.63	<b>97.21</b>	84.19	<b>94.29</b>	<b>92.78</b>	
06085501600	78.23	67.96	77.16	51.84	66.46	64.34	76.32	59.12	<b>93.89</b>	
06085503110	84.02	64.73	37.05	81.49	<b>95.14</b>	<b>98.28</b>	<b>94.12</b>	42.25	<b>93.12</b>	
06085504602	65.33	79.87	<b>99.82</b>	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	<b>92.65</b>	74.03	87.33	71.19	82.12	<b>92.40</b>	76.57	82.00	78.41	
06085501401	68.08	52.79	67.72	38.00	87.90	<b>92.13</b>	68.81	33.82	73.80	
06085503113	64.57	38.27	46.74	35.49	<b>94.36</b>	81.99	85.41	42.25	<b>92.24</b>	
06085503117	80.58	65.18	11.76	81.89	88.49	<b>97.15</b>	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	<b>91.07</b>	<b>94.16</b>	71.68	70.57	47.33	

**Notes:** Disadvantaged communities by census tract in the project's 6-mile radius. Shaded row indicates census tract where project is located. **Bold** indicates a percentile is 90 or above. **Source:** CalEPA 2018

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### 5.21.2 Environmental Impacts and Mitigation Measures

The following technical areas discuss impacts to EJ populations: Aesthetics, Air Quality<sup>5</sup>, Cultural and Tribal Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Transportation, Utilities and Service Systems, and Mandatory Findings of Significance.

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, Hazards and Hazardous Materials, Hydrology and Water Quality, and Utilities and Service Systems. 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 proposed 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 Geographic Information System (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 impact to an EJ population and would have a less than significant impact.

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<sup>5</sup> Public Health issues discussed under Air Quality.

## 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. The potential demolition/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 fine particulate matter 2.5 microns or less [PM<sub>2.5</sub>]) 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 **Section 5.3, Air Quality** of this IS/PMND 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 Walsh Backup Generator Facility (WBGF), 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 WBGF, 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 for ozone are included in **Table 5.21-4**. The percentile for nine out of the fifteen census tracts are the same at the 16.94 percentile, and six of the fifteen census tracts are the same at the 22.34 percentile. This means ozone levels in these census tracts are relatively low, with lower values reported for just 16.94 percent and 22.34 percent, respectively of all the census tracts in California. Another way to look at the data is that approximately 83 and 78 percent, respectively, of all California census tracts have higher ozone levels than these near WBGF.

For ozone, all of the census tracts within a six-mile radius of the proposed project's site have percentiles well below the statewide average. Populations within these census tracts are not exposed to high ozone concentrations 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 demolition and construction, which would reduce NOx and VOCs. 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 ozone and ozone precursor air quality impacts would be less than significant for the local EJ community and the general population.

### ***PM2.5 Impacts***

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.

PM<sub>2.5</sub> 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 PM<sub>2.5</sub> is determined by the annual mean concentration of PM<sub>2.5</sub> (average of quarterly means), averaged over three years (2011-2013). According to CalEnviroScreen data, PM<sub>2.5</sub> concentrations in each census tract are ordered by PM<sub>2.5</sub> 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. All of the census tracts within a six-mile radius of the proposed project's site are average compared to other census tracts in California.

The project would not be expected to contribute significantly to the regional air quality related to PM<sub>2.5</sub>. 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 BMPs during demolition and construction, which would reduce particle matter. 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 PM<sub>2.5</sub> concentrations, relative to baseline conditions.

The project's PM<sub>2.5</sub> air quality impacts would be less than significant for the local EJ community and the general population.

### ***NO<sub>2</sub> Impacts***

As stated in **Section 5.3, Air Quality**, staff conducted 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<sub>2</sub> impacts. Staff's conservative 1-hour NO<sub>2</sub> modeling results indicate that the WBGF's readiness testing and maintenance would not cause adverse NO<sub>2</sub> impacts to the EJ population.

The project's NO<sub>2</sub> air quality impacts would be less than significant for the local EJ community and the general population.

### ***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 (see **Table 5.21-4**). 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 all 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 readiness testing and maintenance activities (diesel-fueled equipment) would be less than significant.

The project's diesel PM impacts would be less than significant for the local EJ community and the general population.

### ***Pesticide Use***

Specific pesticides included in the pesticide use indicator 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.

For pesticide use, all of the census tracts within a six-mile radius of the proposed project's site have a zero (0) percentile use, except census tract 06085504602, which has a 38.5 percentile (see **Table 5.21-4**). This indicates that agricultural pesticide use in these census tracts are below the statewide average. Therefore, the EJ population and the general public in this area are currently not exposed to high pesticide use compared to the rest of the state. The applicant has not indicated whether any pesticides would be used at the project site, but as there is landscaping around the project, it is reasonable to assume that some pesticides would be used in the maintenance of the landscaping. Any pesticide use at the project site would not have a significant cumulative contribution to pesticide use in the vicinity of the project site.

The project's pesticide use would be less than significant for the local EJ community and the general population.

### ***Toxic Releases from Facilities***

This indicator represents modeled air concentrations of chemical releases from large facility emissions in and near a 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, which includes the proposed project site, was at the 57.3 percentile in the Toxic Release from Facilities category (see **Table 5.21-4**). This indicates that toxic release from facilities threats in this census tract is higher than 57.3 percent of census tracts statewide. Census tract 06085504318 is also within a six-mile radius of the project site and it has the second highest percentile, at 53.89 percent. All

other census tracts within a six-mile radius of the project site have toxic release percentiles ranging from about 32 to 48 percentile. This indicates that these communities are average for exposure to toxic releases from facilities compared to the rest of the state.

According to the results of the health risk assessment conducted for the project, impacts associated with toxic releases from construction, and readiness testing and maintenance activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to toxic releases.

The project's toxics emissions would be less than significant for the local EJ community and the general population.

### ***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 (see **Table 5.21-4**). 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 construction, and readiness testing and maintenance activities (diesel-fueled equipment) would be less than significant.

The project's traffic volume impact would not have a significant cumulative contribution to the traffic density for the local EJ community and the general population.

### ***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 34.95 percentile in the Asthma category (see **Table 5.21-5**). 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.

According to the results of the health risk assessment conducted for the project, impacts associated with emissions from construction, and readiness testing and maintenance activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to asthma ER visits.

The project's emissions would not have a significant cumulative contribution to asthma ER visits for the local EJ community and the general population.

### ***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 (see **Table 5.21-5**). 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 risks of the nearest sensitive receptors (that is, Maximally Exposed Individual Sensitive Receptor [MEI SR] and Maximally Exposed Individual Resident [MEIR]) are below health-based thresholds. Therefore, the toxic emissions from the project would not cause significant health effects for the low birth weight infants.

The project's emissions would not have a significant cumulative contribution to low birth weight infant births for the local EJ community and the general population.

### ***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 51.84 percentile in the Cardiovascular Disease category (see **Table 5.21-5**). 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. 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.

According to the results of the health risk assessment conducted for the project, impacts associated with emissions from construction, and readiness testing and maintenance activities (diesel-fueled equipment) would be less than significant and would not have a significant cumulative contribution to cardiovascular disease.

The project's emissions would not have a significant cumulative contribution to cardiovascular disease for the local EJ community and the general population.

## Cultural and Tribal Cultural Resources

No IMPACT. Staff considered EJ populations in its analysis of the project. Staff did not identify any Native American EJ 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, thus 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 **Table 5.21-4** for each of the following environmental stressors that relate to hydrology and water quality: Drinking Water Contaminants, Groundwater Threat, 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 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 **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 census 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 census 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 aggregates drinking water quality data from the California Department of Public Health, the U. S. EPA, 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 scored 14 percent in the Drinking Water Contaminants category (see **Table 5.21-4**). This indicates that drinking water contamination threats in this census tracts 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); Dichlorodiphenyltrichloroethane (DDT) and other insecticides; and perchlorate. CalEnviroScreen 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 scored 98 percent in the Groundwater Threat category (see **Table 5.21-4**). This indicates that groundwater contamination threats in this census tract is 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 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 scored 41 percent in the Groundwater Threat category (see **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 would not generate disproportionate land use impacts to the nearby EJ population. It would not physically divide an existing community and the project is generally consistent with the policies in the Santa Clara County Airport

Land Use Commission Comprehensive Land Use Plan for the San Jose International Airport, the General Plan, and the Zoning Ordinance. The applicant submitted the project to the FAA for review as required. The City of Santa Clara, as the permitting agency, would ensure consistency with any FAA conditions and require dedication of an aviation easement to the City of San Jose. The applicant would need to obtain a minor modification of the Heavy Industrial zoning district's maximum building height from the City's Zoning Administrator. The project's floor area ratio (FAR) would exceed the maximum FAR for the zoning district. However, as is typical of data centers, 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 land use environmental impacts associated with the FAR exceedance, including no 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 uses, and the nearest residences are approximately 0.5-mile away from the project site, potential impacts would not be disproportionate.

Demolition and construction activities would increase existing noise levels at the adjacent commercial and industrial land uses, but they would be temporary and intermittent. In addition, demolition and construction 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 demolition and 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 and housing includes the City of Santa Clara, staff considered the project's population and housing impacts on the EJ population living in this geographic area.

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. However, 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 generators and facilities, and solid waste 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 scores for the disadvantaged community census tracts in a 6-mile radius of the project (see **Figure 5.21-1**) are presented in **Table 5.21-4** for each of the following environmental stressors that relate to waste management: cleanup sites, hazardous waste generators and facilities, and solid waste 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 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 stationary stressors, the weighting factor diminishes to zero for distances larger than 1,000 meters (0.6 mile). As **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 5.21-4**). 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 project owner 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.

### ***Hazardous Waste Generators and Facilities***

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 TSDFs 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 generators and facilities 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. 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 generation and disposal would be reduced to less than significant for the relevant census tract and the general population.

### ***Solid Waste Facilities***

This indicator is calculated by considering the number of solid waste 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 facilities category for the only assessed census tract within 1,000 meters is 95 (see **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 project owner 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.

## Mandatory Findings of Significance

LESS THAN SIGNIFICANT IMPACT. Staff analysis concluded that cumulative project impacts would be mitigated to less than significant levels. Therefore, cumulative impacts would be less than significant for both the general population and the EJ population.

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# **Appendix A**

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## **Project's Jurisdictional and Generating Capacity Analysis**

## **Appendix A: Project's Jurisdictional and Generating Capacity Analysis**

The Walsh Data Center (WDC)) would include 33 diesel-fired standby generators that would provide emergency backup power supply for the WDC 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 WDC.

32 of the gensets would each have a nameplate output capacity of 3.0 megawatts (MW) and continuous steady-state output capacity of 2.5 MW. The 33<sup>rd</sup> genset would have a nameplate capacity of 2.0 MW. The maximum total WDC facility load requirements would not exceed 80 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.)

Based on the following, staff has determined that the net deliverable or useable electricity capacity is more than 50 MW and less than 100 MW from the WDC backup generation facility, qualifying it for a Small Power Plant Exemption under the capacity criterion.

1. The diesel-fueled reciprocating engine generators use a thermal energy source.
2. The gensets and the associated WDC that they would support would all be located on a common property under common ownership sharing common utilities and the 33 gensets should be aggregated within a single thermal power plant facility having a generation capacity of greater than 50 MW.
3. Any "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 applicable to diesel generators, the principles in Title 20, California Code of Regulations, section 2003 can provide a framework to calculate a net deliverable or

useable electricity capacity from the WDC 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, not the combined capacity of the installed generators. In this instance, the maximum facility-wide WDC load requirement would be 80 MW.

5. The backup generators would be exclusively connected to the WDC 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 WDC facility with more than 80 MW of electricity.
6. The restrictions 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 WDC 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. WDC 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 WDC is made up of gensets that use diesel fossil-fueled engines to convert the thermal energy in the diesel fuel<sup>1</sup> 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 33 such gensets to service WDC.

The 33 gensets, and the associated WDC 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 WDC when its connection to the grid is lost; a few gensets would be installed for the purpose of redundancy, to operate to backup the initial or grid backup gensets. However, any genset can function either as a backup to the grid or a backup to the grid backup gensets, so there is no functional difference in the type of engine or generator between each genset. All of the backup gensets at the WDC would share a common trigger for operation during an emergency: the transfer switch isolating the WDC from the grid.

*2. Title 20, California Code of Regulations section 2003 does not control.*

The WDC would be installed during the initial construction of the project by the project

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<sup>1</sup> Diesel fuel is composed of a mixture of hydrocarbons, containing chemical energy. When ignited, this chemical energy is converted to thermal energy.

owner, but there is no specific timeline proposed for when the WDC 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 WDC 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 WDC, and is therefore not controlling here. There are other reasons to conclude that simply focusing on nameplate capacity here is not appropriate.

For a typical power plant, 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. Such is not the case with data 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.<sup>2</sup> 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

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<sup>2</sup> 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.

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 as 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<sup>3</sup> 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 critical IT load.<sup>4</sup> 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 with staff's method, the ISO specifies that generating capacity should be the net capacity at average annual ambient conditions.<sup>5</sup>

In the case of WDC, 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 "WDC grid" does. If the breakers between the WDC 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

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<sup>3</sup> 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."

<sup>4</sup> American National Standards Institute (ANSI)/ASHRAE Standard 90.4-2016, [www.ashrae.org](http://www.ashrae.org).

<sup>5</sup> ISO 3046-1 Reciprocating Internal Combustion Engines – Performance, [www.iso.org/standards](http://www.iso.org/standards).

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 gensets would open the engine fuel throttle to increase generation output and match demand but would still not exceed the combined 80 MW IT and building demand.

*4. WDC's capacity will not exceed 80 MW.*

While no more than 27 backup generators would need to operate at full-load output to reach the facility's maximum output requirement of 80 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 80 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 80 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 80 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 WDC 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 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 install additional gensets and 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 WDC is at full load, its worst-case day combined IT and building load<sup>6</sup> will be 80 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 WDC server bays and building equipment in use at the time of an emergency. The emergency operation of each set ("5 to make 4" or "6 to make 5" server bay set) is fully automated. Once the WDC loses connection to the local grid, the transfer switch isolates the WDC from the local SVP grid and 4 of the 5 or 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 5 minutes<sup>7</sup> of power to smoothly transition the WDC customer's data servers from the grid to the emergency gensets (Walsh 2019a, Section 2.2.4). 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 server bay set match (meet but cannot exceed) the WDC 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 WDC server bays and building equipment.

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<sup>6</sup> Based on the hottest, most humid day of the year and with all IT servers in use at their full usage rate

<sup>7</sup> The gensets are expected to be on and synchronized within a minute or so, but the UPS can supply up to 5 minutes of power at 100 percent inverter load to ensure a complete transition from the grid to the emergency gensets.

Combined output would be limited by sizing the electricity handling equipment that would throttle transfer capacity to no more than 80 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 80 MW.

## **Appendix B**

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### 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 28<sup>th</sup>, 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	
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	
01/22/17	SER-BRO	Tree in wires	3 hours 31 min	

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 there 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 required 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 PPS 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.

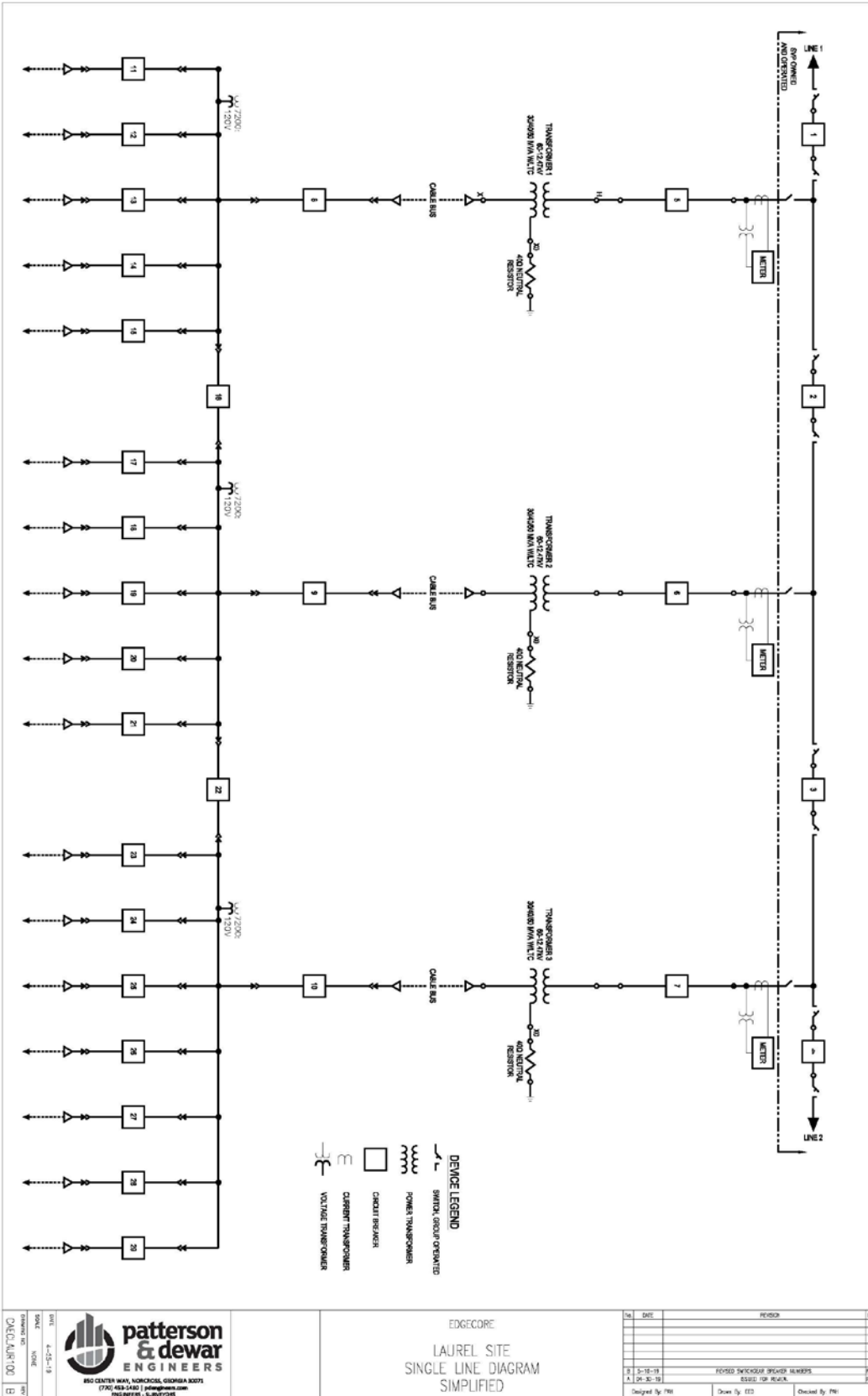
We will be instructed to reduce load to respond to emergency conditions somewhere within the CAISO controlled grid, we have to follow what the CAISO directs us to do. The CAISO instructions are not voluntary. We would request customers to reduce load to satisfy the emergency condition and if that is not sufficient we will begin shutdown of our customers to meet the emergency situation. We would be operating at the direction of the CAISO.

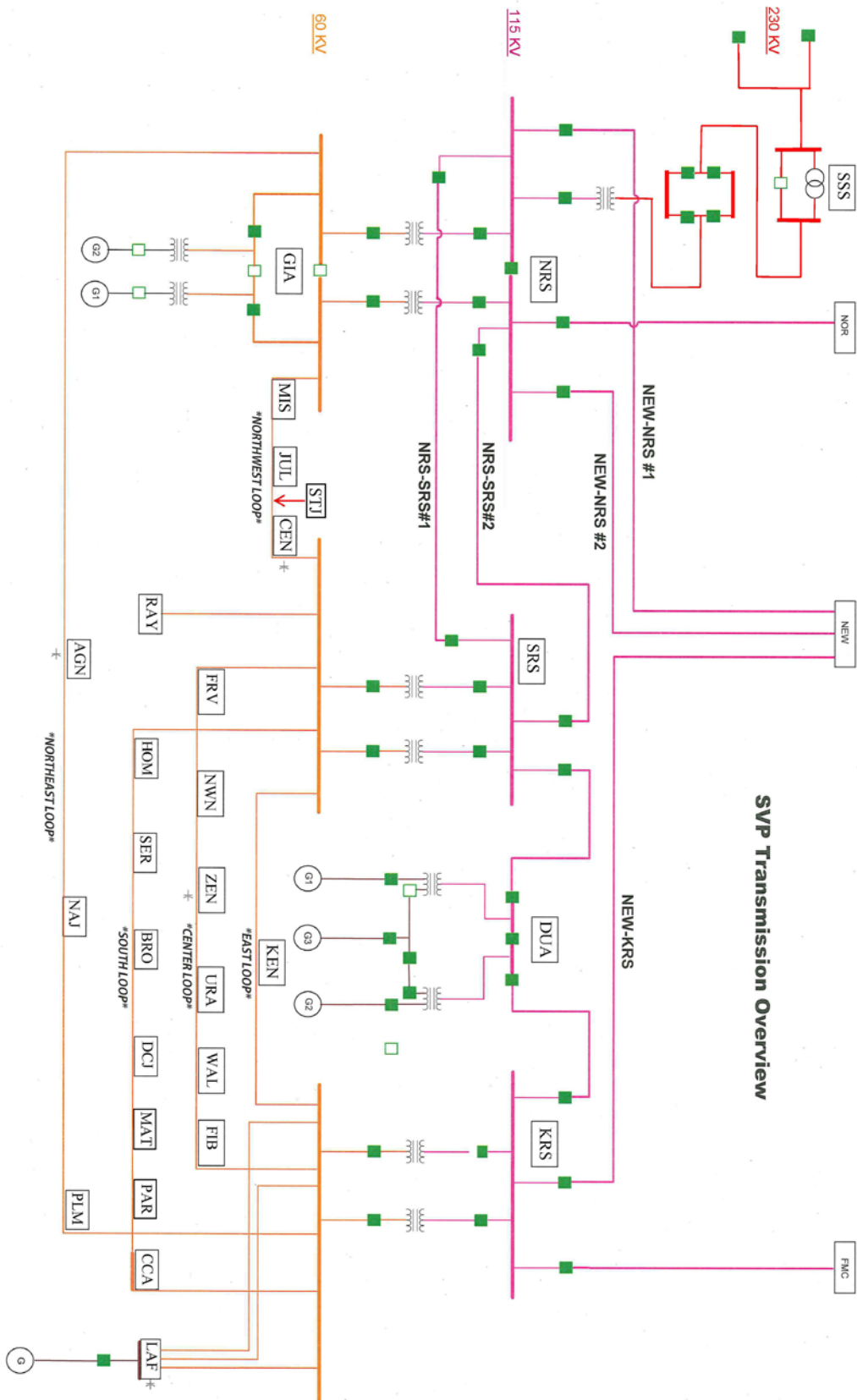
9. Are there any plans that part of the PPS program might include payments to some loads to curtail or shed?

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 PPS 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.







## 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:**

<b>Center 141MW</b>	<b>East Loop 15MW</b>	<b>Northeast Loop 28MW</b>	<b>Northwest Loop 112MW</b>	<b>South Loop 65MW</b>
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](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 determined<sup>744</sup> 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**

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## Mailing List

## Appendix C: Mailing Lists

### Owners and occupants of properties contiguous with the project (sent Notice of Intent in accordance with CEQA Guidelines Section 15072(b))

224-04-011	CURRENT TENANT	785 WALSH AVE	SANTA CLARA	CA	95050
224-04-011	BARNHART CONSTRUCTION COMPANY	7008 WILDROSE TER	CARLSBAD	CA	92011
224-04-062	CURRENT TENANT	2755 LAFAYETTE ST	SANTA CLARA	CA	95050
224-04-062	WITKIN PROPERTIES LP	188 TWIN OAKS DR	LOS GATOS	CA	95032
224-04-094	CURRENT TENANT	2805 LAFAYETTE ST	SANTA CLARA	CA	95050
224-04-094	DIGITAL BH 800 LLC	16600 WOODRUFF AVE # 200	BELLFLOWER	CA	90706
230-03-095	SOUTHERN PACIFIC TRANSPORTATION CO	65 CAHILL ST	SAN JOSE	CA	95110

### Owners and occupants within 1000 feet of the project site or 500 feet of project linears (sent Notice of Receipt and Notice of Intent).

224-04-005	CURRENT RESIDENT OR TENANT	850 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-005	L A W LLC	330 COMMERCIAL ST	SAN JOSE	CA	95112
224-04-005	CURRENT RESIDENT OR TENANT	870 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-006	CURRENT RESIDENT OR TENANT	810 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-006	DOUGLAS M MORGAN	15635 CALISTOGA DR	RAMONA	CA	92065
224-04-011	CURRENT RESIDENT OR TENANT	785 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-011	BARNHART CONSTRUCTION COMPANY	7008 WILDROSE TER	CARLSBAD	CA	92011
224-04-057	CURRENT RESIDENT OR TENANT	860 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-057	CURRENT RESIDENT OR TENANT	890 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-057	L A W LLC	330 COMMERCIAL ST	SAN JOSE	CA	95112
224-04-057	CURRENT RESIDENT OR TENANT	880 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-057	CURRENT RESIDENT OR TENANT	812 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-057	CURRENT RESIDENT OR TENANT	764 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	711 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	627 WALSH AVENUE	SANTA CLARA	CA	95050

224-04-059	CURRENT RESIDENT OR TENANT	705 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	651 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	651 WALSH PARTNERS LLC	14573 BIG BASIN WAY	SARATOGA	CA	95070
224-04-059	CURRENT RESIDENT OR TENANT	691 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	701 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	661 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	621 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	631 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	625 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	670 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-059	CURRENT RESIDENT OR TENANT	601 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-062	CURRENT RESIDENT OR TENANT	2709 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-062	CURRENT RESIDENT OR TENANT	2755 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-062	WITKIN PROPERTIES LP	188 TWIN OAKS DR	LOS GATOS	CA	95032
224-04-062	CURRENT RESIDENT OR TENANT	2725 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-062	CURRENT RESIDENT OR TENANT	2715 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-062	CURRENT RESIDENT OR TENANT	2707 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-062	CURRENT RESIDENT OR TENANT	2705 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-071	CURRENT RESIDENT OR TENANT	651 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-071	GAHRAHMAT FAM LP II LP	3476 EDWARD AVE	SANTA CLARA	CA	95054
224-04-071	CURRENT RESIDENT OR TENANT	631 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-075	CURRENT RESIDENT OR TENANT	614 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-075	ESTANISLAO T HARO	12395 COLUMBET AVE	SAN MARTIN	CA	95046
224-04-075	CURRENT RESIDENT OR TENANT	630 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-076	CURRENT RESIDENT OR TENANT	750 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-076	DJ SMITH FAM PARTNERSHIP LP	4208 CHABOYA RD	SAN JOSE	CA	95148

224-04-076	CURRENT RESIDENT OR TENANT	760 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	650 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	668 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	PELIO 650 WALSH LLC	14573 BIG BASIN WAY	SARATOGA	CA	95070
224-04-077	CURRENT RESIDENT OR TENANT	664 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	680 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	688 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	672 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	676 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	684 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	686 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	696 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-077	CURRENT RESIDENT OR TENANT	660 WALSH AVENUE	SANTA CLARA	CA	95050
224-04-088	CURRENT RESIDENT OR TENANT	2555 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-088	GAHRAHMAT FAMILY LP I	3476 EDWARD AVE	SANTA CLARA	CA	95054
224-04-090	CURRENT RESIDENT OR TENANT	801 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-090	CURRENT RESIDENT OR TENANT	881 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-090	CURRENT RESIDENT OR TENANT	851 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-090	GAHRAHMAT FAMILY LP II	3476 EDWARD AVE	SANTA CLARA	CA	95054
224-04-090	CURRENT RESIDENT OR TENANT	821 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-090	CURRENT RESIDENT OR TENANT	831 MARTIN AVENUE	SANTA CLARA	CA	95050
224-04-093	CURRENT RESIDENT OR TENANT	2825 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-093	DIGITAL LEFAYETTE LLC	2845 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-094	CURRENT RESIDENT OR TENANT	2805 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-04-094	DIGITAL BH 800 LLC	16600 WOODRUFF AVE # 200	BELLFLOWER	CA	90706
224-07-099	CURRENT RESIDENT OR TENANT	980 CENTRAL EXPRESSWAY	SANTA CLARA	CA	95050

224-07-099	CURRENT RESIDENT OR TENANT	960 CENTRAL EXPRESSWAY	SANTA CLARA	CA	95050
224-07-099	OWENS, CORNING INSULATING	13155 NOEL RD # 71	DALLAS	TX	75240
224-07-099	CURRENT RESIDENT OR TENANT	900 CENTRAL EXPRESSWAY	SANTA CLARA	CA	95050
224-36-004	CURRENT RESIDENT OR TENANT	790 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-004	790 COMSTOCK LLC	614 N ALTA DR	BEVERLY HILLS	CA	90210
224-36-004	CURRENT RESIDENT OR TENANT	792 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-008	CURRENT RESIDENT OR TENANT	750 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-008	JOYCE J WATSON	2104 FALLEN LEAF LN	LINCOLN	CA	95648
224-36-024	CURRENT RESIDENT OR TENANT	780 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-024	LEAH F ZIMMERMAN	1010 HEWITT DR	SAN CARLOS	CA	94070
224-36-025	CURRENT RESIDENT OR TENANT	720 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-025	ALBANESE PARKER I LLC	851 MARTIN AVE	SANTA CLARA	CA	95050
224-36-026	CURRENT RESIDENT OR TENANT	800 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-026	BILL MICHAEL NAPOLI	1590 EDMUNDSON CT	MORGAN HILL	CA	95037
224-36-035	CURRENT RESIDENT OR TENANT	701 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-035	CURRENT RESIDENT OR TENANT	705 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-035	CURRENT RESIDENT OR TENANT	700 COMSTOCK STREET	SANTA CLARA	CA	95054
224-36-035	ALBANESE PARKER I LLC	851 MARTIN AVE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	1035 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	1235 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	1285 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	2765 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	925 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	PSB NORTHERN CA INDUSTL PORTFOLIO LLC	701 WESTERN AVE	GLENDALE	CA	91201
224-56-001	CURRENT RESIDENT OR TENANT	1015 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	1025 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	1135 WALSH AVENUE	SANTA CLARA	CA	95050

224-56-001	CURRENT RESIDENT OR TENANT	2775 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	915 WALSH AVENUE	SANTA CLARA	CA	95050
224-56-001	CURRENT RESIDENT OR TENANT	2710 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-59-006	CURRENT RESIDENT OR TENANT	938 WALSH AVENUE	SANTA CLARA	CA	95050
224-59-006	CURRENT RESIDENT OR TENANT	986 WALSH AVENUE	SANTA CLARA	CA	95050
224-59-006	CURRENT RESIDENT OR TENANT	988 WALSH AVENUE	SANTA CLARA	CA	95050
224-59-006	CURRENT RESIDENT OR TENANT	982 WALSH AVENUE	SANTA CLARA	CA	95050
224-59-006	CURRENT RESIDENT OR TENANT	2600 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-59-006	SAULUN YEUNG	24001 OAK KNOLL CIR	LOS ALTOS HILLS	CA	94022
224-59-008	CURRENT RESIDENT OR TENANT	1245 WALSH AVENUE	SANTA CLARA	CA	95050
224-59-008	GARDEN CITY SANIT LLC	1080 WALSH AVE	SANTA CLARA	CA	95050
224-60-001	CURRENT RESIDENT OR TENANT	2605 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-60-001	CURRENT RESIDENT OR TENANT	2580 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-60-001	PHILLIP J RESTIVO	5948 VISTA LOOP	SAN JOSE	CA	95124
224-60-001	CURRENT RESIDENT OR TENANT	2590 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-60-002	CURRENT RESIDENT OR TENANT	2562 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-60-002	CURRENT RESIDENT OR TENANT	2578 LAFAYETTE STREET	SANTA CLARA	CA	95050
224-60-002	RECTOR PROPERTIES LLC	3396 TRUMAN AVE	MOUNTAIN VIEW	CA	94040
230-03-096	CURRENT RESIDENT OR TENANT	2858 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-096	CURRENT RESIDENT OR TENANT	2860 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-096	CURRENT RESIDENT OR TENANT	2830 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-096	@CENTRAL PROPERTY OWNER LLC	260 CALIFORNIA ST STE 1100	SAN FRANCISCO	CA	94111
230-03-096	CURRENT RESIDENT OR TENANT	2880 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-096	CURRENT RESIDENT OR TENANT	2890 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-097	CURRENT RESIDENT OR TENANT	2800 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-097	CVENTRAL PROPERTY OWNER LLC	2800 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050

230-03-098	CVENTRAL PROPERTY OWNER LLC	2770 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-098	CURRENT RESIDENT OR TENANT	2770 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-099	GK PROPERTIES IV LLC	2752 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-099	CURRENT RESIDENT OR TENANT	2750 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-099	GK PROPERTIES IV LLC	2750 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-105	CL SANTA CLARA LLC	2600 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-106	CURRENT RESIDENT OR TENANT	2500 DE LA CRUZ BOULEVARD	SANTA CLARA	CA	95050
230-03-106	EMF LLC	1875 BOOKSIN AVE	SAN JOSE	CA	95125

**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).**

<b>FIRST</b>	<b>LAST</b>	<b>TITLE</b>	<b>TRIBE NAME</b>	<b>ADDRESS</b>	<b>CITY</b>	<b>ST</b>	<b>ZIP</b>
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).**

ARIANA	HUSAIN	PERMIT ENGINEER	BAY AREA AIR QUALITY MANAGEMENT DISTRICT	375 BEALE STREET, SUITE 600	SAN FRANCISCO	CA	94105
GREG	STONE	SUPERVISING AIR QUALITY ENGINEER	BAY AREA AIR QUALITY MANAGEMENT DISTRICT	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
GLORIA	SCIARA	DEVELOPMENT REVIEW OFFICER	CITY OF SANTA CLARA PLANNING DIVISION	1500 WARBURTON AVENUE	SANTA CLARA	CA	95050
YEN	CHEN	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	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

			SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD	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
ARUNA	BODDUNA	ASSOCIATE TRANSPORTATION PLANNER	COUNTY OF SANTA CLARA ROADS AND AIRPORT DEPARTMENT	101 SKYPORT DRIVE	SAN JOSE	CA	95110
MARK	CONNER	PLANNER	SANTA CLARA COUNTY AIRPORT LAND USE COMMISSION	70 WEST HEDDING STREET; EAST WING, 7TH FLOOR	SAN JOSE	CA	95110
GWEN	GOODMAN	KEY CUSTOMER SERVICE REPRESENTATIVE	SILICON VALLEY POWER	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
CARY	GREENE	AIRPORT PLANNER	CITY OF SAN JOSE AIRPORT DEPARTMENT	1701 AIRPORT BOULEVARD, SUITE B-1130	SAN JOSE	CA	95510
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
BEN	AGHEGNEHU		COUNTY OF SANTA CLARA ROADS AND AIRPORTS DEPARTMENT	101 SKYPORT DR.	SAN JOSE	CA	95110

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**

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Letter Affirming City of Santa Clara Acceptance of  
Responsibility for Mitigation



**City of  
Santa Clara**  
The Center of What's Possible

Planning Division

February 7, 2020

Leonidas Payne  
CEQA Lead Project Manager  
California Energy Commission  
1516 Ninth Street, MS-40  
Sacramento, CA 95814-5512

Re: 651 Walsh Avenue Data Center Project Proposed Initial Study/Mitigated Negative Declaration (IS/MND)

Dear Mr. Payne,

Thank you for keeping the City of Santa Clara involved with the environmental process for the proposed data center project located at 651 Walsh Avenue. It is our understanding that the applicant agrees to the mitigation measures for Biological Resources in the IS/MND. 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 Debby Fernandez at 408-615-2450 or [dfernandez@santaclaraca.gov](mailto:dfernandez@santaclaraca.gov).

*for* 

Gloria Sciara  
Development Review Officer/ Zoning Administrator  
Planning Division / Community Development Department  
1500 Warburton Avenue  
Santa Clara, CA 95050

I:\PLANNING\2018\Project Files Active\PLN2018-13303 651 Walsh Ave (Data Center)\CEQA\CEC mitigation measure acceptance  
ltr 2.5.2020.docx