# SAN JOSÉ / SANTA CLARA REGIONAL WASTEWATER FACILITY COGENERATION PROJECT

Initial Study
File Number: PP14-005

Prepared by

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

April 2014

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*Department of Planning, Building, and Code Enforcement*
DAVID SYKES, INTERIM DIRECTOR

**PUBLIC NOTICE**
**INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**
**CITY OF SAN JOSÉ, CALIFORNIA**

**File No. PP14-005, San José / Santa Clara Regional Wastewater Facility Cogeneration Project.** The Project would include the installation of up to four natural gas/biogas fired reciprocating engines (up to 12.5 MW total for three of the four engines operating at any one time). The proposed engines would meet or exceed Achieved in Practice emissions standards maintained by the Bay Area Air Quality Management District (BAAQMD). The proposed engines would be housed in a new, 36,300 square foot (330 feet x 110 feet) Cogeneration Building that would be constructed within the Project area near Zanker Road. The Cogeneration Building would be constructed as a high-bay concrete design, with a height similar to the existing Blower Generation Building. The proposed Cogeneration Building would also include four new stacks for air emissions. The stacks would be 24 inches in diameter and would reach toapproximately 40 feet in height, which is the same height as the existing stack for the adjacent Blower Generation Building.The Facility is located at the southern end of the San Francisco Bay within the northernmost portion of the City of San José, immediately north of State Route 237, west of Interstate 880 (700 Los Esteros Road, APN: 015-31-024). (Council District: 4)

The City of San Jose has performed environmental review on the project. Environmental review examines the nature and extent of any adverse effects on the environment that could occur if a project is approved and implemented. Based on the review, the City has prepared a draft Mitigated Negative Declaration (MND) for this project. An MND is a statement by the City that the project will not have a significant effect on the environment if protective measures (mitigation measures) are included.

The public is welcome to review and comment on the draft Mitigated Negative Declaration.

The public comment period for this draft Mitigated Negative Declaration begins on **April 11, 2014** and ends on **May 12, 2014.**

A hearing date has not yet been scheduled for this project.

The draft Mitigated Negative Declaration, initial study, and reference documents are available online at: http://www.sanjoseca.gov/index.aspx?NID=2165. The documents are also available for review from 9:00 a.m. to 5:00 p.m. Monday through Friday at the City of San Jose Department of Planning, Building & Code Enforcement, located at City Hall, 200 East Santa Clara Street; and at the Dr. Martin Luther King, Jr. Library, located at 150 E. San Fernando Street.

For additional information, please contact John Davidson at 408/535-7895, or by e-mail at john.davidson@sanjoseca.gov .

David Sykes, Interim Director
Planning, Building and Code Enforcement

John Davidson
Deputy

Circulated on: April 11, 2014

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

*Department of Planning, Building, and Code Enforcement*
DAVID SYKES, INTERIM DIRECTOR

# MITIGATED NEGATIVE DECLARATION

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

**NAME OF PROJECT: San José / Santa Clara Regional Wastewater Facility Cogeneration Project**

**PROJECT FILE NUMBER: PP14-005**

**PROJECT DESCRIPTION:** The Project would include the installation of up to four natural gas/biogas fired reciprocating engines (up to 12.5 MW total for three of the four operating at any one time. The proposed engines would meet or exceed Achieved in Practice emissions standards maintained by the Bay Area Air Quality Management District (BAAQMD). The proposed engines would be housed in a new, 36,300 square foot (330 feet x 110 feet) Cogeneration Building that would be constructed within the Project area near Zanker Road. The Cogeneration Building would be constructed as a high-bay concrete design, with a height similar to the existing Blower Generation Building. The proposed Cogeneration Building would also include four new stacks for air emissions. The stacks would be 24 inches in diameter and would reach to approximately 40 feet in height, which is the same height as the existing stack for the adjacent Blower Generation Building.

**PROJECT LOCATION & ASSESSORS PARCEL NO.:** The Facility is located at the southern end of the San Francisco Bay within the northernmost portion of the City of San José, immediately north of State Route 237, west of Interstate 880 (700 Los Esteros Road, APN: 015-31-024).

**COUNCIL DISTRICT: 4**

**APPLICANT CONTACT INFORMATION: Sanhita Ghosal, City of San Jose Environmental Services Division, 200 E. Santa Clara Street, T-10, San Jose CA 95113.**

**FINDING:**

The Director of Planning, Building & Code Enforcement finds the project described above will not have a significant effect on the environment in that the attached initial study identifies one or more potentially significant effects on the environment for which the project applicant, before public release of this draft Mitigated Negative Declaration, has made or agrees to make project revisions that clearly mitigate the effects to a less than significant level.

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

**I. AESTHETICS.** The project will not have a significant impact on aesthetics or visual resources, therefore no mitigation is required.

**II. AGRICULTURE AND FOREST RESOURCES.** The project will not have a significant impact on agriculture or forest resources, therefore no mitigation is required.

**III. AIR QUALITY.** The project could have an impact to air quality both from construction dust and criteria pollutants during the construction process.

**Mitigation Measure AIR-1: BAAQMD Construction Control Measures.** During Project construction, the City, through its construction contractor(s), shall ensure that the following BAAQMD construction control measures are implemented.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

**IV. BIOLOGICAL RESOURCES.**

**Impact BIO-1:** The project could interfere with special status bird species.

**Mitigation Measure BIO-1: Raptor and Migratory Bird Nest Measure.**
If Project construction is scheduled during the breeding season for raptors or migratory birds (February 1–August 31), a qualified wildlife biologist will be retained to conduct a survey for nesting raptors and migratory bird nests. If an active nest is discovered, a no-disturbance buffer zone around the nest tree (or, for ground-nesting species, the nest itself) shall be established.

The no-disturbance zone shall be marked with flagging or fencing that is easily identified by the construction crew. In general, the minimum buffer zone widths shall be as follows: 100 feet (radius) for non-raptor species and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with the California Department of Fish and Wildlife (CDFW). Buffers shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest.

Construction activities that are scheduled to begin before the breeding season (i.e., begin between September 1 and January 31) can proceed without surveys. Optimally, all necessary vegetation removal should be conducted before the breeding season (generally between February 1 and August 31) so that nesting birds or raptors would not occur in the construction area during construction activities.

**Impact BIO-2:** The Project would remove or damage trees protected under the City's Tree Ordinance.

**Mitigation Measure BIO-2: Minimize Construction Effects on Ordinance Trees to Be Retained.**
The Project proponent shall implement the following tree protection measures prior to and during project construction.

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

## V. CULTURAL RESOURCES.

**Impact CUL-1:** Project construction could cause accidental discovery and/or disturbance to previously unknown human remains.

**Mitigation Measure CUL-1: Accidental Discovery of Archaeological Resources.**
If discovery is made of items of historic or archaeological interest, the City's contractor shall immediately cease all work activities in the vicinity (within approximately 100 feet) of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, baked clay fragments, or faunal food remains (bone and shell); stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include the remains of stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation the contractor shall immediately contact the City. The contractor shall not resume work until authorization is received from the City.

Any inadvertent discovery of cultural resources during construction shall be evaluated by a qualified archaeologist. If it is determined that the project could damage a historical resource or

a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with PRC Section 21083.2 and Section 15126.4 of the CEQA *Guidelines*, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, the archaeologist shall develop a treatment plan in consultation with the City and appropriate Native American representatives (if the find is of Native American origin).

**Impact CUL-2:** Project construction could cause accidental discovery and/or disturbance to previously unknown human remains.

**Mitigation Measure CUL-2: Accidental Discovery of Human Remains.**
Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

**VI. GEOLOGY AND SOILS.** The project will not have a significant impact due to geology and soils, therefore no mitigation is required.

**VII. GREENHOUSE GAS EMISSIONS.** The project will not have a significant impact due to greenhouse gas emissions, therefore no mitigation is required.

**VIII. HAZARDS AND HAZARDOUS MATERIALS.**

**Impact HAZ-1:** Project construction could encounter contaminated soils, potentially causing release of hazardous materials into the environment and/or exposing workers to hazardous materials. Additionally, project construction could intersect contaminated groundwater from adjacent hazardous materials site listings.

**Mitigation Measure HAZ-1a: Pre-Construction Hazardous Materials Assessment.**
Prior to issuance of grading permits for Project construction, the City or its contractor shall ensure that a limited soil and/or groundwater investigation is performed at proposed construction work areas to characterize soil and/or groundwater quality. Generally, for projects within 250 feet of a known underground fuel tank leak or spill, the City shall perform the site assessment in general accordance with protocols described in the SWRCB Leaking Underground Fuel Tank Guidance Manual (September 2012), and coordinate with the RWQCB as required. For all other projects, the City shall conduct a site assessment including potential testing of soil and/or groundwater, and if testing reveals soil and/or groundwater concentrations that exceed applicable regulatory screening levels, the City shall contact the SCCDEH or RWQCB, as appropriate, to secure regulatory oversight.

The work plan will establish the sampling and laboratory analysis program which may include the following: analysis of subsurface soil samples within the WPCP for total petroleum hydrocarbons (as gasoline, diesel, and waste oil), Title 22 metals, and VOCs or any other chemicals of concern to evaluate the potential presence of contamination; groundwater samples if subsurface excavations are anticipated to require dewatering;. and additional analyses for VOCs and SVOCs for groundwater samples collected at construction locations within 1000 feet of adjacent landfills.

The results of the hazardous materials assessment shall be incorporated into the Site Health and Safety Plan prepared in accordance with Mitigation Measure HAZ-1b and the Soil and Groundwater Management Plan prepared in accordance with Mitigation Measure HAZ-1c to determine whether: specific soil and groundwater management and disposal procedures for contaminated materials are required; excavated soils are suitable for reuse; and construction worker health and safety procedures for working with contaminated materials are required. If the pre-construction hazardous materials assessment identifies the presence of soil and/or groundwater contamination at concentrations in excess of applicable regulatory screening levels (ESLs or CHHSLs) for proposed site use, the City shall complete site assessment and remedial activities required by the regulatory agency to ensure that residual soil and/or groundwater contamination, if any, shall not pose a continuing significant threat to groundwater resources, human health, or the environment.

**Mitigation Measure HAZ-1b: Health and Safety Plan.**
The City shall require the construction contractor to retain a qualified environmental professional to prepare a site-specific Health and Safety Plan (HASP) in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal/OSHA regulations (8 CCR Title 8, Section 5192). Because anticipated contaminants vary depending upon the location of proposed improvements in the project area and may vary over time, the HASP shall address site-specific worker health and safety issues during construction of the individual projects. The HASP shall include the following information.

- Results of sampling conducted in accordance with Mitigation Measure HAZ-1a.
- All required measures to protect construction workers and the general public by including engineering controls, monitoring, and security measures to prevent unauthorized entry to the construction area and to reduce hazards outside of the construction area. If prescribed contaminant exposure levels are exceeded, personal protective equipment shall be required for workers in accordance with state and federal regulations.
- Required worker health and safety provisions for all workers potentially exposed to contaminated materials, in accordance with state and federal worker safety regulations, and designated qualified individual personnel responsible for implementation of the HASP.
- The contractor shall have a site health and safety supervisor fully trained pursuant to hazardous materials regulations be present during excavation, trenching, or cut and fill operations to monitor for evidence of potential soil contamination, including soil staining, noxious odors, debris or buried storage containers. The site health and safety supervisor must be capable of evaluating whether hazardous materials encountered constitute an incidental release of a hazardous substance or an emergency spill. The site health and safety supervisor shall direct procedures to be followed in the event that an unanticipated hazardous materials release with the potential to impact health and safety is encountered. These procedures shall be in accordance with hazardous waste operations and regulations and specifically include, but are not limited to, the following: immediately stopping work in

the vicinity of the unknown hazardous materials release; notifying Santa Clara County Department of Environmental Health and retaining a qualified environmental firm to perform sampling, remediation, and/or disposal.

- Documentation that HASP measures have been implemented during construction.
- Provision that submittal of the HASP to the City, or any review of the contractor's HASP by the City, shall not be construed as approval of the adequacy of the contractor's health and safety professional, the contractor's HASP, or any safety measure taken in or near the construction site. The contractor shall be solely and fully responsible for compliance with all laws, rules, and regulations applicable to health and safety during the performance of the construction work.

**Mitigation Measure HAZ-1c: Soil and Groundwater Management Plan.**

The City shall require the construction contractor to prepare and implement a Soil and Groundwater Management Plan, subject to review by the City, that specifies the method for handling and disposal of contaminated soil and groundwater prior to construction. The plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The plan shall include the following information.

- Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling. In addition, excavated materials shall be inspected for buried building materials, debris, and evidence of underground storage tanks; if identified, these materials shall be stockpiled separately and characterized in accordance with landfill disposal requirements. If some of the spoils do not meet the reuse criteria and/or debris is identified, these materials shall be disposed of at a permitted landfill facility.
- Procedures to be implemented if unknown subsurface conditions or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils.
- Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method to analyzed groundwater for hazardous materials likely to be encountered and the appropriate treatment and/or disposal methods.

**IX. HYDROLOGY AND WATER QUALITY.** The project will not have a significant hydrology and water quality impact, therefore no mitigation is required.

**X. LAND USE AND PLANNING.** The project will not have a significant land use impact, therefore no mitigation is required.

**XI. MINERAL RESOURCES.** The project will not have a significant impact on mineral resources, therefore no mitigation is required.

**XII. NOISE.** The project will not have a significant noise impact, therefore no mitigation is required.

**XIII. POPULATION AND HOUSING.** The project will not have a significant population and housing impact, therefore no mitigation is required.

**XIV. PUBLIC SERVICES.** The project will not have a significant impact on public services, therefore no mitigation is required.

**XV. RECREATION.** The project will not have a significant impact on recreation, therefore no mitigation is required.

**XVI. TRANSPORTATION / TRAFFIC.** The project will not have a significant traffic impact, therefore no mitigation is required.

**XVII. UTILITIES AND SERVICE SYSTEMS.** The project will not have a significant impact on utilities and service systems, therefore no mitigation is required.

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.** The project will not substantially reduce the habitat of a fish or wildlife species, be cumulatively considerable, or have a substantial adverse effect on human beings, therefore no mitigation is required.

**PUBLIC REVIEW PERIOD**

Before 5:00 p.m. on **May 12, 2014,** any person may:

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

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

David Sykes, Interim Director
Planning, Building and Code Enforcement

**Circulation period: from April 11, 2014 to May 12, 2014.**

John Davidson

Deputy

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# San José / Santa Clara Regional Wastewater Facility Cogeneration Project Initial Study

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# CHAPTER 1
# Project Description

The following text provides relevant background for the San José / Santa Clara Regional Wastewater Facility Cogeneration Project (Project), City of San José File Number PP14-005, identifies the Project location and describes the Project area and its vicinity, identifies the Project objectives and need, reviews proposed facilities and operations, and summarizes the proposed construction process and schedule.

## 1.1 Introduction

The San José / Santa Clara Regional Wastewater Facility (Facility) treats domestic, industrial, and commercial wastewater during dry weather from San José, Santa Clara, Campbell, Los Gatos, Monte Sereno, Cupertino, Milpitas, and Saratoga; and parts of Sunnyvale, Los Altos, and unincorporated Santa Clara County. In total, the existing service area covers roughly 300 square miles and contains a service population of approximately 2 million people (1.4 million residents and 600,000 workers).

Originally constructed in 1956, the Facility treats an average of 110 million gallons per day (mgd) of wastewater, with an existing capacity of 167 mgd. The Facility provides a tertiary level of treatment, in accordance with state and local regulations. The Facility produces recycled water for industrial use and toilet flushes, and also discharges treated wastewater to the South San Francisco Bay. The City of San José (City) manages the Facility and the surrounding Facility lands, which together total approximately 2,680 acres. About half of this area consists of current and former lagoons and drying beds used for biosolids management and lands that have provided a buffer between Facility operations and neighboring land uses.

Power demand at the Facility varies on an hourly basis based on wastewater treatment load. Overall, Facility power demand averages about 11 megawatts (MW), but peak power demand can require several additional MW of power capacity. Variability in power demand roughly correlates with demand for wastewater treatment at the Facility. During periods of higher demand, additional treatment equipment is brought online, which results in increased electrical demand. Electrical power at the Facility is provided by a combination of power generated on site and grid power from PG&E. Power produced on site is used to support as much of the total Facility load as is possible, with remaining power supply being purchased from PG&E as needed.

Grid power from PG&E is provided by two independent PG&E power lines: the Newark-San Jose (North Line) and the Newark-Kiefer (South Line). These power lines enter the west side of the Facility at Electrical Substation #1, which contains Main Power Station "M3." Each PG&E power line

is capable of providing 115 kV power for the entire Facility as needed. In addition, this substation is connected via 115 kV overhead power lines to Substation #2 on the east side of the Facility. At each substation, there are two transformers that step down 115 kV power to 4,160 volts for use at the Facility. The power is distributed around the Facility via a ring buss and system of main distribution stations and switchgears.

Because Facility power demand is variable, under existing conditions, there are brief periods of time where the Facility generates more power than is needed on site. This situation occurs intermittently, when Facility power demand drops below the optimal capacity of the existing onsite power generation facilities. During these periods, which typically last up to about 30 minutes, Facility operators run the existing engines at a steady speed to maintain engine efficiency, even though Facility power demand has dropped. When this occurs, the Facility temporarily generates excess power, which is added to the grid, without monetary compensation.[1] This situation will continue to occur under the Project, for the proposed engines.

Facility power production capacity is provided by several existing sources of power generation. Historically, the Facility's existing power generation system produced electricity using three engine-generator sets in the Facility's Pump and Engine Building (P&E Building; engines E2, E3, and E5), three engine-generator sets in the Blower Generation Building (engines EG 1, EG 2, and EG 3) and one fuel cell. Combined, the generators were capable of producing approximately 11 MW on average (12 MW maximum capacity), and met most of the electricity demand at the Facility site. In addition, there are six engine-driven blowers in the Secondary Blower Building.

However, electrical generation capability within these facilities has been declining due to the oldest 1953 and 1962 era engines in the P&E Building reaching the end of their service life. In addition, in April, 2013, one of the existing engine-generator sets (EG 1 in the Blower Generation Building) suffered a catastrophic failure in its operation system, rendering it inoperable and unable to produce power. A second generator (EG 3 in the Blower Generation Building) had also failed, but was recently repaired. These failures have significantly reduced power generation capacity on site, and engine reliability remains a primary concern for Facility operators.

All of the engines at the Facility are equipped with heat recovery systems. Cogeneration (also known as combined heat and power, or CHP), is defined as the concurrent production of electricity and usable heat from a single engine or power source. Thus, in addition to supplying power to meet existing power demand, the existing engines supply heat via a hot water loop to heat the anaerobic digesters, and provide cooling water for building space conditioning. Heat recovery efficiency of the existing Facility engine generators varies throughout the Facility, from as low as 5 percent, to as high as 28 percent, average of approximately 16 percent for all engines combined. These efficiencies are considered very low as compared to the heat recovery capacity of currently available engine/cogeneration technologies.

[1] The City is investigating potential to develop an agreement with PG&E to receive compensation for excess power placed on the grid under such circumstances. However, such operation would remain consistent with existing practice under the Project.

In order to address the failure of existing engine generators, and to avoid continued failures of aging cogeneration equipment, the City proposes the installation of up to four new reciprocating engine generators, with a total nameplate[2] capacity of approximately 4.17 MW each. Operationally, three engines would produce up to 12.5 MW of power, while one engine would be placed on standby, ready to be put into service when one of the three operating engines is placed out of service for maintenance. In no case would all four engines be operated concurrently. These proposed engines, in combination with the existing and operating fuel cell (1.4 MW), are projected to meet Facility electricity and heat demand through 2036. Power demands in excess of proposed total capacity under the Project could occur, especially during periods of high demand for wastewater treatment and other periods of high electricity demand. Power demand in excess of generation capacity would be supplied by PG&E, through the Facility's existing grid connection.

The proposed cogeneration facility would use blended gas, a combination of natural gas and digester gas (also referred to as biogas) for fuel. Biogas would be sourced from existing digestion processes at the Facility, whereas natural gas would be supplied by PG&E via an existing connection to the Facility. The amount of biogas that could be made available for combustion in support of the Project would vary based on Facility wastewater treatment throughput and other process related variables. Currently, all of the biogas generated at the Facility is consumed on site for power production. The biogas is blended with natural gas to produce heat and power as discussed previously, which is sufficient to produce approximately 70 percent of existing power requirements. The proposed cogeneration systems would use the blend of digester gas and natural gas more efficiently to meet nearly all Facility power requirements. Additionally, natural gas consumption would not increase, under the Project. Instead, natural gas consumption is expected to drop to 75 percent of current usage.

As soon as the new engines under the Project are commissioned, tested, and verified to be operational, existing old engines to be replaced would be decommissioned as soon as possible. Following Project commissioning and testing, the old/existing generators that would be replaced would in no case be run concurrently with the proposed new generators.

Under the proposed operational scenario, there are periods where the Facility will have the capacity to generate more power than needed if requested by PG&E. Periodically, under special agreements, PG&E partners with agencies with power generation capability to provide temporary and intermittent power generation capacity, to meet area power shortfalls at times of need. The City may pursue such an agreement with PG&E. Under these agreements, PG&E could purchase the excess power from the Facility during limited periods of high grid power demand that coincide with reduced Facility power demand on site. However, power production under such a program would never exceed the 12.5 MW of power production capacity identified and analyzed in this report.

**Emergency Generators Project (City of San José File No. PP13-049; State Clearinghouse#: 2013082051):** In addition to the proposed Project, a separate Emergency Generators project, which has undergone CEQA review, is also currently in the planning process. The Emergency Generators

[2] Nameplate capacity refers to the rated capacity of the proposed generators. Actual operational power production would typically be slightly below nameplate capacity.

project would be designed to provide 12 MW of power capacity that would be used in the event of a power failure. The proposed emergency generators would be used to restart Facility processes and maintain operation until power could be restored, would not be used on an ongoing basis, and would only be used as a temporary source of power supply. Additionally, the Emergency Generators project would not provide heat to the Facility. The emergency generators would be fueled by a separate diesel fuel system including on-site storage tanks, and would not be subject to interruption of natural gas or other utility fuel supply pipelines.

## 1.2 Relationship to the Plant Master Plan

The City has prepared a Master Plan (Master Plan) for the Regional Wastewater Facility that addresses various improvement projects needed to address aging infrastructure, reduce odors, accommodate projected population growth in the Facility's service area, and comply with changing regulations that affect the Facility. The Master Plan also includes a comprehensive land use plan for the Facility lands surrounding the Facility operational area. The master planning effort identified both near-term and long-term (to year 2040) Facility improvements and land uses, which have been evaluated in the San José/Santa Clara Water Pollution Control Plant[3] Master Plan Environmental Impact Report (Master Plan EIR; City of San José File No. PP11-043; State Clearinghouse # 2011052074) certified in November, 2013. The Master Plan effort focuses on future planning efforts for the Facility and surrounding areas.

The Project evaluated in this initial study is independent and separate from the projects evaluated in the Plant Master Plan EIR. The Plant Master Plan identified the need to complete a more detailed energy review, including further evaluation of existing on site power generation systems. As a result, the 2012 Energy Management Strategic Plan (EMSP) was developed. The EMSP identified existing, aging cogeneration equipment as a critical issue that would need to be addressed in order to maintain onsite production of a reliable supply of heat and power. Cogeneration equipment identified in the EMSP ranges from 17 to 58 years of age, and has been subject to breakdowns of increasing frequency and severity, beyond levels that had previously been forecast. The EMSP also identifies the acquisition of parts for aging equipment as a critical consideration, wherein replacement parts for older machinery are increasingly difficult to acquire, and lack of available parts has resulted in the permanent shutdown of one generator to date. As a result, the EMSP recommended that the Facility's existing cogeneration equipment be updated in order to provide reliable on site power and heat generation.

Completion of the Project is needed irrespective of the improvements proposed in the Master Plan. Specifically, the Project would meet an existing need at the Facility for onsite power and heat production. The Project would not result in increased wastewater treatment capacity at the existing Facility.

[3] The legal name of the facility remains "San Jose/Santa Clara Water Pollution Control Plant" but beginning in early 2013, the facility's common name was changed to San José-Santa Clara Regional Wastewater Facility.

## 1.3 Project Location and Facility Siting

The Project would be located in the northern area of Santa Clara County, within the City, near the City's northern margin. The Project area is composed of approximately 4.5 acres of land located within the existing Facility's central operational area. The Project area is located along the northeastern corner of the Central Facility Area, with gas lines and a gas treatment area extending toward the center of the Central Facility Area, as shown on Figure 1-1. The Project is bounded by Los Esteros Road and inactive biosolids lagoons to the north, Zanker Road and existing biosolids drying beds to the east, electrical substation no. 2 and undeveloped Facility areas to the south, and the Blower Generation Building and Biological Nutrient Removal (BNR) aeration facilities to the west. The proposed gas pipelines extend into the center of the Facility, and would be routed along existing BNR aeration basins and clarifiers, south of the Blower Generation Building, and adjacent to the sludge concentrators and Sludge Control Building before reaching the proposed gas treatment area. The gas treatment area would be located in a small open area immediately north of the existing Sludge Control Building and existing digesters.

Neighboring uses in the vicinity of the Project area include a business park and shopping center (Walmart) located approximately 1 mile east of the Project, another business park located 0.8 mile southeast of the Project, the Los Esteros Substation, located 0.5 miles southeast, and State Route (SR) 237, located 0.9 mile south of the Project. Other nearby relevant uses include George Mayne Elementary School, located 0.9 mile southwest of the Project, a business park located 0.8 mile southwest of the Project, and residential developments located 1 mile east of the Project.

The Project area shown in Figure 1-1 reflects the largest potential area that would be disturbed by Project construction. Within this Project footprint the specific location and arrangement of required facilities will be determined during the Project design phase, which would occur after completion of the CEQA environmental review process and Project approval by the City. The City proposes to complete Project design under a design-build contract, such that the final design and layout of Project facilities would be developed by a private contractor rather than Facility staff.

Although Project facilities may not occupy the entire Project area, because the specific locations for the proposed facilities and appurtenances within the boundaries of the Project area will not be identified prior to completion of CEQA review, this Initial Study assumes that the proposed facilities could be located anywhere within the Project area boundary and assumes the entire area could be disturbed. For example, the proposed Cogeneration Building and appurtenances would be located within the boundary for the main cogeneration boundary shown on Figure 1-1, the gas pipelines would be located within the aboveground or buried gas lines area shown on Figure 1-1, and the gas treatment facilities would be located within the gas treatment area shown on Figure 1-1. Figures 1-2 and 1-3 include photographs of areas where the Project would be located.


SOURCE: ESRI, 2013

San José/Santa Clara Regional Water Treatment Facility Cogeneration Project . 209470

**Figure 1-1**

Project Location and Central Facility Operational Area

San José/Santa Clara Regional Water Treatment Facility Cogeneration Project . 209470

SOURCE: ESA, 2013

**Figure 1-2**

Western Side of Project Site Near Existing Blower Building, Facing Northwest



SOURCE: ESA, 2013

**Figure 1-3**

North End of Project Site, Looking South Towards Existing Blower Generation Building; Existing Building is 40 Feet High

## 1.4 Project Need and Objectives

The EMSP, as noted above, identified existing, aging (17 to 58 years of age) cogeneration equipment as a critical issue that would need to be addressed to maintain reliable onsite heat and power production. Existing equipment has been subject to breakdowns of increasing frequency and severity, beyond levels that had previously been forecast, and replacement parts for existing cogeneration equipment have become increasingly difficult to acquire. A recent catastrophic failure rendered one engine inoperable. Other temporary/repairable failures have occurred with increasing frequency. As a result, and as recommended by the EMSP, existing and aging equipment should be updated in order to maintain reliable on site power and heat generation.

The following objectives have been identified for the Project:

- Provide a reliable power source using 100 percent of the biogas available at the Facility under existing conditions
- Provide onsite electricity generation sufficient to meet demand of the existing Facility
- Provide heat to be used for sludge heating and other hot water service needs at the Facility
- Enable energy purchase savings by generating power and heat on site
- Update existing, aging onsite cogeneration infrastructure to cleaner burning, more efficient technologies

## 1.5 Proposed Facilities

The Project would include the installation of up to four 4.175 MW natural gas/biogas fired reciprocating engines (up to 12.5 MW total). Operationally, three engines would produce power while one engine would be placed on standby, ready to be put into service when one of the three operating engines is placed out of service for maintenance. Under no circumstances would all four engines be operated concurrently. Under this operating scenario, the proposed engines, working with the existing fuel cell, are anticipated to meet Facility energy and heat requirements. The proposed engines would meet or exceed Best Available Control Technology (BACT) emissions standards maintained by the Bay Area Air Quality Management District (BAAQMD). The proposed engines would be housed in a new, 36,300 square foot (330 feet x 110 feet) Cogeneration Building that would be constructed within the Project area near Zanker Road. The Cogeneration Building would be constructed as a high-bay concrete design, with a height similar to the existing Blower Generation Building. The proposed Cogeneration Building would also include 1 to 4 new stacks for air emissions. The stack(s) would be 24 inches in diameter and would reach to approximately 40 feet in height, which is the same height as the existing stack for the adjacent Blower Generation Building.

Various additional appurtenances would be installed in support of the engines and Cogeneration Building, including the following:

- New gas treatment system, to be installed centrally in the existing Facility (see Figure 1-1), which would treat biogas upstream of the proposed cogeneration engines
    - Gas treatment would include removal of hydrogen sulfide, siloxanes, and other volatile organic compounds (VOCs) from the biogas
    - No exhaust or other airborne emissions from the gas treatment system would occur
    - Cement pad for housing the gas treatment system, with aboveground piping
- New biogas pipelines that would connect the proposed gas treatment system to the Cogeneration Building (see Figure 1-1);
- New natural gas supply pipeline that would connect to existing natural gas service located near the intersection of Zanker Road and McCarthy Lane (see Figure 1-1). The pipeline would be 6 inches or less in diameter, and would either be buried or installed aboveground.
- New heat recovery system used to capture heat from the proposed engine generators and supply hot water to the Facility's main hot water loop;
- System controls, gas blending, and maintenance facilities, including dedicated sites in or adjacent to the proposed Cogeneration Building;
- Parking area adjacent to the Cogeneration Building;
- Connections to existing utilities including natural gas, water, stormwater, and sanitary sewer lines
- Minor on-site access roads
- Landscaping, walls, berms, fences, and/or other hardscape to shield equipment from views outside of the Facility.

Operation of the existing, aging generators that are currently used for cogeneration would be terminated concurrent with initiation of normal operations using the new generators under the Project. The existing, aging generators would be decommissioned and removed. Terms of the decommissioning process will be reviewed and determined by the BAAQMD, such that total permitted emissions are never exceeded under normal operations, including during the testing and commissioning period.

# 1.6 Facility Operations

The proposed cogeneration engines would operate on a continuous basis. As noted above, up to three of the four engines would operate at any given time, for a total maximum online electricity production capacity of 12.5 MW. During operation, one engine may be placed on standby, to be placed in service when one of the other engines requires maintenance or repairs. Routine maintenance would include oil changes, filter changes, inspections, and load testing for the proposed engines, as well as regular inspection of appurtenances and other supporting facilities. Operation period deliveries in support of the Project would be limited to items needed for Project maintenance and upkeep. Thus, deliveries would be intermittent and infrequent, and would occur during daytime hours. The Project would be operated and maintained by existing Facility staff; operation of the Project would not require additional workers.

# 1.7 Construction Process and Schedule

The following section summarizes the construction process that would be utilized on site, identifies construction access roads, and delineates the anticipated construction schedule for the Project.

## 1.7.1 Construction Process

The Project area would be accessed via a dedicated construction gate that would be installed along Zanker Road. Due to heavy truck traffic to the landfill and to the future zero waste facility, flag men would be used to control traffic at the Project entrance, in order to facilitate truck movement into and out of the Project area.

Project construction would involve excavation of up to 15 feet for installation of the proposed cogeneration facility. Installation of the proposed biogas pipelines would involve excavation of up to 6 feet. All other facilities, including the proposed natural gas lines, would require excavation of 4 feet or less, and building ground floor levels will be elevated to approximately 4 feet higher than the existing surface level. Cut and fill volumes are estimated at 6,723 cubic yards and 4,710 cubic yards, respectively. Pipeline installation disturbance widths are estimated at 30 feet, but may be reduced in certain areas to avoid trees or facilities.

Initial construction activities would include excavation followed by installation of building foundations, piping, and underground utility connections to existing facilities. Such activities would include excavating, pile driving, trenching, sheeting, and shoring. Later activities would include building construction, pipeline installation, installation of cement pads, installation of access roads on site, and installation of other aboveground equipment including the proposed generators and appurtenances. Proposed typical construction hours for the Project are Monday through Friday, 7:00 am to 5:00 pm. However, the selected contractor may be required to work on Saturday and Sunday, or during extended hours to support a critical Project development timeframe.

Equipment required during Project construction would include the following: excavators, compactors, backhoe loaders, concrete trucks, dump trucks, pile drivers, cranes, semi-trucks, and

other large equipment typically used for minor to moderate earth moving, site preparation, foundation laying, concrete pours, and building construction. Construction staging areas would be located within the Project area on non-paved areas. Temporary fencing would be installed along the boundary of the construction area, and temporary lighting would be utilized as needed during the construction period. Project construction would require a total of 240 truck trips for construction-related truck activity, plus an additional approximately 650 trips for workers' commute vehicles.

### 1.7.2 Affected Roadways

Construction equipment and workers would access the site along Los Esteros Road and Zanker Road, connecting to SR 237. Thus, site access would be via the southeastern corner of the Facility site.

### 1.7.3 Schedule

Construction of the Project would occur from June, 2015 through December, 2016 over a period of approximately 400 working days, followed by four to twelve months of commissioning and acceptance.

# CHAPTER 2
# Environmental Checklist

## 2.1 Aesthetics

### 2.1.1 Setting

The Project area is located near the southern tip of the San Francisco Bay, near the northeastern corner of the existing Central Facility Area, with gas lines and a gas treatment area extending toward the center of the Central Facility Area (Figure 1-1). Thus the Project area is bounded by Los Esteros Road and inactive biosolids lagoons to the north, Zanker Road. and existing biosolids lagoons and drying beds to the east, electrical substation No. 2 and undeveloped areas to the south, and the Blower Generation Building and BNR aeration facilities to the west. The Project area and vicinity are relatively flat, allowing for views from nearby offsite areas of the eastern foothills, Mount Hamilton, and the Diablo Mountains to the east, and the San Francisco Baylands to the north from elevated locations. Figures 1-2 and 1-3 depict close-range views of the proposed site for the cogeneration building, looking northwest and south.

Roadways in the vicinity of the Project area include Zanker Road and Los Esteros Road, providing primary access to the Facility operational area and the primary means by which the public can observe the Project area. From outside the Master Plan planning area, viewing opportunities of the Project area are limited and largely screened by nearby structures and landscaping. Most of these facilities are industrial in character, with most buildings being one to two stories high. The Central Facility Area also contains storage tanks, utility infrastructure, and a railroad line. The periphery of the Facility consists of fencing plus landscaping including eucalyptus trees, shrubs, and manicured lawns.

The nearest residences where the Project vicinity could be visible are located in the Alviso Village area, which is approximately 0.9 mile west of the Project area. The Project area would also be visible from Los Esteros Road.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **1. AESTHETICS — Would the project:** | | | | | |
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☒ | ☐ | 1, 2, 7 |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area? | ☐ | ☐ | ☒ | ☐ | 1, 2 |

## 2.1.2 Discussion

a,c) **Less than Significant Impact.** The Project is located in the existing Central Facility Area, and would involve the installation and use of the proposed Cogeneration Building, engine generators, gas treatment and heat recovery systems, parking areas, emissions stack(s), pipelines and various other Project features. The proposed changes would be limited in extent, with maximum facility heights reaching approximately 2 stories, consistent with other, existing facilities located adjacent to the Project area, within the Central Facility Area. If the proposed natural gas pipelines are installed aboveground, they could be visible from Zanker Road. However, the pipelines would be limited to less than 4 feet in height, and would be installed behind the existing row of trees along Zanker Road. The Project would include 1 to 4 new, 24-inch exhaust stacks that would reach a height of approximately 40 feet. The dimensions of the proposed stack(s) would be the same as the existing stack for the adjacent Blower Generation Building. Therefore, the Project would be installed adjacent to other industrial facilities that are similar in appearance and height, associated with the Central Facility Area. There are no scenic vistas in the Project vicinity. Therefore, the proposed facilities would be consistent with the existing visual setting, would not result in a substantial adverse effect on any scenic vista, and would not substantially alter the existing visual character or quality of the Project area and its surroundings. These impacts are considered less than significant.

b) **Less than Significant Impact.** Area highways from which the Project area is visible are not listed as state scenic highways. Additionally, no rock outcroppings or historic buildings are located on site or in the immediate vicinity of the Project area, such that views of such resources could be affected. Limited trees (i.e., existing Facility landscaping) are located where the proposed cogeneration facility would be located, but new landscaping would be included as part of the Project. This impact is considered less than significant.

d) **Less than Significant Impact.** Nighttime lighting is currently used throughout the Central Facility Area, including the Project area, with limited lighting adjacent to the Project area. The Project would add to existing lighting, sufficient to provide lighting needed for security of the proposed cogeneration Project.

The City of San José Public Streetlights Council Policies 4-2 and 4-3 require that new streetlight lighting be dimmable and programmable and fully shielded/downward facing lights, which would control the amount and color of light shining on streets and sidewalks. The Project would adhere to the requirements of this policy. Further, because there are no residences or other active nighttime uses in the immediate vicinity of the proposed facilities, lighting impacts would be less than significant, and no additional mitigation is required beyond adherence to the City's current policies.

# 2.2 Agricultural and Forest Resources

## 2.2.1 Setting

There are no existing agricultural lands or forest resource areas located on the Project area or in the immediate vicinity of the Project. Surrounding lands to the south of the Project area currently serve as open space/bufferlands, much of which is designated as grazing land. Pond A18, located northeast of the Project area, is under a Williamson Act contract and is designated as Non-Prime Agricultural Land. No other lands in the immediate Project vicinity are enrolled in the Williamson Act Program.[4]

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **2. AGRICULTURAL AND FOREST 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:** | | | | | |
| 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? | ☐ | ☐ | ☐ | ☒ | 1 |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ | 1 |
| 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))? | ☐ | ☐ | ☐ | ☒ | 1 |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ | 1 |
| 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? | ☐ | ☐ | ☐ | ☒ | 1 |

## 2.2.2 Discussion

a-e) **No Impact.** As noted above, the Project is not located on, and would not affect, any agricultural lands (including Prime Farmland, Unique Farmland, or Farmland of Statewide

[4] California Department of Conservation (CDC), 2009. Division of land Resource Protection, Santa Clara County Williamson Act Lands 2009—Lands Enrolled in Williamson Act and Farmland Security Zone Contracts as of 2009 [GIS data], Williamson Act Program, available online at http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx, accessed October 2012.

Importance), lands subject to a Williamson Act contract, or forest lands. The Project would not result in the construction of any facilities or other displacement, interference, or loss of agricultural or forest lands. Additionally, the Project would not alter other areas which could, directly or indirectly, result in the conversion of farmland or forest land to other uses.

# 2.3 Air Quality

## 2.3.1 Setting

Under amendments to the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has classified air basins or portions thereof as either "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the national standards have been achieved. The California CAA, which is patterned after the federal CAA, also requires areas to be designated as "attainment" or "non-attainment" for the state standards. Thus, areas in California have two sets of attainment / non-attainment designations: one set with respect to the national standards and one set with respect to the state standards. The San Francisco Bay Area Air Basin (Bay Area) is currently designated as a nonattainment area for state and national ozone standards, state particulate matter (PM10 and PM2.5) standards, and federal PM2.5 (24-hour) standard.

The BAAQMD is the regional air quality authority in the Project area and surrounding areas. The BAAQMD requires any person or facility that puts in place, builds, erects, installs, modifies, modernizes, alters or replaces any article, machine, equipment or other contrivance, the use of which may cause, reduce or control the emission of air contaminants, to obtain written authorization from the BAAQMD in the form of an Authority to Construct permit (unless the source is specifically excluded or exempt from permit requirements). The BAAQMD's permit process is a pre-construction review and approval process. The BAAQMD's review is conducted after the equipment is designed, but before it is installed. After an Authority to Construct permit has been issued and construction is complete, a Permit to Operate is required to verify that the permitted equipment performs as required. The Permit to Operate must be renewed annually. The City would be required to obtain an Authority to Construct permit and a Permit to Operate for the Project.

The most recently adopted air quality plan for the San Francisco Bay Area is the *Bay Area 2010 Clean Air Plan*.[5] The 2010 Clean Air Plan (CAP) is an update to the BAAQMD 2005 Ozone Strategy to comply with State air quality planning requirements. The 2010 CAP also serves as a multi-pollutant air quality plan to protect public health and the climate. The 2010 CAP control strategy includes revised, updated, and new measures in the three traditional control measure categories, including stationary source measures, mobile source measures, and transportation control measures. In addition, the 2010 CAP identifies two new categories of control measures, including land use and local impact measures, and energy and climate measures.

The BAAQMD *CEQA Air Quality Guidelines* were adopted in 2010 and amended in 2011 to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions.

[5] Bay Area Air Quality Management District (BAAQMD), 2010. Bay Area 2010 Clean Air Plan, adopted September 15, 2010. Available at http://www.baaqmd.gov.

In 2012, the Alameda County Superior Court ruled that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD *CEQA Air Quality Guidelines*. In August 2013, the First District Court of Appeal reversed the trial court's judgment and upheld the BAAQMD's *CEQA Guidelines*. However, as of November 2013, an appeal is pending at the California Supreme Court. Although reliance on the 2011 thresholds is no longer required, local agencies still have a duty to evaluate impacts related to air quality and GHG emissions. In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, this analysis is based on the BAAQMD's 2011 thresholds to evaluate Project impacts in order to protectively evaluate the potential effects of the Project on air quality. Despite the court ruling, the science and reasoning contained in the BAAQMD 2011 *CEQA Air Quality Guidelines* provide the latest state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 *CEQA Air Quality Guidelines*.

For the purposes of this air quality analysis, sensitive receptors are defined as facilities and land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and daycare centers. Residential areas are also considered sensitive to poor air quality because people usually stay home for extended periods of time, which results in greater exposure to ambient air quality. There are no sensitive receptors (e.g., residences, schools) in the immediate vicinity of the Project area. The closest residences are located south of Highway 237, approximately 1 mile from the Project area. There are no hospitals, schools, daycare centers, or long-term care facilities within 1 mile of the Project area. The Jubilee Christian Youth Center, where children frequently engage in outdoor activities, is located 1.0 mile southwest of the Project.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Sources* |
|---|---|---|---|---|---|
| **3. AIR QUALITY —** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:** | | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☒ | ☐ | ☐ | 1,10 |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☒ | ☐ | ☐ | 1,10 |
| c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | ☐ | ☒ | ☐ | ☐ | 1,10 |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ | 1 |

| Issues (and Supporting Information Sources): | Potentially Significant Impact | Less Than Significant with Mitigation Incorporation | Less Than Significant Impact | No Impact | Checklist Sources |
|---|---|---|---|---|---|
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ | 1 |

## 2.3.2 Discussion

a) **Less than Significant with Mitigation.**

**Impact AIR-1:** For air quality plan consistency determinations, the BAAQMD recommends that agencies analyze the Project with respect to the following questions: (1) does the Project support the primary goals of the air quality plan; (2) does the Project include applicable control measures from the air quality plan; and (3) does the Project not disrupt or hinder implementation of any 2010 CAP control measures? If all the questions are concluded in the affirmative, BAAQMD considers the Project consistent with air quality plans prepared for the Bay Area.[6] Any project that would not support the 2010 CAP goals would not be considered consistent with the 2010 CAP, and if approval of the Project would not result in significant and unavoidable air quality impacts after the application of mitigation, then the Project would be considered consistent with the 2010 CAP.

As presented in the subsequent impact discussions, proposed Project-related construction and operation emissions would not exceed the identified guidelines or thresholds; therefore, the Project would support the primary goals of the 2010 CAP. As mentioned above, projects that incorporate all feasible air quality plan control measures are considered consistent with the 2010 CAP. There appear to be no 2010 CAP control measures that would be directly applicable to the proposed Project. However, in order to comply with applicable BAAQMD basic construction control measures, implementation of Mitigation Measure AIR-1 would be required.

The Project would support the primary goals of the 2010 CAP and it would not disrupt or hinder implementation of any 2010 CAP control measures. Therefore, there would be no impact associated with conflicting or obstructing implementation of the applicable air quality plan.

**Mitigation Measure:** Mitigation Measure AIR-1 would ensure that the Project would comply with applicable BAAQMD requirements for control of construction period emissions, and ensure that potential air emissions impacts would be reduced to less than significant levels.

> **Measure AIR-1:** During Project construction, the City, through its construction contractor(s), shall ensure that the following BAAQMD construction control measures are implemented.
>
> **BAAQMD Basic Construction Mitigation Measures**
>
> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

[6] Bay Area Air Quality Management District (BAAQMD), 2011. *CEQA Air Quality Guidelines*, revised May 2011.

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

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

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

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

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.

8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

b) **Less than Significant with Mitigation**.

**Impact AIR-2:** The Project would provide a reliable power source on site and would use anaerobic biogas blended with natural gas as a fuel source, or alternatively use natural gas when biogases are not available. The Project would involve the installation of internal combustion (IC) engine generators at the Facility that would be used for power and heat cogeneration. Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to operation. First, during project construction (short-term), the Project would affect local particulate concentrations primarily due to fugitive dust sources and equipment exhaust. Under operations (long-term), the Project would result in an increase in emissions primarily due to IC engine use at the cogeneration facility. However, it is anticipated that the cogeneration facility would allow for the decommissioning of older existing engines at the Facility. As discussed below, with implementation of applicable mitigation, construction and operation of the Project would not result in a violation of an air quality standard or contribute significantly to an existing or projected air quality violation.

**Construction**

Criteria pollutant and precursor exhaust emissions of reactive organic gases (ROG), nitrogen oxides (NOx), respirable particulate matter (PM10), and fine particulate matter (PM2.5) from construction equipment and vehicles would incrementally add to the regional atmospheric loading of these pollutants during construction of the Project. Impacts related to the Project

contributing to an existing or projected air quality violation are judged by comparing estimated direct and indirect Project exhaust emissions to the significance thresholds, which for short-term construction emissions are 54 pounds per day for ROG, NOx, and PM2.5; and 82 pounds per day for PM10.[7] Only the exhaust portion of PM2.5 and PM10 emissions are compared against the construction thresholds.

BAAQMD recommends that analyses focus on implementation of dust control measures rather than comparing estimated levels of fugitive dust to a quantitative significance threshold. Rather, BAAQMD considers implementation of BAAQMD-recommended basic mitigation measures for fugitive dust sufficient to ensure that construction-related fugitive dust is reduced to a less-than-significant level. The City has standard permit conditions designed to reduce environmental impacts of projects. For relatively small projects, such as the Project, the City and/or its construction contractor(s) are required by the BAAQMD to implement the BAAQMD's basic construction mitigation measures. Therefore, implementation of Mitigation Measure AIR-1 would be required. With implementation of this mitigation measure, dust-related construction impacts would be reduced to less than significant.

**TABLE 2.3-1**
**AVERAGE DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS (Pounds/Day)[a]**

| Year | ROG | NOx | Exhaust PM10[b] | Exhaust PM2.5[b] |
|---|---|---|---|---|
| 2015 (Unmitigated Emissions) | 3.6 | 27.3 | 1.5 | 1.4 |
| 2016 (Unmitigated Emissions) | 5.7 | 19.0 | 1.2 | 1.1 |
| 2017 (Unmitigated Emissions) | 25.0 | 3.0 | 0.2 | 0.2 |
| *BAAQMD Construction Threshold* | 54 | 54 | 82 | 54 |
| Significant Impact? | No | No | No | No |

[a] Emissions were modeled using the latest CalEEMod version. Additional information is included in Appendix A.
[b] BAAQMD's proposed construction-related significance thresholds for PM10 and PM2.5 apply to exhaust emissions only and not to fugitive dust.

Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 for development of the 36,300 square foot cogeneration facility and 25,000 square foot parking lot, and other Project appurtenances, as depicted in Table 2.3-1.[8] Project construction would run from 2015 to 2017 over a period of approximately 400 working days. Default equipment parameters were assumed for the construction phases. Cut and fill volumes were estimated at 6,723 cubic yards and 4,710 cubic yards, respectively. Additional assumptions and information are included in Appendix A.

[7] Bay Area Air Quality Management District (BAAQMD), 2011. *CEQA Air Quality Guidelines*, revised May 2011.
[8] The proposed natural gas supply pipeline was added to the Project following completion of the model run. However, construction of the pipeline would require limited additional construction effort, and therefore would result in a minimal increase to the estimates shown in Table 2.3-1, which already incorporate conservative default equipment assumptions.

As depicted in Table 2.3-1 above, impacts that would be associated with construction-related exhaust emissions would be less than significant. However, in order to comply with BAAQMD requirements, implementation of Mitigation Measure AIR-1 would be required.

**Operation**

Operational phase emissions were estimated assuming the Project IC engines would comply with the BAAQMD Best Available Control Technology (BACT) Guidelines for Biogas Fired IC Engines. Emissions from the older engines that are being decommissioned are based on the emissions calculated and described in the BAAQMD Permit to Operate for the Facility (#A0778). Project IC engine emissions assume 12.5 megawatts of power would be generated at 100 percent capacity (for maximum emissions) and incorporate BAAQMD BACT standards for biogas fired IC engines. Unmitigated Project emissions are based on the "Achieved in Practice" BACT standards, whereas the mitigated Project emissions incorporate the "Technologically Feasible" BACT standards for particulate matter. Daily and annual emissions are depicted in Tables 2.3-2 and 2.3-3 and compared to the applicable BAAQMD standards of significance. All assumptions used to estimate the Project-related operation emissions are identified in **Appendix A**. As indicated in Table 2.3-2, worst-case emissions associated with Project operations with "Achieved in Practice" BACT would exceed the daily and annual thresholds for PM2.5. However, as shown in Table 2.3-3, the Project would not exceed any of the identified significance thresholds with implementation of Technologically Feasible BACT standards for particulate matter. As discussed in Section 1.5, the proposed engines would meet or exceed BACT standards. Therefore, the Project would not be expected to contribute to air quality violations and associated impacts would be less than significant.

**TABLE 2.3-2**
**PROJECT IC ENGINES MINUS ENGINES TO BE DECOMMISSIONED[A]**

| | Criteria Pollutant Emissions | | | |
|---|---|---|---|---|
| **Scenario (Daily Emissions)** | **ROG** | **NOx** | **PM10** | **PM2.5** |
| Project IC Engines | 141.9 | 133.0 | 88.7 | 88.7 |
| Engines to be Decommissioned | 520.0 | 530.0 | 30.4 | 30.4 |
| Net Increase with Project | (378.1) | (397.0) | 58.3 | 58.3 |
| BAAQMD Threshold | 54 | 54 | 82 | 54 |
| Significant? | No | No | No | Yes |
| **Scenario (Annual Emissions)** | **ROG** | **NOx** | **PM10** | **PM2.5** |
| Project IC Engines | 25.9 | 24.3 | 16.2 | 16.2 |
| Engines to be Decommissioned | 94.9 | 96.7 | 5.6 | 5.6 |
| Net Increase with Project | (69.0) | (72.4) | 10.6 | 10.6 |
| BAAQMD Threshold | 10 | 10 | 15 | 10 |
| Significant? | No | No | No | Yes |

A. Project IC engines assume 12.5 MW of power would be generated at 100 percent capacity and incorporate "Achieved in Practice" BACT. Reduced emissions are presented within (parentheses). Emissions estimates are included in Appendix A.

**TABLE 2.3-3**
**MITIGATED PROJECT IC ENGINES MINUS ENGINES TO BE DECOMMISSIONED[A]**

| | Criteria Pollutant Emissions | | | |
|---|---|---|---|---|
| **Scenario (Daily Emissions)** | **ROG** | **NOx** | **PM10** | **PM2.5** |
| Mitigated Project IC Engines | 106.4 | 133.0 | 62.1 | 62.1 |
| Engines to be Decommissioned | 520.0 | 530.0 | 30.4 | 30.4 |
| Net Increase with Project | (413.6) | (397.0) | 31.7 | 31.7 |
| BAAQMD Threshold | 54 | 54 | 82 | 54 |
| Significant? | No | No | No | No |
| **Scenario (Annual Emissions)** | **ROG** | **NOx** | **PM10** | **PM2.5** |
| Mitigated Project IC Engines | 19.4 | 24.3 | 11.3 | 11.3 |
| Engines to be Decommissioned | 94.9 | 96.7 | 5.6 | 5.6 |
| Net Increase with Project | (75.5) | (72.5) | 5.7 | 5.7 |
| BAAQMD Threshold | 10 | 10 | 15 | 10 |
| Significant? | No | No | No | No |

A. Mitigated Project IC engines assume 12.5 MW of power would be generated at 100 percent capacity and incorporate "Technologically Feasible" BACT. Reduced emissions are presented within (parentheses). Emissions estimates are included in Appendix A.

**Mitigation Measure:** Implementation of the following mitigation measure would ensure that potential dust related impacts would be reduced to less than significant levels, and would also ensure that Project construction would comply with applicable BAAQMD basic construction control measures.

**Implement Mitigation Measure AIR-1.**

c) **Less than Significant with Mitigation.**

**Impact AIR-3:** Based on BAAQMD guidance, if a project would result in an increase in ROG, NOx, PM10, or PM2.5 of more than its respective daily mass thresholds, then it would also be considered to contribute considerably to a significant cumulative impact. In developing thresholds of significance for air pollutants, BAAQMD has considered the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, if a project would exceed the identified significance thresholds, its emissions would be cumulatively considerable, and if a project would not exceed the significance thresholds, its emissions would not be cumulatively considerable.

With implementation of Mitigation Measure AIR-1, as discussed for Criteria "a" and "b" above, Emissions of Project-related criteria pollutants associated with short-term construction (unmitigated) would be reduced to less than significant levels. Because the

proposed engine generators would adhere to BACT standards, long-term operational emissions would be less than the identified significance thresholds and would not be considered to result in a significant contribution to existing air quality violations (see discussion for Criterion "b" above). Therefore, with implementation of Mitigation Measure AIR-1, the impact associated with short-term and long-term increases in criteria pollutant emissions from operations of the Project would not be cumulatively considerable, and associated impacts would be less than significant.

**Mitigation Measure:** Implementation of the following mitigation measure would ensure that potential construction period emissions would not contribute to a cumulatively considerable impact on air quality.

**Implement Mitigation Measure AIR-1.**

d) **Less than Significant Impact.** Long-term operations-related emissions that would be associated with the Project would primarily be associated with the proposed IC engines, which would replace older IC engines that would be decommissioned. In addition, the closest sensitive receptors are residences located at a distance of approximately 1 mile from the Project area. Project-related emissions at this location would be substantially diluted. Long-term operations-related impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Construction activities would generate air pollutant emissions, including diesel particulate matter associated with equipment and heavy truck exhaust emissions. Construction activities would occur over a period of approximately 400 working days, thereby resulting in limited emissions, and construction emissions would be limited in intensity during the duration of construction, as discussed under checklist item b, above.. In addition, the closest sensitive receptors to the Project area are residences located at a distance of approximately 1 mile from the Project area. Therefore, Project-related construction emissions would be sufficiently diluted at the nearest sensitive receptor locations. Short-term construction-related impacts associated with the Project exposing sensitive receptors to substantial pollutant concentrations would be less than significant.

e) **Less than Significant Impact.** Although odorous, biogas would be contained within the existing Facility, and then combusted as a fuel used to power the IC engines of the Project. Combustion of the biogas would control/remove odors associated with raw biogas. In addition, there are no odor sensitive receptors within close proximity to the Facility. The Project would utilize a closed-loop system for the generation and collection of biogas. Under existing conditions, biogas is contained under all stages of production and transport. The Project would include installation of additional gas cleaning activities, as well as pipelines and the proposed engine generators. These facilities would prevent release of biogas into the atmosphere, and thereby preclude the release of biogas-related odors into the environment. Therefore, the Project would not create objectionable odors. Additionally, the Project would not result in the generation of additional biogas or new releases of odors associated with biogas production, but would only result in a change in processing and use from existing

generators that rely in part on biogas, to new generators, that would also rely in part on biogas. Therefore, the odor impact that would be associated with the Project would be less than significant.

# 2.4 Biological Resources

## 2.4.1 Setting

The Project area is located along the northeastern corner of the existing Central Facility Area, with gas lines and a gas treatment area extending toward the center of the Central Facility Area. The Project area is relatively flat, ranging in elevation from approximately 5 feet to 13 feet above mean sea level (MSL).

### Biological Communities

The only biological communities occurring within the Project area are consistent with developed areas.

### Developed Areas

Developed areas in the Project area and its immediate vicinity include the existing BNR aeration basins and clarifiers, Blower Generation Building, sludge concentrators and Sludge Control Building, and digesters. Developed portions of the Project area represent low-quality habitat value for plant and wildlife species, and support only a small number of plant and wildlife species.

Consistent with the Master Plan, the proposed Cogeneration Building and appurtenances would be located in an area that includes mown ornamental and mown non-native grass communities. The area is typified by a dominance of non-native ornamental grasses and other non-native ornamental vegetation, as well as other non-native forbs and grasses that thrive in disturbed conditions. Although vegetation in these areas includes grass species similar to those often associated with annual grassland, non-native weedy forbs are more dominant than in annual grassland. Abundant weedy forbs in these areas include predominantly bristly oxtongue (Picris echioides) and prickly lettuce (Lactuca serriola). The area is mown routinely as part of ongoing Facility maintenance/operations.

Developed areas may support American crow (Corvus brachyrhynchos), Canada goose, (Branta canadensis), western scrub jay (Aphelocoma californica), northern mockingbird (Mimus polyglottos), and house finch (Haemorhous mexicanus).

Wildlife species occurring within these areas are frequently determined by the characteristics of nearby land cover. Species observed within similar areas in other parts of the Facility lands included primarily songbirds, and western fence lizard.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Sources* |
|---|---|---|---|---|---|
| **4. BIOLOGICAL RESOURCES — Would the project:** | | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ | 1, 2, 8 |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☐ | ☐ | ☒ | 1, 2, 8 |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☐ | ☐ | ☒ | 1, 2, 8 |
| 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? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☒ | ☐ | ☐ | 1, 2 |
| 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? | ☐ | ☐ | ☒ | ☐ | 1, 2, 9 |

## 2.4.2 Discussion

a) **Less than Significant with Mitigation.**

**Impact BIO-1.** Land cover within the Project area includes mown ornamental and non-native grasses, and developed areas. Aerial photographs show that the areas of ornamental and non-native grasses in the Project area are routinely mowed[9,10]. Species with potential to occur within the Project area or its vicinity include golden eagle (*Aquila chrysaetos*), western burrowing owl (*Athene cunicularia hypugaea*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), prairie falcon (*Falco mexicanus*), and American peregrine falcon (*Falco peregrines anatum*). Tables 2.4-1 and 2.4-2 respectively list the wildlife and plant species considered in the analysis, their current regulatory status, distribution, habitat, and potential to occur within the Project area. Figure 2.4-1 includes California Natural Diversity Database (CNDDB) occurrences of special-status species within two miles of the Project area. Golden

[9] Google Earth. 2013. Satellite Photograph Taken on July 30, 2007.
[10] Google Earth. 2013. Satellite Photograph Taken on August 28, 2012.

eagle, northern harrier, prairie falcon, white-tailed kite and American peregrine falcon have the potential to occur within the Project area during foraging activities only. Burrowing owl is known to occur from numerous occurrences immediately south of the Project area[11], but no known nesting burrows have been identified in the Project area, and nesting within the Project area is not anticipated. As discussed above, vegetation within the Project area is limited to plant communities associated with developed areas within the Facility. As such, the Project area does not support burrowing owl foraging habitat. Therefore, potential impacts to burrowing owl nests and foraging habitat are not anticipated, and mitigation for burrowing owl habitat is not warranted. The Project is located outside of the Santa Clara Valley Habitat Plan (SCVHP) study area and is not a covered activity under the SCVHP. However, the Project is located near areas that are covered under the SCVHP, including portions of the Facility bufferlands. In the event that a burrowing owl were to stray into the Project area, impacts to the species could occur. Therefore, although the Project is not directly covered within the SCVHP, and burrowing owls were not identified on site, the Mitigation measure BIO-1 is designed in accordance with the SCVHP to ensure that no burrowing owls enter the project area prior to construction.

With respect to nighttime lighting, the Project would install nighttime lighting within the Project area, in order to maintain security. Fugitive light has the potential to interrupt normal avian behavior, including foraging and nesting activities of covered species, which could reduce habitat quality for these species. The proposed project will adhere to the City of San Jose's Public Streetlights Council Policy 4-2 and Outdoor Lighting Policy 4-3 (described below), which require (among other things) full-shielding for lights that meet or exceed 4,050 lumens and partial shielding for lights that are less than 4,050 lumens. Adherence to these policies would reduce light pollution and prevent light shine onto adjacent areas or up into the sky.

**City of San José Public Streetlights Council Policy 4-2**

The City of San José Public Streetlights Council Policy 4-2 addresses both energy efficiency and lighting type. This policy calls for dimmable, programmable lighting for new streetlights which would control the amount and color of light shining on streets and sidewalks. Light is to be directed downward and outward with minimal light trespassing upward. New streetlights also should protect the night sky by offering the ability to change the color of the light from full spectrum (appearing white or near white) in the early evening to a monochromatic light in the later hours of the night and early morning. This policy has been in effect since 1980 and was revised in 2011 to advance the City's *Green Vision* goals.[12]

**City of San José Outdoor Lighting on Private Developments Policy 4-3**

Similar to the City's Policy 4-2, described above, the City of San José Outdoor Lighting on Private Developments Policy 4-3 promotes energy-efficient outdoor

[11] California Department of Fish and Wildlife. 2013. California Natural Diversity Database. RareFind 4. Accessed: June 7, 2013. Available: http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

[12] City of San José, Public Streetlights Council Policy 4-2, effective February 13, 1980, revised February 15, 2011.

lighting on private development in the City of San José, while providing adequate lighting for nighttime activities and reducing light pollution throughout the city. The policy prohibits directing of light sources toward the sky and requires that light sources producing more than 4,050 lumens be fully shielded to prevent light aimed skyward. This policy has been in effect since 1983 and was revised in 2000 to allow for an exemption from the provisions of this policy in the Downtown Core area.[13]

The required shielding of light described in these City policies would substantially reduce the amount of light that shines on adjacent natural habitats, and would minimize associated potential impacts.

**Mitigation Measure:** The following mitigation measure would minimize potential impacts on special status bird species, and therefore would reduce impacts to less than significant.

**Mitigation Measure BIO1: Raptor and Migratory Bird Nest Measure.**

If Project construction is scheduled during the breeding season for raptors or migratory birds (February 1–August 31), a qualified wildlife biologist will be retained to conduct a survey for nesting raptors and migratory bird nests. If an active nest is discovered, a no-disturbance buffer zone around the nest tree (or, for ground-nesting species, the nest itself) shall be established. The no-disturbance zone shall be marked with flagging or fencing that is easily identified by the construction crew. In general, the minimum buffer zone widths shall be as follows: 100 feet (radius) for non-raptor species and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with the California Department of Fish and Wildlife (CDFW). Buffers shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest.

Construction activities that are scheduled to begin before the breeding season (i.e., begin between September 1 and January 31) can proceed without surveys. Optimally, all necessary vegetation removal should be conducted before the breeding season (generally between February 1 and August 31) so that nesting birds or raptors would not occur in the construction area during construction activities.

[13] City of San José, Public Streetlights Council Policy 4-2, effective February 13, 1980, revised February 15, 2011.

**TABLE 2.4-1**
**SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| **Invertebrates** | | | | |
| *Branchinecta conservatio* Conservancy fairy shrimp | E/-- | Disjunct occurrences in Solano, Merced, Tehama, Ventura, Butte, and Glenn Counties | Large, deep vernal pools in annual grasslands | None—project area is outside of the species' known range. |
| *Euphydryas editha bayensis* Bay checkerspot butterfly | T/-- | Disjunct occurrences in San Mateo and Santa Clara Counties. | Associated with specific host plants that typically grow on serpentine soils. | None—no suitable habitat, as there are no serpentine soils in the project area. |
| *Lepidurus packardi* Vernal pool tadpole shrimp | E/-- | Shasta County south to Merced County. | Vernal pools and ephemeral stock ponds. | None—this species is not known to occur within Santa Clara County. |
| **Fish** | | | | |
| *Hypomesus transpacificus* Delta smelt | T/T | Primarily in the Sacramento–San Joaquin Estuary, but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay. | Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand (Moyle 2002). | None – outside of known range and there is no suitable habitat in the project area. |
| *Oncorhynchus mykiss* Central California coast steelhead | T/-- | Coastal drainages along the central California coast. | Cold, clear water with clean gravel of appropriate size for spawning. Most spawning occurs in headwater streams. Steelhead migrate to the ocean to feed and grow until sexually mature. | None – there is no suitable habitat in the project area. |
| *Oncorhynchus mykiss* Central Valley steelhead | T/-- | Sacramento and San Joaquin River and their tributaries. | Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 7.8 to 18°C (Moyle 2002). Habitat types are riffles, runs, and pools. | None – there is no suitable habitat in the project area. |
| *Oncorhynchus tshawytscha* Central Valley and Sacramento River Chinook salmon | T (spring run)/- E (winter run)/- C, SC (fall)/- | Sacramento and San Joaquin River and their tributaries. | Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 8.0 to 12.5°C. Habitat types are riffles, runs, and pools. (Moyle 2002) | None – there is no suitable habitat in the project area. |
| *Spirinchus thaleichthys* Longfin smelt | C/T | San Francisco Bay-Delta north to the Cook Inlet in Alaska | Pelagic portions of estuaries. | None – there is no suitable habitat in the project area. |

**TABLE 2.4-1 (CONTINUED)**
**SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| **Amphibians** | | | | |
| *Ambystoma californiense* California tiger salamander | T/T | Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Sonoma County south to Santa Barbara County | Small ponds, lakes, or vernal pools in grasslands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy. | None – there is no suitable habitat in the project area. |
| *Rana draytonii* California red-legged frog | T/SSC | Found along the coast and coastal mountain ranges of California from Mendocino County to San Diego County and in the Sierra Nevada from Butte County to Stanislaus County. | Permanent and semipermanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may aestivate in rodent burrows or cracks during dry periods | None – there is no suitable habitat in the project area. |
| **Reptiles** | | | | |
| *Emys marmorata* Western pond turtle | –/SSC | The western pond turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. | Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests. Nests are typically constructed in upland habitat within 0.25 mile of aquatic habitat. | None – there is no suitable habitat in the project area. |
| *Masticophis lateralis* euryxanthus Alameda whipsnake | T/T | Restricted to Alameda and Contra Costa Counties; fragmented into 5 disjunct populations throughout its range | Valleys, foothills, and low mountains associated with northern coastal scrub or chaparral habitat; requires rock outcrops for cover and foraging | None - There is currently no potential for Alameda whipsnake to occur in the project area, as the project area does not contain suitable habitat for this species. |
| **Mammals** | | | | |
| *Reithrodontomys raviventris* Salt marsh harvest mouse | E/E | The San Francisco Bay Estuary and Suisun Marsh. | Saline to brackish salt marsh habitat. | None – there is no suitable habitat in the project area. |
| *Sorex vagrans halicoetes* Salt-marsh wandering shrew | -/SSC | Southern arm of the San Francisco Bay in San Mateo, Santa Clara, Alameda, and Contra Costa Counties. | Salt marshes from 6 to 9 feet above MSL. | None – there is no suitable habitat in the project area. |

**TABLE 2.4-1**
**SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Vulpes macrotis mutica* San Joaquin kit fox | E/T | Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County | Saltbush scrub, grassland, oak, savanna, and freshwater scrub | None – outside of known range and there is no suitable habitat in the project area. |
| **Birds** | | | | |
| *Agelaius tricolor* Tricolored blackbird | --/SSC | Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties | Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony | None – there is no suitable habitat in the project area. |
| *Aquila chrysaetos* Golden eagle | PR/ FP | Foothills and mountains throughout California. Uncommon non-breeding visitor to lowlands such as the Central Valley | Nest on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals | Low (foraging only) – golden eagle has the potential to forage within the ruderal areas within the project area. Since there is no nesting habitat within the project area, no impacts to this species are expected to occur. |
| *Ardea herodias* Great blue heron (rookery) | --/-- | Nests in suitable habitat throughout California except at higher elevations in Sierra Nevada and Cascade mountain ranges. | Widely distributed in freshwater and calm-water intertidal habitats. | None – there is no suitable habitat in the project area. |
| *Athene cunicularia hypugaea* Western burrowing owl | --/SSC | Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast | Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows | Moderate – western burrowing owl is known to occur in the non-native grassland south of the project area but the project area does not support suitable nesting or foraging habitat. |
| *Charadrius alexandrines nivosus* Western snowy plover | T/SSC | Population defined as those birds that nest adjacent to or near tidal waters, including all nests along the mainland coast, peninsulas, offshore islands, and adjacent bays and estuaries. Twenty breeding sites are known in California from Del Norte to Diego County | Coastal beaches above the normal high tide limit in flat, open areas with sandy or saline substrates; vegetation and driftwood are usually sparse or absent | None – there is no suitable habitat in the project area. |

**TABLE 2.4-1**
**SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Circus cyaneus* Northern harrier | --/SSC | Occurs throughout lowland California. Has been recorded in fall at high elevations | Grasslands, meadows, marshes, and seasonal and agricultural wetlands | Low (foraging only) - northern harrier was observed foraging in the ruderal areas immediately south and west of the project area and has the potential to forage in the ruderal areas within the project area. |
| *Elanus leucurus* White-tailed kite | --/FP | Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border. | Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging | Low (foraging only) - white-tailed kite has the potential to forage in the ruderal areas on the project area. |
| *Falco mexicanus* Prairie falcon | --/-- | Permanent resident in the south Coast, Transverse, Peninsular, and northern Cascade Ranges, the southeastern deserts, Inyo-White Mountains, foothills surrounding the Central Valley, and in the Sierra Nevada in Modoc, Lassen, and Plumas Counties. Winters in the Central Valley, along the coast from Santa Barbara County to San Diego County, and in Marin, | Nests on cliffs or escarpments, usually overlooking dry, open terrain or uplands | Low (foraging only) – prairie falcon has the potential to forage within the ruderal areas within the project area. Since there is no nesting habitat within the project area, no impacts to this species are expected to occur. |
| *Falco peregrines anatum* American peregrine falcon | --/E, FP | Permanent resident along the north and south Coast Ranges. May summer in the Cascade and Klamath Ranges and through the Sierra Nevada to Madera County. Winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range | Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large prey populations | Low (foraging only) – American peregrine falcon has the potential to forage within the non-native grassland and other open habitat within the project area. Since there is no nesting habitat within the project area, no impacts to this species are expected to occur. |
| *Geothlypis trichas sinuosa* Saltmarsh common yellowthroat | --/SSC | Found only in the San Francisco Bay Area in Marin, Napa, Sonoma, Solano, San Francisco, San Mateo, Santa Clara, and Alameda Counties | Freshwater marshes in summer and salt or brackish marshes in fall and winter; requires tall grasses, tules, and willow thickets for nesting and cover | None – there is no suitable habitat in the project area. |

**TABLE 2.4-1**
**SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT VICINITY**

| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Melospiza melodia pusillula* Alameda song sparrow | --/SSC | Found only in marshes along the southern portion of the San Francisco Bay | Brackish marshes associated with pickleweed; may nest in tall vegetation or among the pickleweed | None – there is no suitable habitat in the project area. |
| *Pelecanus occidentalis californicus* California brown pelican | D/E | The Pacific coast from Canada through Mexico. | Coastal areas. Nests on islands. Occasionally along Arizona's lakes and rivers. | None – there is no suitable habitat in the project area. |
| *Rallus longirostris obsoletus* California clapper rail | E/FP | Found along the Pacific Coast in Monterey and San Luis Obispo Counties. | From tidal mudflats to tidal sloughs | None – there is no suitable habitat in the project area. |
| *Sternula antillarum browni* California least tern | E/E | Found along the Pacific Coast of California from San Francisco to Baja California | Nest on open beaches kept free of vegetation by natural scouring from tidal action | None – there is no suitable habitat in the project area. |

Notes:

**Status explanations:**

**Federal**

E = listed as endangered under the ESA
T = listed as threatened under the ESA
PT = proposed for federal listing as threatened under the ESA
C = species for which USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded
D = delisted
SC = species of concern
– = no listing

**State**

E = listed as endangered under CESA
T = listed as threatened under CESA
FP = fully protected under the California Fish and Game Code
SSC = species of special concern in California
D = delisted
– = no listing

**Potential Occurrence in the Study Area**

High: Known occurrences of the species within the study area, or CNDDB, or other documents, records the occurrence of the species within a 2-mile radius of the study area; suitable habitat is present within the study area
Moderate: CNDDB, or other documents, records the known occurrence of the species within a 2-mile radius of the study area; poor quality suitable habitat is present within the study area
Low: CNDDB, or other documents, does not record the occurrence of the species within a 2-mile radius of the study area; suitable habitat is present within the study area

**TABLE 2.4-2**
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT REGION**

| Scientific and Common Names | Status Federal/State/ CNPS | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Astragalus tener var. tener* Alkali milk-vetch | --/--/1B.2 | Southern Sacramento Valley, northern San Joaquin Valley, east San Francisco Bay Area | Alkali playas, on adobe clay in valley and foothill grassland, vernal pools on alkaline soils; below 60 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Atriplex depressa* Brittlescale | --/--/1B.2 | Western and eastern Central Valley and adjacent foothills on west side of Central Valley | Alkaline clay soils in chenopod scrub, playas, valley and foothill grasslands, meadows and seeps and vernal pools on alkaline, clay soils; below 320 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Atriplex joaquiniana* San Joaquin spearscale | --/--/1B.2 | West edge of Central Valley from Glenn County to Tulare County. Also reported from Monterey and San Luis Obispo Counties | Alkaline soils in chenopod scrub, meadows and seeps, playas, valley and foothill grassland; below 835 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |

**TABLE 2.4-2**
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT REGION**

| Scientific and Common Names | Status Federal/State/ CNPS | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Atriplex minuscula* Lesser saltscale | --/--/1B.1 | Sacramento and San Joaquin Valley, Butte County and from Merced County to Kern County. Also recorded from Don Edwards NWR in Alameda County. | Sandy alkaline soils in chenopod scrub, playas, valley and foothill grassland; 15-200 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Centromadia parryi ssp. congdonii* Congdon's tarplant | --/--/1B.2 | East San Francisco Bay Area, Salinas Valley, Los Osos Valley | Alkaline soils in annual grassland, on lower slopes, flats, and swales, sometimes on saline soils; below 230 meters above MSL | None; the species was observed in alkali grassland west of the project area, but there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Chlorizanthe robusta var. robusta* Robust spineflower | E/--/1B | Coastal central California, from San Mateo to Monterey County | Coastal bluff scrub, coastal dunes openings in cismontane woodland, on sandy soil | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |

**TABLE 2.4-2**
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT REGION**

| Scientific and Common Names | Status Federal/State/ CNPS | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Chloropyron maritimum ssp. palustre (Cordylanthus maritimus ssp. palustris)* Point Reyes bird's-beak | --/--/1B.2 | Coastal northern California, from Humboldt to Santa Clara County | Coastal salt marsh, tidal salt marsh; below 10 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Eryngium aristulatum var. hooveri* Hoover's button-celery | --/--/1B.1 | South San Francisco Bay area, South Coast Ranges in Alameda, San Benito, Santa Clara, and San Luis Obispo Counties | Vernal pools; 3-45 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Lasthenia conjugens* Contra Costa goldfields | E/--/1B.1 | Scattered occurrences in Coast Range valleys and southwest edge of Sacramento Valley, Alameda, Contra Costa, Monterey, Marin, Napa, Solano and Sonoma Counties. Presumed extirpated in Mendocino, Santa Barbara and Santa Clara Counties | Wet areas in cismontane woodland, valley and foothill grassland, vernal pools, alkaline playas or saline vernal pools and swales; seasonal wetlands below 470 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |

**TABLE 2.4-2**
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT REGION**

| Scientific and Common Names | Status Federal/State/ CNPS | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Malacothamnus acruatus* Acruate bush mallow | –/–/1B | Santa Clara, Santa Cruz, and San Mateo Counties | Chaparral, between 15-355 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Malacothamnus hallii* Hall's bush mallow | –/–/1B | Alameda, Contra Costa, Merced, Santa Clara, and Stanislaus Counties | Chaparral and coastal scrub between 30-2,500' | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Navarretia prostrata* Prostrate vernal pool navarretia | --/--/1B.1 | Western San Joaquin Valley, interior South Coast Ranges, central South Coast, Peninsular Ranges: Alameda, Los Angeles, Merced, Monterey, Orange, Riverside, San Diego, and San Luis Obispo Counties. | Vernal pools and mesic areas in coastal scrub and alkali grasslands, seasonal wetlands in alkaline soils; between 15-700 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |

**TABLE 2.4-2**
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT REGION**

| Scientific and Common Names | Status Federal/State/ CNPS | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|
| *Suaeda californica* California seablite | E/--/1B.1 | Morro Bay, San Luis Obispo County, and San Francisco and Contra Costa Counties; historically found in the south San Francisco Bay. | Margins of tidal salt marsh; below 15 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |
| *Trifolium hydrophilum* (*T. depauperatum var. hydrophilum*) Saline clover | --/--/1B.2 | Sacramento Valley, central western California. | Salt marsh, mesic alkaline areas in Valley and foothill grasslands, vernal pools, marshes and swamps; below 300 meters above MSL | None; there is no suitable habitat within the project area. Additionally, the project area has been heavily disturbed (vehicle traffic, construction of existing facilities) in 2007 and earlier, and continually disturbed by maintenance activities (e.g., mowing). |

**TABLE 2.4-2**
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT REGION**

| Scientific and Common Names | Status Federal/State/ CNPS | Geographic Distribution | Habitat Requirements | Potential Occurrence in Project Area |
|---|---|---|---|---|

Notes:

**Status explanations:**
**Federal**
E = listed as endangered under the ESA
T = listed as threatened under the ESA
– = no listing
**State**
E = listed as endangered under CESA
T = listed as threatened under CESA
– = no listing
**CNPS**
1A – presumed extinct in California
1B.1 –rare, threatened or endangered in California and elsewhere; seriously threatened in California
1B.2 – rare, threatened or endangered in California and elsewhere; fairly threatened in California

**Potential Occurrence in the Study Area**
High: Known occurrences of the species within the study area, or CNDDB, or other documents, records the occurrence of the species within a 2-mile radius of the study area; suitable habitat is present within the project area
Moderate: CNDDB, or other documents, records the known occurrence of the species within a 2-mile radius of the study area; suitable habitat is present within the project area
Low: CNDDB, or other documents, may record the occurrence of the species within a 2-mile radius of the study area; however, only marginal or poor quality suitable habitat is present within the study area, or the species is believed to be extirpated from the vicinity of the project area

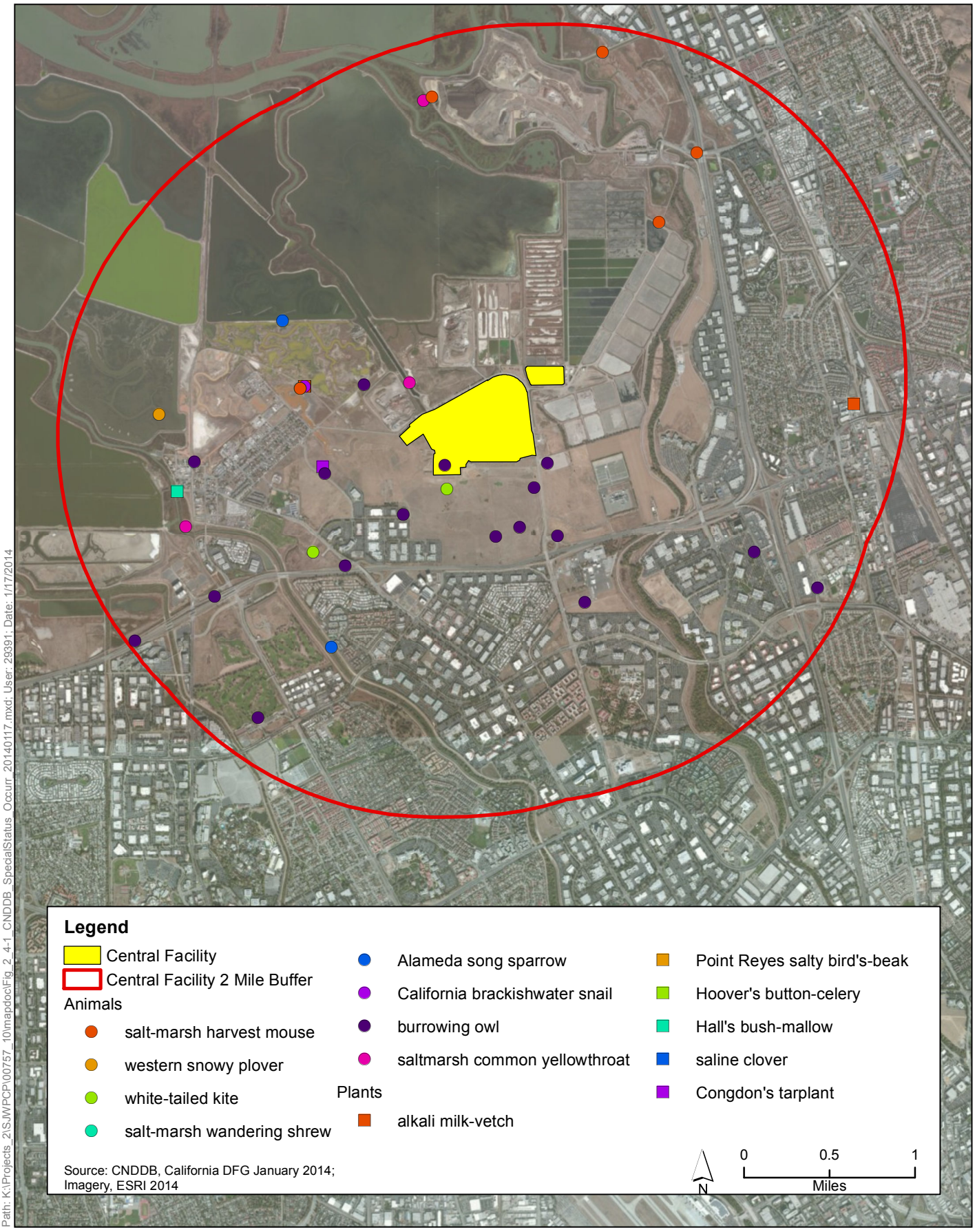


**Figure 2.4-1**
**CNDDB Special-status Species Occurrences**

b) **No Impact.** The Project area does not include 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; therefore, no impact to sensitive natural communities are expected to occur.

c) **No Impact.** No wetlands occur within the Project area; therefore, no impacts to federally protected wetlands are expected to occur.

d) **No Impact.** The Project area is located entirely within the fenced, central operations area of the San José/Santa Clara Regional Wastewater Facility. As such no significant wildlife movement, no known migratory corridors, and no native wildlife nursery sites occur within the Project area; therefore, no impacts to wildlife movement, migratory corridors, or nursery sites are expected to occur.

e) **Less than Significant with Mitigation.**

**Impact BIO-2:** The City's Tree Ordinance requires a Tree Permit Adjustment for the removal of any tree on industrial properties, and offers additional protections to trees measuring 56 inches in circumference or greater at 2 feet above ground level. Trees protected under the ordinance are referred to as "Ordinance Trees." The Project would result in the removal of up to 15 non-native trees , to enable installation of the proposed Cogeneration Building and associated parking and access areas. The proposed natural gas supply pipeline would be routed so as to avoid existing trees. A survey of the Project site indicated that none of the existing trees is greater than 56 inches in circumference. The Project will be required to conform to the City's tree ordinance, and the City will provide replacement trees in conformance with this policy. The City also requires that replacement trees be over and above the regular landscaping proposed for the site. Project construction could also result in damage to existing Ordinance trees. Adherence to the City's tree preservation ordinance and Measure BIO-2 would ensure that potential impacts to trees would be less than significant.

**Mitigation Measures:** Implementation of Mitigation Measure BIO-2 would ensure that construction period effects on ordinance trees to be retained, would be reduced to a less than significant level.

**Mitigation Measure BIO-2: Minimize Construction Effects on Ordinance Trees to Be Retained.**

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

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

f) **Less than Significant Impact.** The Project is outside of the SCVHP study area. It is not a covered activity under the SCVHP. However, the SCVHP includes an Expanded Study Area for Burrowing Owl Conservation, as defined in the SCVHP, and the Project area is located within this area. Although the Project is located within the SCVHP Expanded Study Area for Burrowing Owl Conservation, the Project would not result in impacts to burrowing owl nesting or foraging habitat. Therefore, the Project is deemed consistent with the SCVHP. No other SCVHP covered species would be impacted by the Project.

# 2.5 Cultural Resources

## 2.5.1 Setting

Cultural resources include architectural resources, archaeological resources, and human remains. Paleontological resources include fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. This section provides an assessment of potential impacts on cultural and paleontological resources that might be present in the vicinity of the proposed cogeneration facility Project. Mitigation measures to reduce impacts to a less-than-significant level are identified.

### Background Research

Environmental Science Associates (ESA; environmental consultant to the City for the Facility Master Plan EIR and this Project) completed a cultural resources study for the Master Plan.[14] That study, which included the proposed cogeneration facility Project area, provided background research, a surface survey, and an analysis of the potential for cultural resources to be present in the Facility. Research included a records search at the Northwest Information Center of the California Historical Resources Information System on August 1, 2011 (File No. 11-0118). Previous surveys, studies, and archaeological site records were accessed. Records were also reviewed in the Historic Property Data File for Santa Clara County, which contains information on locations of recognized historical significance including those evaluated for listing in the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), the California Inventory of Historic Resources, California Historic Landmarks, and California Points of Historical Interest. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within or adjacent to the Facility and a 1-mile radius; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and evaluation of cultural resources.

### Historical Resources

The Facility was originally constructed in 1956 with major alterations and additions through the late 1970s. The 1950s-era facilities are now of a sufficient age that they could be considered historical resources if other criteria apply, such as significant associations with historical events, people, or architectural styles or master architects/engineers, and if sufficient integrity remains to convey such associations (if any). Based on the analysis completed for the Master Plan, there are no buildings or structures within the Facility that have been previously identified as a historical resource as stated in CEQA Guidelines Section 15064.5, or as a City of San José Landmark. The Facility as a whole has been altered substantially within the last 35 years and does not qualify as a historic district due to a lack of physical integrity. Two buildings (the Pump & Engine Building and the Training Center) largely retain their original appearance and with additional research may qualify as historical

[14] ESA, San José/Santa Clara Water Pollution Control Plant Master Plan Cultural Resources Survey Report. Prepared for City of San José Planning Division, March 2012.

resources or a City Landmark upon further review; however the currently proposed cogeneration facility Project would not impact either of these buildings.

## Archaeological Resources and Human Remains

Six archaeological resources have been recorded within the 1-mile records search radius; all six are prehistoric occupation sites with midden soils, fire-affected rock, faunal remains, and/or Native American artifacts. At least two of the sites are known to contain human burials. None of these resources are located within the cogeneration facility Project area; the nearest is approximately ½-mile to the southeast.

ESA completed a surface survey of the Project area on August 1, 2013. The survey completed in approximately 20-meter-wide zigzag transects in order to ensure maximum ground coverage. Ground visibility was limited (approximately 10 percent) due to the existing landscaping (ornamental grasses) covering the entire Project area. Rodent holes, holes from recent lawn aeration, and the soil around landscaped trees was inspected. The soil consisted of artificially deposited gravel and fill that had been graded during construction of the Facility. No archaeological resources, including midden soil, shell fragments, or other evidence of past human use, were identified in the Project area.

The cogeneration facility Project area is mapped as Holocene-age alluvium. This geologic formation has a high potential to contain buried "paleosols" or surfaces that would have once been available for human use and occupation prior to being covered by naturally occurring sediment deposits. Numerous deeply buried sites have been uncovered in the Santa Clara Valley, at depths varying between 1 and more than 10 feet below the current ground surface. In fact, more than 60 percent of the recorded archaeological sites in this region have been found in a buried context.[15]

The Project is located in an area highly disturbed from previous impacts related to the construction and operation of the Facility. The geologic characteristics of the Project area are generally confirmed by geotechnical studies that have been completed in support of various past projects within the Facility. Soil borings completed as part of geotechnical investigations for the sodium hypochlorite tank farm, main outfall and road, effluent diversion facility, sludge lagoons, and monitoring wells for underground storage tanks within the Facility operational area generally show that most areas are covered by artificial fills 3.5 to 11 feet thick, often capped by concrete asphalt, and underlain by silty clays with thin, discontinuous intervals of fine sand.[16,17,18,19] For the cogeneration facility Project, ground disturbance would be primarily within artificially deposited and disturbed fill. Ground

15 Meyer, Jack, and Jeffrey Rosenthal, Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4. Prepared for Caltrans District 4, 2007.

16 Fugro West, Inc. Geotechnical Study, San Jose/Santa Clara Water Pollution Control Plant Alternative Disinfection Project, San José, California, prepared for Corollo Engineers, July 2006; URS Corporation, Final Report, Geotechnical Investigation, Advanced Recycled Water Treatment Facilities, Santa Clara Valley Water District, San José, California, prepared for Black & Veatch, June 2009; Black and Veatch. Seismic and Geotechnical Evaluation of the WPCP Outfall Channel, 1997.

17 URS Corporation. Final Report, Geotechnical Investigation, Advanced Recycled Water Treatment Facilities, Santa Clara Valley Water District, San José, California, prepared for Black & Veatch, June 2009.

18 Black and Veatch. CIP Engineering Support: Seismic and Geotechnical Evaluation - Outfall Channel Weir/Dam, Weir, Banks, 1997.

19 CH2M Hill, Well Construction Application and Well Completion Report Geologic Boring Logs, SCVWD Permit No. 92W1663. 1985.

disturbance may extend below the artificial fill however the Project location has been highly disturbed and is not located near to historic natural features that would heighten archaeological sensitivity. Therefore, despite the general sensitivity of the vicinity for deeply buried archaeological resources, there appears to be a low possibility of encountering intact paleosols with cultural materials during Project activities within the Project area.

### Paleontological Resources

The Project area overlies young Holocene-age geologic units. Beneath a cap of 3.5 to 11.5 feet of artificial fill lies deposits of mud and silt associated with the present-day bay estuary (bay mud) and the distal edges of alluvial fans. Excavation would be confined to within two feet of the ground surface. Artificially deposited fill and young Holocene-age geologic units do not have the potential to contain paleontological resources. For these reasons, in accordance with Society of Vertebrate Paleontology[20] standards, there is a very low paleontological potential within the cogeneration facility Project area.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **5. CULTURAL RESOURCES — Would the project:** | | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☒ | ☐ | ☐ | 1, 2 |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☒ | ☐ | ☐ | 1, 2 |

## 2.5.2 Discussion

a) **No Impact.** CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a Project on historical resources. A historical resource is defined as any building, structure, site, object, or district (including landscapes) listed in or determined to be eligible for listing in the California Register, or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. The following discussion will focus on architectural and structural resources. Archaeological resources, including archaeological resources that are potentially historical resources according to Section 15064.5, are addressed below.

[20] Society of Vertebrate Paleontology (SVP). Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources: standard guidelines, Society of Vertebrate Paleontology News Bulletin, Vol. 163, p. 22–27. 1995.

Based on the above analysis, the proposed Project would result in no impacts to historical resources or cultural landscapes. The proposed cogeneration building and associated facilities would be constructed approximately 1,000 feet from potentially eligible historical resources at the Facility, and would have no direct or indirect effects upon them. As such, no mitigation is required.

b) **Less than Significant with Mitigation.**

**Impact CUL-1:** This section discusses archaeological resources, both as historical resources according to Section 15064.5 as well as unique archaeological resources as defined in Section 21083.2(g).

Based on the above analysis, the proposed Project has a low potential for uncovering archaeological resources. While unlikely, given the general sensitivity of the Project vicinity, the inadvertent discovery of archaeological resources cannot be entirely discounted.

**Mitigation Measure:** In the unlikely event that archaeological resources are encountered during project construction the following mitigation measure would reduce impacts to a less-than-significant level

**Mitigation Measure CUL-1: Accidental Discovery of Archaeological Resources.**

If discovery is made of items of historic or archaeological interest, the City's contractor shall immediately cease all work activities in the vicinity (within approximately 100 feet) of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, baked clay fragments, or faunal food remains (bone and shell); stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include the remains of stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation the contractor shall immediately contact the City. The contractor shall not resume work until authorization is received from the City.

Any inadvertent discovery of cultural resources during construction shall be evaluated by a qualified archaeologist. If it is determined that the project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with PRC Section 21083.2 and Section 15126.4 of the CEQA *Guidelines*, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, the archaeologist shall develop a treatment plan in consultation with the City and appropriate Native American representatives (if the find is of Native American origin).

c) **No Impact.** Based on the above analysis, the Project would result in no impacts to paleontological resources. No mitigation is required.

d) **Less than Significant with Mitigation.**

**Impact CUL-2:** There is no indication that the Project area has been used for burial purposes in the recent or distant past. However, during excavation associated with Project construction, it is possible that previously unknown human remains could be discovered.

**Mitigation Measure:** In the unlikely event of the discovery of human remains during Project construction, the following mitigation measure from the Master Plan would reduce impacts to a less-than-significant level.

**Mitigation Measure CUL-2: Accidental Discovery of Human Remains.**

Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

# 2.6 Geology, Soils, and Seismicity

## 2.6.1 Setting

The Project area is located near the southern end of the San Francisco Bay, which is within the geologically complex California Coast Ranges geomorphic province.[21,22] The Coast Ranges province is characterized by a series of northwest-trending ridges and valleys that run roughly parallel to the San Andreas fault zone, and can be further divided into the northern and southern ranges that are separated by the San Francisco Bay. The San Francisco Bay lies within a broad depression created from an east-west expansion between the San Andreas and the Hayward fault systems. The tectonic forces that dominate the region developed from the margin between the Pacific Plate and the North American Plate where the Pacific Plate slowly creeps northward past the North American Plate on the San Andreas, Hayward, and associated subsidiary faults.

Topography of the Project area is largely flat, gently sloping from an elevation of 8 feet above msl (NAVD88) at the eastern edge of the Project area, to 12 feet msl at the western edge of the site. The Central Facility Area, including the Project area, has been historically underlain by artificial fills. Fill may be engineered or non-engineered material, and both may occur on site or in the vicinity of the Project. Artificial fill on site and in the general area of the Facility central operational area ranges in depth from about 5 to 10 feet.

The native soils underlying the Project area and its vicinity have a moderate shrink-swell potential due to the presence of saturated clays with high plasticity. However, shrink-swell potential on site is expected to be more limited due to the historic placement of several feet of fill material as noted above.

The Project area lies within a region of California that contains many active and potentially active faults and is considered an area of high seismic activity. It is estimated that the Bay Area as a whole has a 63 percent chance of experiencing an earthquake of magnitude 6.7 or higher before 2036.[23] The individual faults posing the greatest threat to the Bay Area including the Project area are the Hayward-Rodger's Creek fault and the San Andreas fault. Other principal faults capable of producing significant earthquakes in the general vicinity of the Project area include the Calaveras, Concord–Green Valley, Marsh Creek–Greenville, and the San Gregorio faults. However, the Project area is not located on or immediately adjacent to any active faults.

[21] California's geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landforms with unique, defining features based on geology, faults, topographic relief, and climate.
[22] California Geological Survey. *California's Geomorphic Provinces*, CGS Note 36, 2002.
[23] U.S. Geologic Survey. *Forecasting California's Earthquakes—What Can We Expect in the Next 30 Years?*, Prepared by Edward H. Field, Kevin R. Milner, and the 2007 Working Group on California Earthquake Probabilities, USGS Fact Sheet 2008-3027.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **6. GEOLOGY, SOILS, AND SEISMICITY — Would the project:** | | | | | |
| a) Expose people or structures to 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.) | ☐ | ☐ | ☒ | ☐ | 1, 2, 6 |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| iv) Landslides? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| 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 wastewater? | ☐ | ☐ | ☐ | ☒ | 1, 2 |

## 2.6.2 Discussion

a.i) **Less than Significant Impact.** No Alquist-Priolo zones are mapped on the Project area or in its vicinity. Additionally, the City of San José Fault Hazard Map does not identify any fault hazard zones on site or in the immediate vicinity of the Project.[24] The potential for rupture of an unknown fault on site is considered remote.

a.ii, iii) **Less than Significant Impact.** As noted above, the Project area is located within a seismically active region. As a result, the proposed facilities, including the proposed Cogeneration Building, engine generators, gas treatment and heat recovery systems, parking areas, emissions stack(s), pipelines and various other Project features, could be subject to strong seismic ground shaking, seismic failure, or liquefaction during an earthquake. Strong seismic

[24] URS Corporation. *Final Report, Geotechnical Investigation, Advanced Recycled Water Treatment Facilities, Santa Clara Valley Water District, San José, California*, prepared for Black & Veatch, June 2009.

shaking could occur as a result of seismic activity along any of the faults noted above. However, the Project would incorporate standard engineering and construction techniques related to seismicity, in accordance with the requirements of the California and Uniform Building Codes for Seismic Zone 4. Adherence to these practices and requirements would minimize potential impacts of strong seismic ground shaking, seismic-related ground failure, and liquefaction on site.

a.iv) **Less than Significant Impact.** The Project area has limited topographic relief, with elevations on site spanning a differential of less than 10 feet. Therefore, potential for landslides on site, including seismically induced landslides, is considered remote.

b) **Less than Significant Impact.** Project construction would involve demolition of existing facilities (e.g. existing paved areas), as well as ground disturbance during minor on site grading, and may involve placement of fill. In the event of a rain storm, erosion on site could occur, with sediment from the Project area becoming entrained in stormwater runoff from the site. However, potential for erosion and loss of sediment from the site during construction would be minimized via adherence to applicable permitting requirements, as discussed in greater detail for Checklist Item c in Section 2.9, Hydrology and Water Quality. Additionally, soils on site would be stabilized near the end of the construction process, and the proposed facilities (which would include primarily paved surfaces) are not expected to be subject to substantial erosion or topsoil loss.

c) **Less than Significant Impact.** As noted previously, the Project area has relatively flat topography and is composed of at least 5 feet of fill dirt, underlain by alluvial sediments. Therefore, landslides, liquefaction, subsidence, and soil collapse are not anticipated on site. As noted previously, potential for liquefaction to affect the proposed facilities would be minimized via adherence to standard engineering and construction techniques related to seismicity, in accordance with the requirements of the California and Uniform Building Codes for Seismic Zone 4.

d) **Less than Significant Impact.** Although native soils underlying the Project area may have moderate shrink-swell potential, this potential is limited due to the placement of fill on site, where the fill is anticipated to have limited shrink-swell potential. Additionally, adherence to standard engineering and construction techniques in accordance with the requirements of the California and Uniform Building Codes would further minimize potential effects of expansive soils on site.

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

# 2.7 Greenhouse Gas Emissions

## 2.7.1 Setting

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters the atmosphere from space and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect, or climate change, are carbon dioxide ($CO_2$), methane ($CH_4$), ozone ($O_3$), water vapor, nitrous oxide ($N_2O$), and chlorofluorocarbons (CFCs). Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for enhancing the greenhouse effect.

In 2011, the City adopted the Envision San José 2040 General Plan (General Plan). As part of the General Plan update, the City adopted a Greenhouse Gas Reduction Strategy[25] in accordance with the BAAQMD CEQA Guidelines and CEQA Guidelines Section 15183.5. The GHG Strategy identifies policies and measures to reduce GHG generation within the City.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **7. GREENHOUSE GAS* EMISSIONS — Would the project:** | | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ | 1, 10 |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ | 1, 10 |
| * Note: GHGs include, but are not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride | | | | | |

## 2.7.2 Discussion

a) **Less than Significant Impact**. As described above, the City recently adopted the Envision San José 2040 General Plan, which focuses on creating urban centers that provide mixed-use settings for new housing and job growth that are pedestrian, bicycle, and transit-oriented. The mixed-use land use concept reduces GHG emissions by placing land uses closer together and, as a result, decreases vehicle miles traveled. The City has also adopted a GHG Strategy that includes policies and measures to reduce GHG emissions. Adoption of a GHG Strategy provides environmental clearance for GHG impacts of proposed development as

[25] City of San Jose, 2011. *Greenhouse Gas Reduction Strategy for the City of San Jose*, June 2011.

per the BAAQMD CEQA Guidelines[26] and CEQA Guidelines Section 15183.5. Project evaluation in light of City requirements is provided for through an evaluation of Project conformance with the City's GHG Reduction Strategy.

In order to conform to the GHG Reduction Strategy, projects must be consistent with the Land Use/Transportation assumptions and incorporate applicable features into the Project that meet the mandatory implementation policies. Based on a review of Project components and proposed operation scenarios, in light of the GHG Reduction Strategy, the Project would be consistent with the Land Use/Transportation assumptions and is a cogeneration facility, fueled in part with digester gas, which would replace older IC engines and generate electricity to meet existing 80$^{th}$ percentile Facility demand. Additionally, as noted in the Project Description, the Project would result in a net reduction in natural gas usage on site, and thus would reduce GHG emissions in comparison to existing conditions. Thus, the Project would result in continued renewable energy production and reduced reliance on fossil energy. In addition, construction related Project emissions would be limited due to its relatively limited construction intensity. Consequently, based on a review of anticipated Project emissions in comparison to the City's GHG Strategy and the BAAQMD CEQA Guidelines, the Project is expected to be consistent with the General Plan and GHG Strategy; therefore, it would have a less-than-significant impact associated with GHG emissions.

b) **Less than Significant Impact**. The Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, since the proposed Project is consistent with the City's General Plan that includes implementation of a GHG Reduction Strategy. The impact would be less than significant.

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[26] Bay Area Air Quality Management District (BAAQMD), 2011. *CEQA Air Quality Guidelines*, revised May 2011.

# 2.8 Hazards and Hazardous Materials

## 2.8.1 Setting

This discussion of the potential presence of hazardous materials at the Project area is based on the results of regulatory agency database searches using the California State Water Resources Control Board (SWRCB) GeoTracker database[27] and the California Department of Toxic Substances Control (DTSC) EnviroStor database,[28] and review of prior documentation completed for the Facility in support of the Master Plan EIR. The GeoTracker database includes the following hazardous materials site lists: leaking underground storage tank (LUST) cleanup sites; spills, leaks, investigation and cleanup (SLIC) sites; permitted underground storage tank (UST) facilities; land disposal sites; military cleanup sites; and other cleanup sites. The EnviroStor database includes: federal Superfund; state response; voluntary cleanup; school cleanup; and hazardous waste corrective action. The Facility and nearby landfill facilities were identified by the database searches. The Facility was included on hazardous material site lists by multiple regulatory agencies, including the cleanup and voluntary cleanup lists. The adjacent landfill facilities are listed on the land disposal site lists. Based on the records search and listed locations of the sites, as well as a review of previously compiled information in support of the Plant Master Plan EIR, the Project area does not contain any hazardous materials sites. The San José Police Department operates a bomb disposal facility within the inactive biosolids lagoons area, located to the north of the Project area.

### Wildfire Hazards

Based upon fire hazard mapping by the CAL FIRE Forest Resource Assessment Program[29] and the Santa Clara County Wildland Urban Fire Interface Map,[30] the Project area is not located within identified high fire hazard areas.

### Airports

The nearest airports to the Project are the Norman Y. Mineta San José International Airport, located approximately 3 miles south of the Project area and the Moffett Federal Airfield, located approximately 6 miles west of the Project area. No private airstrips occur in the Project vicinity.

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27 State Water Resources Control Board, GeoTracker database, available online at http://geotracker.swrcb.ca.gov, accessed January 13, 2014.

28 California Department of Toxic Substances (DTSC) Control EnviroStor database, http://envirostor.dtsc.ca.gov. accessed January 13, 2014.

29 California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, Fire Hazard Severity Zones in State Responsibility Areas, Santa Clara County, California. November 7, 2007. http://frap.cdf.ca.gov/webdata/maps/santa_clara/fhszsmap.43.pdf accessed March 30, 2012; California Department of Forestry and Fire Protection, Fire and Resource Assessment Program, Very Fire Hazard Severity Zones in Local Responsibility Areas, Santa Clara County, California. May 2008. http://frap.cdf.ca.gov/webdata/maps/santa_clara/fhszl_map.43.pdf accessed March 30, 2012.

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

## Emergency Response

The Santa Clara County Operational Area Emergency Operations Plan[31] establishes emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of response in the event of an emergency. The plan does not identify specific emergency response or evacuation routes.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **8. HAZARDS AND HAZARDOUS MATERIALS — Would the project:** | | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| 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? | ☐ | ☒ | ☐ | ☐ | 1, 2 |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| 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? | ☐ | ☒ | ☐ | ☐ | 1, 2 |
| 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 for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ | 1 |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ | 1 |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☒ | ☐ | 1, 2 |

[31] Santa Clara County, 2008, *Santa Clara County Operational Area Emergency Operations Plan*, March 18, 2008, available online at http://www.sccgov.org/sites/oes/Documents/EOP_Complete.pdf

## 2.8.2 Discussion

**a) Less than Significant Impact.**

Project construction could involve the routine use of small quantities of hazardous materials commonly used during construction activities such as fuels, lubricants, paints, and degreasers. Storage and use of hazardous materials at the construction site could result in the accidental release of small quantities of hazardous materials, which could degrade soil, groundwater, and surface water within the Project area.

However, the Project would be subject to the requirements of the Construction General Permit for Stormwater Discharges, the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, and treatment requirements of the Facility NPDES Permit (Please refer to Section 2.9, Hydrology and Water Quality, for additional discussion of these permits). Adherence to the conditions of these permits would be required under state and federal law. Permit conditions would require the completion and implementation of a Storm Water Pollution Prevention Plan (SWPPP) including implementation of best management practices to minimize the risk of a hazardous materials release during construction activities. The best management practices would include protection measures for the temporary on site storage of fuel and other hazardous materials used during construction, including requirements for secondary containment and berming to prevent any such release from reaching an adjacent waterway or stormwater collection system. All equipment and materials storage would need to be routinely inspected for leaks, and records maintained for documenting compliance with the storage and handling of hazardous materials. Thus, potential adverse effects related to the routine use and possible release of hazardous construction chemicals into the environment would be minimized.

Project operation would involve the routine use of natural gas/biogas for engine operation. Gas treatment would include removal of hydrogen sulfide, siloxanes, and other VOCs from the biogas. No exhaust or other airborne emissions from the gas treatment system would occur. Natural gas/biogas storage and handling would be performed in compliance with applicable state and federal hazardous materials regulations.[32]

The Facility currently produces biogas on site, and uses a combination of natural gas and biogas to fuel existing on site engines. The Project would involve the construction of new engines that would replace existing engines, and utilize approximately the same amount of natural gas and biogas as compared to existing conditions. The Project would not increase biogas production on site, and would not increase biogas or natural gas storage on site. Therefore, no increase in risk relating to the onsite production, storage, and/or use of biogas or natural gas would occur, in comparison to existing baseline conditions. Compliance with existing safety regulations and ongoing Facility safety practices would minimize potential

[32] A number of regulations would be applicable including those promulgated by the Operational Safety and Health Administration (OSHA) Title 29 CFR 1910, the California Business Plan Act, Cal/OSHA requirements, and policies and requirements implemented through the Santa Clara County Department of Environmental Health.

hazards to the public and the environment. Therefore, this impact would be less than significant.

**b) Less than Significant with Mitigation.**

**Impact HAZ-1:** A number of prior releases of hazardous materials have also occurred at the existing Facility, near but not within the Project area. However, the extent of contaminated soils may not be known with certainty. Therefore, excavation anywhere within the Project area could potentially result in the encounter of contaminated soils. As a result, the potential exists for workers to encounter hazardous materials in the soil during construction of Project facilities. Any hazardous materials encountered in excavated soil or groundwater during Project construction could result in a release to the environment, which could potentially expose construction workers and plant workers to hazardous materials and chemical vapors. Depending on the nature and extent of any contamination encountered, adverse health effects and nuisance vapors could result if proper precautions are not taken. Contaminated soil or groundwater could also require disposal as a hazardous waste. The Project would not affect or disturb the existing bomb disposal facility, which is located north of the Project site.

Because existing contamination could expose workers to hazardous materials, and/or could result in a reasonably foreseeable release of hazardous materials into the environment, this impact is considered potentially significant.

**Mitigation Measures:** Implementation of the following mitigation measures would reduce this impact to a less-than-significant level by requiring preparation of a Soil And Groundwater Management Plan to ensure appropriate management of soil and groundwater encountered during construction.

**Mitigation Measure HAZ-1a: Pre-Construction Hazardous Materials Assessment.**

Prior to issuance of grading permits for Project construction, the City or its contractor shall ensure that a limited soil and/or groundwater investigation is performed at proposed construction work areas to characterize soil and/or groundwater quality. Generally, for projects within 250 feet of a known underground fuel tank leak or spill, the City shall perform the site assessment in general accordance with protocols described in the SWRCB Leaking Underground Fuel Tank Guidance Manual (September 2012), and coordinate with the RWQCB as required. For all other projects, the City shall conduct a site assessment including potential testing of soil and/or groundwater, and if testing reveals soil and/or groundwater concentrations that exceed applicable regulatory screening levels, the City shall contact the SCCDEH or RWQCB, as appropriate, to secure regulatory oversight.

The work plan will establish the sampling and laboratory analysis program which may include the following: analysis of subsurface soil samples within the WPCP for total petroleum hydrocarbons (as gasoline, diesel, and waste oil), Title 22 metals, and VOCs or any other chemicals of concern to evaluate the potential presence of contamination; groundwater samples if subsurface excavations are anticipated to

require dewatering;. and additional analyses for VOCs and SVOCs for groundwater samples collected at construction locations within 1000 feet of adjacent landfills.

The results of the hazardous materials assessment shall be incorporated into the Site Health and Safety Plan prepared in accordance with Mitigation Measure HAZ-1b and the Soil and Groundwater Management Plan prepared in accordance with Mitigation Measure HAZ-1c to determine whether: specific soil and groundwater management and disposal procedures for contaminated materials are required; excavated soils are suitable for reuse; and construction worker health and safety procedures for working with contaminated materials are required. If the pre-construction hazardous materials assessment identifies the presence of soil and/or groundwater contamination at concentrations in excess of applicable regulatory screening levels (ESLs or CHHSLs) for proposed site use, the City shall complete site assessment and remedial activities required by the regulatory agency to ensure that residual soil and/or groundwater contamination, if any, shall not pose a continuing significant threat to groundwater resources, human health, or the environment.

**Mitigation Measure HAZ-1b: Health and Safety Plan.**

The City shall require the construction contractor to retain a qualified environmental professional to prepare a site-specific Health and Safety Plan (HASP) in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal/OSHA regulations (8 CCR Title 8, Section 5192). Because anticipated contaminants vary depending upon the location of proposed improvements in the project area and may vary over time, the HASP shall address site-specific worker health and safety issues during construction of the individual projects. The HASP shall include the following information.

- Results of sampling conducted in accordance with Mitigation Measure HAZ-1a.

- All required measures to protect construction workers and the general public by including engineering controls, monitoring, and security measures to prevent unauthorized entry to the construction area and to reduce hazards outside of the construction area. If prescribed contaminant exposure levels are exceeded, personal protective equipment shall be required for workers in accordance with state and federal regulations.

- Required worker health and safety provisions for all workers potentially exposed to contaminated materials, in accordance with state and federal worker safety regulations, and designated qualified individual personnel responsible for implementation of the HASP.

- The contractor shall have a site health and safety supervisor fully trained pursuant to hazardous materials regulations be present during excavation, trenching, or cut and fill operations to monitor for evidence of potential soil contamination, including soil staining, noxious odors, debris or buried storage containers. The site health and safety supervisor must be capable of evaluating whether hazardous materials encountered constitute an incidental

release of a hazardous substance or an emergency spill. The site health and safety supervisor shall direct procedures to be followed in the event that an unanticipated hazardous materials release with the potential to impact health and safety is encountered. These procedures shall be in accordance with hazardous waste operations and regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release; notifying Santa Clara County Department of Environmental Health and retaining a qualified environmental firm to perform sampling, remediation, and/or disposal.

- Documentation that HASP measures have been implemented during construction.

- Provision that submittal of the HASP to the City, or any review of the contractor's HASP by the City, shall not be construed as approval of the adequacy of the contractor's health and safety professional, the contractor's HASP, or any safety measure taken in or near the construction site. The contractor shall be solely and fully responsible for compliance with all laws, rules, and regulations applicable to health and safety during the performance of the construction work.

**Mitigation Measure HAZ-1c: Soil and Groundwater Management Plan.**

The City shall require the construction contractor to prepare and implement a Soil and Groundwater Management Plan, subject to review by the City, that specifies the method for handling and disposal of contaminated soil and groundwater prior to construction. The plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The plan shall include the following information.

- Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling. In addition, excavated materials shall be inspected for buried building materials, debris, and evidence of underground storage tanks; if identified, these materials shall be stockpiled separately and characterized in accordance with landfill disposal requirements. If some of the spoils do not meet the reuse criteria and/or debris is identified, these materials shall be disposed of at a permitted landfill facility.

- Procedures to be implemented if unknown subsurface conditions or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils.

- Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method to analyzed groundwater for

hazardous materials likely to be encountered and the appropriate treatment and/or disposal methods.

c) **No Impact.** There are no schools within 0.25-mile of the Project area; therefore, there would be no impact related to this criterion.

d) **Less than Significant Impact with Mitigation**.

**Impact HAZ-2:** While the Project area itself is not listed on a regulatory agency list of hazardous materials sites, it is possible that contaminated soil or groundwater could occur due to adjacent hazardous materials site listings. As discussed above under criterion b, contaminated soil or groundwater could be encountered during excavation and grading for Project construction, potentially exposing construction workers, the public, and/or the environment to hazardous materials. This impact is considered potentially significant.

**Mitigation Measures:** By adhering to applicable hazardous materials regulations, and with implementation of **Mitigation Measures HAZ-1a** through **HAZ-1c,** the potential impact of Project siting on a known hazardous waste site would be less than significant.

**Implement Mitigation Measures HAZ-1a** through **HAZ-1c.**

e) **No Impact.** The nearest airports to the Project are the Norman Y. Mineta San José International Airport, located approximately 3 miles south of the Project area and the Moffett Federal Airfield, located approximately 6 miles west of the Project area. Because the Project area is more than two miles from an airport, and because implementation of the Project would not involve the construction of towers greater than two stories and would not interfere with air traffic, there would be no impact related to safety hazards in the vicinity of an airport.

f) **No Impact.** Similarly, there are no private airstrips within two miles of the Project area; therefore, there would be no impact related to this criterion.

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

h) **Less than Significant Impact.** The Project area is not within a high fire hazard area and, in the unlikely event of a fire, the potential to expose people or structures to a significant risk involving fires is low. The use of construction equipment and the possible temporary on site storage of fuels and/or other flammable construction chemicals could pose an increased fire risk resulting in injury to workers or the public during construction. In the event that a fire were to spread to the existing bomb disposal facility located north of the Project site, a hazardous condition could occur. However, , contractors would be required to comply with hazardous materials storage and fire protection regulations, which would minimize potential for fire creation, and ensure that the risk of hazards related to fires during construction would be less than significant.

As discussed previously, adherence to existing safety regulations and existing Facility safety procedures would minimize the hazard to the public and the environment. With respect to the potential fire hazards associated with the storage and transport of natural gas/biogas and small quantities of other materials used in operations, the National Fire Protection Association has established standards for fire protection which would be applicable to the construction of the proposed facilities. These standards have been successfully implemented by numerous waste water treatment facilities across the country. Construction and operation of facilities would comply with the California fire code, local building codes (including requirements for the installation of fire suppression systems), and gas pipeline regulations.

Compliance with existing safety regulations and widely-accepted industry standards would minimize the hazard to the public and the environment. The local fire agency would be responsible for enforcing the provisions of the fire code. Furthermore, the Project area is not within a high fire hazard area and, in the unlikely event of a fire, the potential to expose people or structures to a significant risk is low. Therefore, this impact would be less than significant.

# 2.9 Hydrology and Water Quality

## 2.9.1 Setting

### Environmental Setting

The San Francisco Bay Area including the Project area and its vicinity, experiences a Mediterranean climate characterized by mild, wet winters and dry, warm summers. The South Bay typically receives about 90 percent of its precipitation in the fall and winter months, with the greatest average rainfall occurring in January. The average annual rainfall in the counties surrounding the South Bay is approximately 20 inches, although the actual rainfall can be highly variable due to El Niño (wet) and La Niña (dry) years and the influence of local topography.

The nearest surface waters to the Project area include Coyote Creek and Guadalupe River, as well as sloughs, marshes, and ponds associated with the southern margin of the Bay. Stormwater drainage on site and in the Facility central operational area is provided by existing infrastructure, which collects stormwater and routes it into the existing headworks of the Facility for treatment. Thus, there is no direct discharge of stormwater from the Project area to natural areas – all stormwater is routed through the Facility.

As shown in **Figure 2.9-1**, the Project would be located entirely within a 100-year flood zone, defined by the Federal Emergency Management Agency (FEMA), as an area having a 1-percent annual chance of occurrence for flooding.

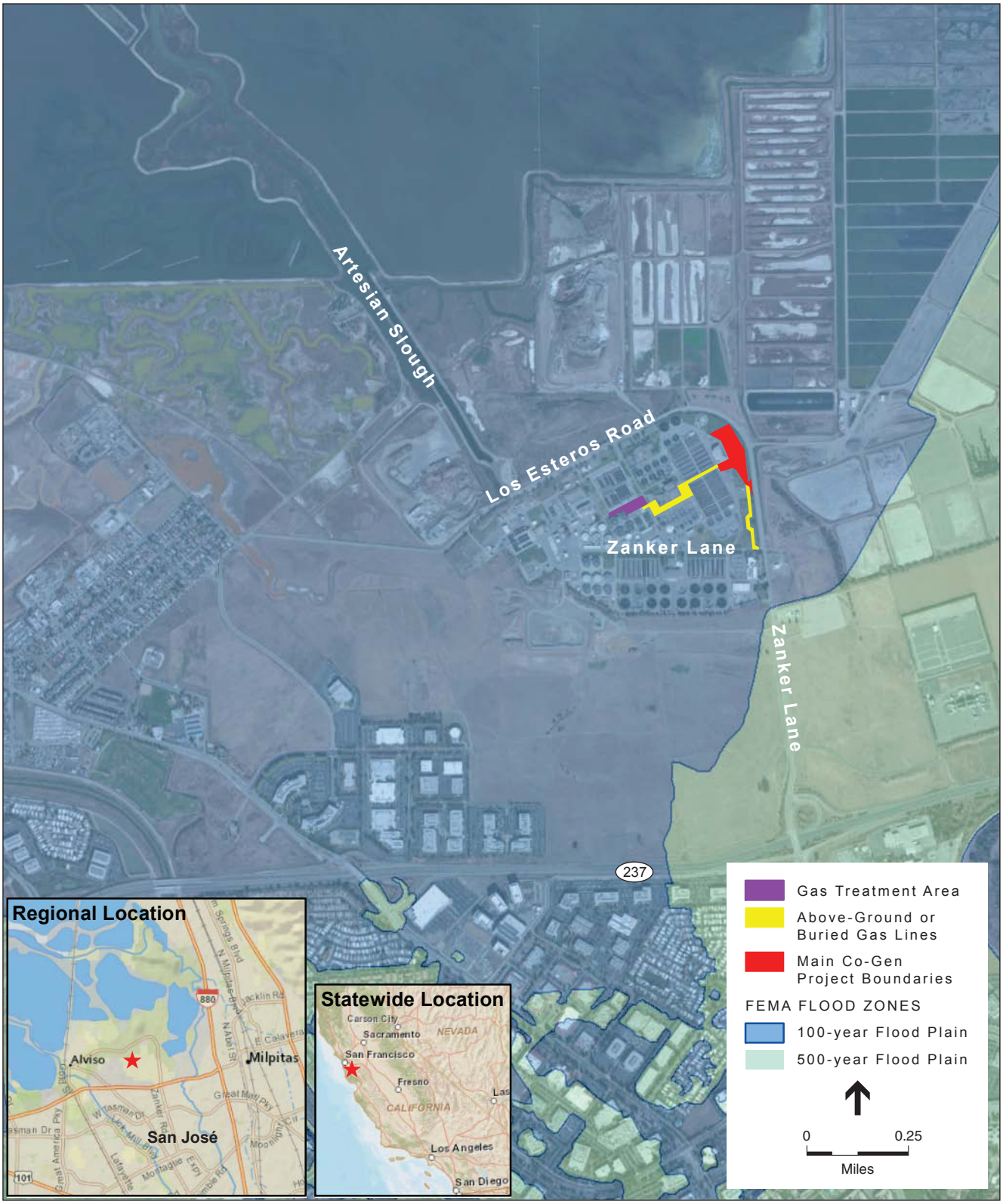
The Project overlays the groundwater aquifer of the Santa Clara Valley Groundwater Basin. The aquifer is generally characterized by alternating layers of impermeable Bay mud and permeable alluvial sand and gravel deposits. Groundwater in the Basin is generally recharged in upland areas and flows down toward the Bay. Monitoring data from the nearby Zanker Road Landfill indicate that groundwater levels alternate seasonally, from approximately -2 to -6 feet NAVD88, corresponding to as approximately 10 to 15 feet below ground in the vicinity of the Project.[33]

### Regulatory Setting

#### NPDES General Permit for Discharges of Stormwater Associated with Construction Activities

Construction activities disturbing 1-acre or more of land are subject to the permitting requirements of the NPDES General Construction Activity Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which must be completed before construction begins, as well as implementation of various other water quality control measures and best management practices. Implementation of the SWPPP starts with

[33] Golder Associates, 2006, *Second Semi-Annual Water Quality Monitoring Report and 2005 Annual Summary, Zanker Materials Processing Facility*, January; Golder Associates, 2006, *Winter 2005/Spring 2006 and 2005 Annual Self-Monitoring Program Report Zanker Road Class III Landfill.* San José, California, April.




SOURCE: FEMA, 2009; ESRI, 2013

San José/Santa Clara Regional Water Treatment Facility Cogeneration Project . 209470

**Figure 2.9-1**
FEMA Flood Zones

the commencement of construction and continues through the completion of the Project. Upon completion of the Project, the applicant must submit a Notice of Termination to the RWQCB notifying the agency that construction is completed.

**San Francisco Bay Region Municipal Regional Stormwater NPDES Permit**

In 2009, the San Francisco Bay RWQCB issued a regional NPDES permit (NPDES Permit Order R2-2009-0074, NPDES Permit No. CAS612008) for stormwater consolidating requirements for all Bay Area municipalities and flood control agencies that discharge directly to the San Francisco Bay. Some provisions require regional action and collaboration, but others relate to specific municipal activities over which the municipalities have individual responsibility and control. Pursuant to permit conditions, that create, add, or replace 10,000 square feet or more of impervious surface area are required to control post-development stormwater runoff through source control, site design, and treatment control BMPs. Additional requirements must be met by certain large Projects that create one acre or more of impervious surfaces.

The treated wastewater discharges from the WPCP are regulated under Order No. R2-2009-0038 and NPDES Permit No. CA0037842 issued by the San Francisco Bay RWQCB. The NPDES permit also covers stormwater discharges from within the WPCP.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **9. HYDROLOGY AND WATER QUALITY — Would the project:** | | | | | |
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| d) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site? | ☐ | ☐ | ☒ | ☐ | 1, 2 |

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | ☐ | ☐ | ☒ | ☐ | 1, 2, 11 |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☒ | ☐ | 1, 2 |

## 2.9.2 Discussion

a, c, f) **Less than Significant Impact.** Construction of the proposed Project would involve the use of heavy construction machinery on site, including for the grading or leveling of soils, placement of fill, excavation, installation of Project components, and decommissioning/removal of existing facilities as relevant. These activities could result in potential for the accidental release of sediment and construction related water quality pollutants from the Project area. For example, during storms, surface soils and sediment loosened during the construction process could become entrained in stormwater, resulting in erosion on site, increases in sediment loading off site, and potential for sedimentation downstream. Other construction-related water quality pollutants could also become entrained in stormwater, including pollutants associated with heavy construction equipment such as oils, greases, fuels, antifreeze, and other lubricants, as well as other construction related pollutants such as paint and cement wash-out or construction related debris. If entrained in stormwater, these pollutants could be carried off site and affect downstream waters.

Project operation would involve ongoing operation of the proposed facilities to support electricity and heat production on site. Potential water quality pollution during Project operation could occur as a result of stormwater runoff from impervious surfaces, or as a result of accidental spills of fuel, oils, lubricants, and other potential water quality pollutants associated with facility fueling and the maintenance and operation of the proposed facilities. These pollutants could become entrained in stormwater.

Potential construction and operation period water quality degradation would, however, be avoided via existing and proposed stormwater drainage design and treatment, and via adherence to applicable permit conditions. With respect to drainage design and treatment, under existing conditions, stormwater runoff from the entire Project area, as well as surrounding facilities within the Central Facility Area, is collected and routed into the Facility headworks for subsequent treatment. Water quality pollutants would be minimized through the Facility's treatment process. With respect to applicable permit conditions, the Project would also be subject to the requirements of the Construction General Permit for Stormwater Discharges, as well as the Facility NPDES Permit and the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. Together, these regulations would require the implementation of construction period best management practices (BMPs) and deployment of a SWPPP designed to reduce and minimize construction related stormwater pollution, construction and operation period water quality monitoring for all discharges, and implementation of various industrial site controls designed to minimize and reduce the emission of polluted stormwater from the Project area. The City would be bound to comply with these requirements under state law.

b) **Less than Significant Impact.** The Project would not involve pumping or extraction of groundwater, and therefore would not directly result in the drawdown of groundwater levels. The Project would involve construction of new impervious surfaces. Impervious surfaces prevent the infiltration of groundwater into the subsurface. The Project would involve the installation of up to approximately 3.75 acres of new impervious surfaces, including the proposed Cogeneration Building and associated parking area, access areas/roads, concrete pads for associated appurtenances, and gas treatment area facilities. Given the pervious nature of areas surrounding the Project area, and the limited extent of new impervious surfaces proposed under the Project, Project implementation is not anticipated to noticeably reduce groundwater recharge. Therefore, groundwater levels would not be noticeably affected.

d, e) **Less than Significant Impact.** The Project would result in the installation of up to approximately 3.75 acres of new impervious surfaces on site. Impervious surfaces would be associated with the proposed Cogeneration Building and associated parking area, access areas/roads, concrete pads for associated appurtenances, and the proposed gas treatment area facilities. Impervious surfaces prevent the infiltration of stormwater into the subsurface. As a result, during a storm event, impervious surfaces can result in a net increase in the volume of water discharged from a site, and can also result in an increase in the peak discharge rate of water from the site. However, as noted for checklist items a, c, and f, all stormwater drainage from the Project area would be routed into the Facility's existing headworks for treatment. Potential increases in stormwater volume due to Project implementation would be relatively limited due to the limited area new impervious surfaces that would be installed. Any anticipated increases in stormwater generated on site could be managed within the Facility's available capacity. Therefore, any increase in stormwater emanating from the Project area would be managed within the capacity of existing stormwater facilities, and additional mitigation would not be required.

g) **No Impact.** The Project would not involve the construction of any housing. Therefore, no impact would occur.

h) **Less than Significant Impact.** As shown on Figure 2.9-1, the Project would be located entirely within a FEMA-defined 100-year flood zone. Flooding would be associated with run-up from the south San Francisco Bay. The Project would result in the installation of new facilities, which could, on a very localized basis, alter flood flows during a major flood event. However, as shown on Figure 2.9-1, the 100-year floodplain is wide and expansive in the vicinity of the Project. Therefore, because the Project would have a limited extent (less than 4.5 acres) with only select facilities having potential to displace flood flows (i.e., the proposed Cogeneration Building), displacement of flood waters would be negligible.

i) **Less than Significant Impact.** The Project would not include any construction or other procedures on, adjacent to, or within a levee, dam, or other flood control feature, and therefore would not directly affect such facilities. The Project would involve installation and operation of a new cogeneration plant building, engines, appurtenances, and an associated parking area, in an area that is not currently protected from 100-year flooding. Additionally, over time, it is expected that sea level rise could further exacerbate flooding on site. The City is currently working with the agencies involved in the South Bay Shoreline Study to implement coastal flood protection for the 100-year flood event along the existing southern and eastern levees impounding Pond A18.[34] Once in place, according to current design concepts, the levee would provide protection for the 100-year flood event through the 50-year period of analysis (2017 – 2067), including consideration of sea level rise based on U.S. Army Corps of Engineers' NRC Curve III scenario.[35] However, the proposed coastal flood protection would be implemented under a separate project by a separate agency, and there is some uncertainty regarding the timing of completion of that project. In the interim, the Project would be susceptible to 100-year flooding.

The City has integrated FEMA's 100-year flood hazard standard into its building code requirements. Because the Project would be constructed prior to the proposed levee, the Project would still be within the 100-year coastal floodplain. The increased risks associated with flooding would be partially reduced through implementation of the City's standard floodproofing requirements for new and existing non-residential structures, presented below:

**City Standard Floodproofing Requirements for New Non-Residential Structures**

a) Elevate the lowest floor above 12.00' NAVD88 or *floodproof to the same elevation*. For insurance rating purposes, the building's floodproofed design elevation must be at least one foot above the base flood elevation to receive rating credit.

b) An Elevation Certificate (FEMA Form 81-31) for each proposed structure, based on construction drawings, is required prior to issuance of a building permit.

[34] Refer to page 4.3-3 in *San Jose/Santa Clara Water Pollution control Plant Master Plan, First Amendment to the Draft EIR*. City of San Jose, October 2013. File No. PP11-043, SCH#2011052074.

[35] National Research Council. *Responding to Changes in Sea Level: Engineering Implications.* National Research Council. National Academy Press: Washington, D.C., 1987.

Consequently, an Elevation Certificate for each built structure, based on finished construction is required prior to issuance of an occupancy permit.

c) If the structure is to be floodproofed, a Floodproofing Certificate (FEMA Form 81-65) for each structure, floodproofing details, and, if applicable, a Flood Emergency Operation Plan and an Inspection & Maintenance Plan are required prior to the issuance of a Public Works Clearance.

d) Building support utility systems such as HVAC (heating, ventilation, and air conditioning), electrical, plumbing, air conditioning equipment, including ductwork, and other service facilities must be elevated above the base flood elevation or protected from flood damage.

Adherence to these requirements would not, however, fully address potential for flooding in light of anticipated sea level rise. With respect to sea level rise, the Project itself would not cause sea levels to rise. Instead, sea level rise and attendant flooding are ongoing environmental conditions to which the Project must adapt. Therefore, sea level rise is not considered an "impact" under CEQA, and need not be evaluated as such in this document. This issue was addressed in the recent case of *Ballona Wetlands Land Trust v. City of Los Angeles* (2011) 201 Cal.App.4th 455, where the Second District Court of Appeal held that an EIR for a mixed-use real estate project was not required to analyze the effect of sea level rise on the proposed development. The court reasoned that since sea level rise was not an impact caused by the project, the EIR did not need to address it.

Thus, in light of the *Ballona* case, sea level rise and the associated flooding are not environmental impacts resulting from the project, but instead are existing/future conditions that the project would have to accommodate. For this reason, the following Project Design Feature (PDF) would be adhered to in support of the Project. Note that the proposed PDF is not a CEQA-derived mitigation measure, but rather a refinement of how the City will implement the Project in order to address potential for flooding considering future sea level rise.

**PDF HYD-1:** For all Project structures to be constructed and in operation or use prior to construction of the proposed flood control levee, the City shall ensure that during design, the latest approved FEMA 100-year floodplain for the project site is used to develop necessary floodproofing measures. FEMA is currently in the process of updating its floodplain maps, which will consider sea level rise that occurred from the 1980s (when the currently-approved maps were created) to the present. Neither the current nor updated maps consider future sea level rise projected to occur in the vicinity of the Project area. Therefore, the City also shall incorporate future sea level rise projections into flood proofing designs for structures within the FEMA 100-year floodplain. Specifically, the City shall require that planning and design of structures within the 100-year FEMA floodplain provide protection for either (1) the high end of projected sea level rise (e.g. NRC Curve III) over the design life of the structure or (2) a lower projected sea level rise with later improvements to protect against the higher rate, should a higher rate occur. Any improvements would need to occur before sea level exceeded the design

elevation. The sea level rise projection shall take into account the design life of the Project and associated structures. Additionally, the Flood Emergency Operation Plan prepared in accordance with City Standard Floodproofing requirements shall describe evacuation and access routes that allow access to and from the developed areas in the project site during the 100-year event, including future sea level rise.

Implementation of PDF HYD-1 along with the City's Standard floodproofing requirements would ensure that the effects of flood hazards on the Project would not expose people or structures to an unacceptable risk of loss from flooding.

j) **Less than Significant Impact.** The Project is not located immediately adjacent to an enclosed water body, such that it could be affected by seiche. Additionally, the Project is not located in an area that is considered susceptible to mudflows, such as downstream of high relief areas denuded of vegetation, or near potential volcanic activity. The Project is located in a lowlands area adjacent to south San Francisco Bay, and could theoretically be subject to tsunami related hazards. Because the characteristic seiche periods of the Bay are significantly longer than surface wave periods for waves caused by earthquakes, earthquake-caused local tsunamis are not considered to pose a hazard to the Facility or the Project area.[36] When a suite of tsunami events, including local tsunamis and teletsunamis (tsunamis originating from distant points in the Pacific Ocean), were modeled in support of the Master Plan EIR,[37] the combined upper bound of tsunami inundation at mean high water was at the northeast corner of Pond A18, located north of the Project area along the margin of the south San Francisco Bay.[38] No inundation was shown within the Project area. This was due to dampening effects of Bay geography as an incoming tsunami passed through the Golden Gate and dissipated across the central and south portions of the Bay. Therefore, tsunamis would not affect the Project area.

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[36] Borrero, J.C., Dengler, L., Uslu, B., and Synolakis, C., *Numerical Modeling of Tsunami Effects at Marine Oil Terminals in San Francisco Bay*, Marine Facilities Division of The California State Lands Commission, 2006.

[37] City of San José. San José/Santa Clara Water Pollution Control Plant Master Plan Final Environmental Impact Report. November, 2013.

[38] California Emergency Management Agency, California Geological Survey, and University of Southern California, 2009, Tsunami Inundation Map for Emergency Planning. Milpitas Quadrangle. July 31.

# 2.10 Land Use and Land Use Planning

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **10. LAND USE AND LAND USE PLANNING — Would the project:** | | | | | |
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ | 1, 3 |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | ☐ | ☐ | ☐ | ☒ | 1, 4 |

## 2.10.1 Discussion

a) **No Impact.** The Project would include installation of additional industrial facilities within the Facility central operational area. The Project would not include any construction within or near an established community, and therefore would not physically divide or interfere with any established community. No impact would occur.

b) **No Impact.** The Project would be entirely located within the Facility central operational area. With respect to City zoning districts, the Project is zoned as Heavy Industrial (HI). With respect to the City's General Plan Land Use/Transportation Diagram designation, the Project is designated as Public/Quasi-Public, a category that is typically used to designate public land uses such as water treatment facilities and the bufferlands. The proposed Project, including all proposed facilities and operations, would therefore be consistent with existing zoning and land use designations applicable to the Project area. No impact would occur.

c) **No Impact.** The Project area is situated outside of the SCVHP study area, and therefore the Project is not a covered activity under the SCVHCP. The Project is within the Expanded Study Area for Burrowing Owl Conservation, as defined in the SCVHP, wherein the burrowing owl is a covered species under the SCVHP. However, the Project would not result in impacts to burrowing owl nesting or foraging habitat, as discussed in Section 2.4, Biological Resources. Therefore, the Project would not conflict with the SCVHP. No other habitat conservation plans or natural community conservation plans are applicable to the Project area. Therefore, no impact would occur.

# 2.11 Mineral Resources

## 2.11.1 Setting

The Project area is not within an aggregate resource area, and is mapped by the California Division of Mines and Geology being within Mineral Resource Zone 1.[39] Mineral Resource Zone 1 identifies areas where adequate information exists to determine that no significant aggregate resources are present. Both published geologic maps and site-specific borings confirm that subsurface materials are generally too fine-grained to be suitable as aggregate. Additionally, according to the USGS Mineral Resources Data System, there are no known mineral occurrences, prospects, or past or present mineral producers within or immediately adjacent to the Project area.[40]

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **11. MINERAL RESOURCES — 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? | ☐ | ☐ | ☐ | ☒ | 1 |
| 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? | ☐ | ☐ | ☐ | ☒ | 1 |

## 2.11.2 Discussion

a,b) **No Impact.** As noted above, no known mineral resources of importance to the state or region are located on site. Additionally, no locally important mineral resource recovery sites are delineated for the Project area, including in a general plan or other land use plan. Therefore, the Project would result in the loss of availability of mineral resources, or otherwise interfere with the extraction of existing mineral resources. No impact would occur.

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[39] California Division of Mines and Geology. *Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region*. DMG Open File Report 96-03, 1996.

[40] U.S. Geologic Survey, *Mineral Resources Data System (MRDS), Mineral Resources On-Line Spatial Data*, available http://mrdata.usgs.gov/mineral-resources/mrds-us.html, accessed 4/9/2012.

# 2.12 Noise

## 2.12.1 Noise Background

Noise may be defined as unwanted sound. The objectionable nature of a particular sound could be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. Most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, DNL (day/night average sound level), was developed. The DNL divides the 24-hour day into the daytime of 7:00 AM to 10:00 PM and the nighttime of 10:00 PM to 7:00 AM. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The equivalent sound level (Leq) represents an average of the sound energy occurring over a specified time period. In effect, the Leq is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The maximum sound level (Lmax) is the highest instantaneous sound level measured during a specified period.

## 2.12.2 Setting

There are no noise sensitive receptors (e.g., residences, schools) in the immediate vicinity of the Project area. The closest sensitive receptors to the Project area are residences south of Highway 237 (about 1 mile south) and churches/worship centers (about 1.1 miles south west).

### Applicable Noise Standards and Policies

The City's General Plan includes policies applicable to all development projects in San José.[41] The City's noise and land use compatibility guidelines are shown in **Table 2.4-3**, below. The land use compatibility guidelines state that the City's normally acceptable exterior noise level is 60 dBA DNL or less for residential and most institutional land uses. The City's standard for interior noise levels for residences, hotels, motels, and residential care facilities is 45 dBA DNL.

[41] City of San Jose, 2011. *Envision San Jose 2040 General Plan*, November 2011.

**TABLE 2.4-3**
**PROPOSED GENERAL PLAN LAND USE COMPATIBILITY GUIDELINES (GP TABLE EC-1)**

| Land Use Category | Exterior DNL Value in Decibels | | | | | |
|---|---|---|---|---|---|---|
| | 55 | 60 | 65 | 70 | 75 | 80 |
| Residential, Hotels and Motels, Hospitals and Residential Care[1] | | | | | | |
| Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds | | | | | | |
| Schools, Libraries, Museums, Meeting Halls, and Churches | | | | | | |
| Office Buildings, Business Commercial, and Professional Offices | | | | | | |
| Sports Arena, Outdoor Spectator Sports | | | | | | |
| Public and Quasi-Public Auditoriums, Concert Halls, and Amphitheaters | | | | | | |

[1]Noise mitigation to reduce interior noise levels pursuant to Policy EC-1.1 is required.

**Normally Acceptable:**
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

**Conditionally Acceptable:**
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation features included in the design.

**Unacceptable:**
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. Development will only be considered when technically feasible mitigation is identified that is also compatible with relevant design guidelines.

SOURCE: City of San Jose, 2011

## Significance Thresholds

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

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

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

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

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

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

In addition to the above General Plan policies, the Project would be subject to the following code and ordinance:

- *San José Municipal Code §20.100.450*: Limits construction hours within 500 feet of residences to 7 AM - 7 PM weekdays, with no construction on weekends or holidays; and
- *City of San José Zoning Ordinance*: The City Zoning Ordinance applies specific noise standards to Residential Zoning Districts, which limits the sound pressure levels generated by any use or combination of uses at any property line to a maximum noise level of 55 dB.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **12. NOISE — Would the project:** | | | | | |
| a) Result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☒ | ☐ | 1 |
| b) Result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☒ | ☐ | 1 |
| c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ | 1 |
| d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | ☐ | ☐ | ☒ | ☐ | 1 |
| e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels? | ☐ | ☐ | ☒ | ☐ | 1 |
| f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ | 1 |

## 2.12.3 Discussion

a) **Less than Significant Impact**. Based on the following, construction and operation of the Project would not expose persons to noise levels in excess of regulatory standards, codes, or ordinances. Therefore, the associated impact would be less than significant.

**Construction**

Construction is a temporary source of noise that can impact residences and businesses located near construction sites. Construction noise can be considerable for short periods of time at any particular location and typically generates the highest noise levels during grading, excavation, and pile driving. However, there are no noise-sensitive receptors within 500 feet of the Project area. The closest existing residential and commercial uses are approximately 1 mile and 0.85 mile from the Project construction location, respectively. Worst-case Project construction noise exposure at the closest existing residences and commercial uses would not be expected to exceed 44 dB Lmax and 46 dB Lmax, respectively, from noise sources in the vicinity of the Project construction site. This is based on a conservative assumption that construction equipment would result in a noise production of up to 101 dB Lmax at 50 feet[42] and assumes a noise level reduction of 7.5 dB for every doubling of distance due to attenuation associated with soft ground surfaces. Estimated short-term construction noise exposure associated with the Project would not be expected to exceed any of the City's significance thresholds. Therefore, the closest existing noise-sensitive uses to the Project area would not be significantly impacted by Project construction-related noise.

**Operation**

Routine operation of the Project would result in noise associated with operation of IC engines, which would replace existing IC engines. In addition, the Project engines would be enclosed in the proposed Cogeneration Building. For a conservative noise analysis, it was assumed that all IC engines would be operated at the same time with building doors open, resulting in a combined maximum noise level. Although the exact make and model of the IC engines has not yet been determined, the combined maximum noise level was estimated based on operation of four representative generator sets (i.e., approximately 3 MW) factory specified sound pressure level of 85 dB at 1 meter.[43] This would result in a combined noise level of 70 dB at 50 feet assuming there would be no noise attenuation associated with soft ground surfaces and the noise level would be reduced by 6.0 dB with every doubling of distance. At distances beyond 50 feet from the generators, it is assumed that noise would attenuate at a rate of 7.5 dB per doubling of distance due to absorption associated with soft ground surfaces. Therefore, operation of the proposed generators would result in a maximum noise exposure at the closest existing residences and commercial uses of up to 19 dB and 21 dB, respectively. This noise level would not exceed any of the City's significance thresholds, and the associated impact would be less than significant.

b) **Less than Significant Impact**. Vibration associated with the proposed generator operation would be negligible; however, vibration produced during demolition/construction of the Project could produce maximum vibration levels of 0.21 in/sec PPV at a distance of 25 feet.[44] Since construction equipment would be well over 2,000 feet from acoustically sensitive uses, construction-related vibration levels, including those generated by pile driving, at these uses

[42] Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*, May 2006.
[43] Caterpillar, 2009. 3 MW Data Center Module, EPA Tier 2 Certified.
[44] Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*, May 2006.

would not be perceivable, and would well below the 0.20 in/sec PPV impact criterion. Therefore, this impact is considered less than significant.

c) **Less than Significant Impact**. As described under Criterion "a" above, Project-related normal operations would result in worst-case noise levels at the closest existing residences and commercial uses that would not exceed 19 dB and 21 dB, respectively. These noise levels would be indistinguishable from the ambient rural or urban noise environment of the nearest receptors. Therefore, the Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. The impact would be less than significant.

d) **Less-than-Significant Impact**. As described under Criterion "a" above, Project-related construction activities would result in worst-case temporary noise levels at the closest existing residences and commercial uses that would not exceed 39 dB Lmax and 41 dB Lmax, respectively. These noise levels would be indistinguishable from the ambient rural or urban noise environment of the nearest receptors. Therefore, the Project would not result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project. The impact would be less than significant.

e) **Less-than-Significant Impact**. The Project would not be significantly impacted by aircraft operations from nearby Norman Y. Mineta San José International Airport or Moffett Field. Norman Y. Mineta San José International Airport and Moffet Field are located approximately 4 miles south and 5 miles west of the Project area, respectively. Since the Project is more than 2 miles from a public use airport and proposes no uses that would be affected by local aircraft operations, the Project would not be significantly impacted by aircraft noise. The impact would be less than significant.

f) **No Impact.** There are no known private airstrips in the Project vicinity. Since the Project is not in the vicinity of a private airstrip and proposes no uses that would be substantially affected by local aircraft operations, the Project would not be affected by aircraft noise. There would be no impact.

# 2.13 Population and Housing

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **13. POPULATION AND HOUSING — Would the project:** | | | | | |
| a) Induce substantial 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)? | ☐ | ☐ | ☐ | ☒ | 1 |
| b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ | 1 |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ | 1 |

## 2.13.1 Discussion

a) **No Impact.** The Project would not involve or result in major new housing, business, or industrial developments that could drive population growth. The Project would involve installing new cogeneration facilities in order to support ongoing operation of the existing Facility. As noted in the Project Description, the Project would not support or contribute to expansion of the Facility, but would serve the sole purpose of supporting existing operations by replacing existing cogeneration facilities with more reliable upgrades. Therefore, the Project would not lift an existing indirect impediment to growth, such as by increasing available capacity at a wastewater treatment plant. No impact would occur.

b) **No Impact.** The Project would involve construction and use of industrial facilities at an existing industrial site. It would not result in the demolition of existing housing, or otherwise cause a reduction in housing units on site or elsewhere. Therefore, no impact would occur.

c) **No Impact.** The Project would involve construction and use of industrial facilities at an existing industrial site. There is no existing housing located on site, and no persons would be displaced as a result of Project implementation. Therefore, no impact would occur.

# 2.14 Public Services

## 2.14.1 Setting

Fire protection services for the City are provided by the San José Fire Department (SJFD). The SJFD currently consists of 33 active stations serving an area of 206 square miles and over one million residents. The SJFD responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents) in the City, including at the Facility site and the Project area. Police services for the City of San José are provided by the San José Police Department (SJPD).

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **14. PUBLIC SERVICES — Would the project:** | | | | | |
| a) Result in substantial adverse physical impacts associated with the provision of, or the 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 following public services: | | | | | |
| i) Fire protection? | ☐ | ☐ | ☒ | ☐ | 1,2 |
| ii) Police protection? | ☐ | ☐ | ☐ | ☒ | 1 |
| iii) Schools? | ☐ | ☐ | ☐ | ☒ | 1 |
| iv) Parks? | ☐ | ☐ | ☐ | ☒ | 1 |
| v) Other public facilities? | ☐ | ☐ | ☐ | ☒ | 1 |

## 2.14.2 Discussion

a.i) **Less than Significant Impact.** The Project would involve include construction and operation of engine generators and associated buildings, piping and supporting facilities, as discussed in the Project Description. In the event of a fire within the Project area, including a fuel fire, fire response would be provided by SJFD. SJFD maintains two hazardous incident teams, a rescue medic, and a foam unit, as well as other standard facilities and equipment. These existing resources are anticipated to be sufficient to manage potential fire incidents on site. Also, use of natural gas and biogas on site to fuel the proposed cogeneration facility would be consistent with existing uses of natural gas and biogas on site (which are used to fire existing cogeneration operations). Therefore, the Project would not result in new activities on site that would drive increased demand for fire protection. All proposed use of natural gas and biogas would remain consistent with existing Facility operations, as well as historic uses. Therefore, the Project would not deleteriously affect fire department response times, and would not require additional facilities or equipment.

a.ii-v) **No Impact.** The Project would involve construction and operation of components needed to generate reliable power and heat in support of the wastewater treatment operations at the Facility. These proposed facilities would not require additional police protection or response, need for schools, demand for parks, or need for other public facilities, such that new or physically altered public facilities would be needed. Additionally, the Project would not create demand for police services such that response times would be altered.

# 2.15 Recreation

## 2.15.1 Setting

There are no existing recreational facilities in the immediate vicinity of the Project area.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **15. RECREATION — Would the project:** | | | | | |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ | 1 |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ | 1 |

## 2.15.2 Discussion

a,b) **No Impact.** The Project would involve the construction and operation of new cogeneration facilities and associated appurtenances in support of the existing Facility. Thus the Project would install new industrial facilities within an existing industrial area, in proximity to other similar facilities. The Project would not result in new housing development or other activities that would increase use, alter usage patterns, or increase demand for existing recreational facilities, thereby causing increased physical deterioration of recreation related facilities or demand for new facilities. Therefore, no impact would occur.

# 2.16 Transportation and Traffic

## 2.16.1 Setting

The Project area is generally bounded by the San Francisco Bay to the north, Interstate 880 (I-880) to the east, SR-237 to the south and the community of Alviso to the west. The following roadways would provide access to the Project area, and would be used for site access during construction and operation.

- Zanker Road is a two-lane road that provides entry to the Facility site from the south, and turns into Los Esteros road near the northeastern corner of the Facility central operational area. SR-237 can be accessed from Zanker Rd by driving south to SR-237. Zanker Road would provide the primary access route to the Project area.

- Los Esteros Road is a two-lane road that enters the Facility site from the west, and runs along the southern flank of the Facility central operational area. SR-237 can be accessed from Los Esteros Road to the west via Disk Drive and North 1st Street. Los Esteros Road could also be used to access the Project area, but would not be the primary access route.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **16. TRANSPORTATION AND TRAFFIC — Would the project:** | | | | | |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | ☐ | ☐ | ☒ | ☐ | 1,2 |
| b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☒ | ☐ | 1,2 |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks? | ☐ | ☐ | ☒ | ☐ | 1,2 |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☒ | ☐ | 1,2 |
| e) Result in inadequate emergency access? | ☐ | ☐ | ☒ | ☐ | 1,2 |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | ☐ | ☐ | ☒ | ☐ | 1,2 |

## 2.16.2 Discussion

a, b) **Less than Significant Impact.** Construction of the Project would involve limited daily worker trips to and from the construction site. As noted in the Project Description, the Project would require a total of 245 truck trips for construction-related truck activity. Project construction would also generate approximately 660 trips for workers' commute vehicles. Truck trips and worker trips would be spread out over the construction period. Both Project related truck trips and worker and construction vehicle trips would occur only during the construction period, and therefore would cause temporary increases in vehicle traffic. In order to provide a conservative overestimate of anticipated effects on traffic, this analysis assumes that all construction trips would occur during peak hours – that is, 7am to 9am, and 4pm to 6pm. Workers and construction vehicles would access the site from Los Esteros Road and Zanker Road. The Project would not require any road closures or lane closures, and would proceed during an approximately 18-month construction schedule. Anticipated construction related trips would thus be dispersed in time across the construction period. Based on information provided within the Master Plan EIR, existing levels of service at the intersection of Zanker Road and SR-237 during weekday morning and afternoon peak hours are equivalent to level of service B or better. The addition of up to approximately 890 construction trips over the construction period would result in minor to negligible changes to existing traffic patterns along Project area access roads. These additional trips are not anticipated to reduce level of service noticeably, and would not result in the lowering of existing levels of service below thresholds maintained in any plan or other standard relevant to the Project area.

Operation and maintenance of the Project would involve ongoing operation activities, as well as periodic (monthly) inspection and maintenance of the proposed facilities. Operation period deliveries in support of the Project would be limited to items needed for Project maintenance. Fuel would be supplied from existing and proposed pipelines and biogas sources located on site. Thus, deliveries of fuel would not be required. Maintenance related deliveries would be intermittent and infrequent, and would occur during daytime hours. The Project would be comprised of replacement facilities for existing, on site generators, and would be operated and maintained by existing Facility staff; operation of the Project would not require additional workers, and therefore would not generate additional traffic on site access roads. Additionally, the Project would not block, interfere with, or congest any existing pedestrian or bicycle paths, and similarly would not interfere with any mass transit systems. Therefore, the Project is not anticipated to conflict with any applicable plan, ordinance, policy, or congestion management program with respect to traffic or circulation, or non-motorized travel.

c) **Less than Significant Impact.** The proposed facilities would be limited in height to approximately 2 stories or less, with the exception of the proposed emissions stack(s), which would be limited to a height of approximately 40 feet. These proposed facilities would not be located in close proximity to an existing airport. Additionally, the Project would not cause

changes in demand for air transport, nor would it otherwise alter existing air traffic levels or routes.

d) **Less than Significant Impact.** The Project would not install any new public access roadways, nor would it alter any public access roadways. Additionally, the Project would not introduce an incompatible use (i.e., such as agricultural use) to area roadways. Therefore, potential hazards associated with such conditions would be avoided.

e) **Less than Significant Impact.** The Project would not block or interfere with, temporarily or permanently, any emergency access route. While the Project would result in additional construction related trips, these would be limited in extent and would only occur during the construction period. Therefore, potential for interference with emergency access would be minimal.

f) **Less than Significant Impact.** The Project would not alter or interfere with existing public transit, bicycle, or pedestrian facilities. The Juan Bautista de Anza NHT (route R1-B) and San Francisco Bay Trail (route R4) are located within the general vicinity of the Project site, at a distance of at least 2,200 feet. Roadway design would be unchanged by the Project, and the Project would not substantially increase hazards to the roadway or the trail routes. Therefore, the Project would not impact the trail routes. More generally, Project construction would be limited in extent to an area that is not generally accessed or utilized by the public, including pedestrians, bicyclists, or persons utilizing public transit. While construction related truck trips could cause a minor increase in use of access roads, these would not interfere with pedestrian, bicycle, or public transit.

# 2.17 Utilities and Service Systems

## 2.17.1 Setting

### Environmental Setting

The City's sanitary sewer system includes approximately 2,200 miles of sewer pipelines ranging from six to 90 inches in diameter. Sewer systems route to the Facility, of which this Project is a component. The Facility provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 mgd average dry weather influent flow.

Solid waste and recycling collection services for businesses are provided by various contracted and franchised waste and recycling haulers. Non-residential waste may be disposed at any of four privately owned landfills in San José (including Newby Island Sanitary Landfill, Zanker Road Landfill, Zanker Material Processing Facility, and Guadalupe Landfill) or at other landfills outside the county. According to CalRecycle and Santa Clara County's 2012 five-year countywide integrated waste management plan review report, the county has adequate disposal capacity (i.e., greater than 15 years).[45, 46]

Historically, electrical power at the Facility was provided by a combination of grid power from PG&E, and power produced onsite by the existing cogeneration facilities. However, as discussed in the Project Description, due to failure of two of the engine generator sets in early 2013, the Facility including the Project area currently receive electrical power from the grid via PG&E as the main source of power supply.

### Regulatory Setting

#### *Federal Safe Drinking Water Act*

The USEPA administers the Safe Drinking Water Act (SDWA), the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The California Department of Health Services (DHS) implements the SDWA and oversees public water system quality statewide. California DHS establishes legal drinking water standards for contaminates that could threaten public health.

#### *Zero Waste Resolution and Zero Waste Strategic Plan*

In October 2007, the City Council adopted a Zero Waste Resolution (No. 74077), which set a goal of 75 percent waste diversion by 2013 and a goal of zero waste by 2022 for the City. To support this

[45] California Department of Resources Recycling and Recovery, Facility Information Toolbox: Identify Disposal Facility Capacity Shortfalls – Santa Clara County. Accessed August 8, 2013. http://www.calrecycle.ca.gov/FacIT/Facility/DisposalGap.aspx.

[46] Santa Clara County, 3rd Five-Year CIWMP/RAIWMP Review Report, August 21, 2012. Accessed August 7, 2013. http://www.sccgov.org/sites/iwm/Santa%20Clara%20County%20Integrated%20Waste%20Management%20Plan/Pages/Santa-Clara-County-Integrated-Waste-Management-Plan.aspx.

resolution and several Green Vision Goals, the City of San José Environmental Services Department prepared the Integrated Waste Management Zero Waste Strategic Plan in November 2008. The primary focus of this plan is to identify the path to achieve zero waste through various goals which include enhancing residential recycling, enhancing construction and demolition debris recycling, evaluating anaerobic digestion of food scraps at the Facility, and promoting the future development of energy conversion technologies for converting residual wastes into energy.

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **17. UTILITIES AND SERVICE SYSTEMS — Would the project:** | | | | | |
| a) Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| c) Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☒ | ☐ | 1, 2 |
| e) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☐ | ☒ | 1, 2 |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☒ | ☐ | 1,2,5 |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ | 1,2 |

## 2.17.2 Discussion

a) **No Impact.** The Project would not generate any wastewater during construction or operation, and therefore would not interfere with or conflict with any applicable Regional Water Quality Control Board requirements for wastewater treatment. For a discussion of stormwater and stormwater quality associated with Project construction and operation, please refer to Section 2.9 of this document. No impact would occur.

b) **Less than Significant Impact.** The Project would involve the construction and operation of facilities designed to provide a reliable onsite power source for existing wastewater

treatment facilities located at the existing Facility site. The Project would not require or result in the construction of new water or wastewater treatment facilities, because the Project would not require additional water supplies, would not generate wastewater, and would not result in the construction of a major housing development or other action that could drive increases in demand for water or wastewater treatment facilities. Therefore, this impact is considered less than significant.

c) **Less than Significant Impact.** The Project would involve the installation of new impervious surfaces including a Cogeneration Building, a gas treatment area, and associated concrete surfaces for parking, staging and other appurtenances discussed in the Project Description. Under existing conditions, drainage from the Project area is collected within the Facility central operational area and directed into the Facility headworks for treatment. Under the Project, stormwater would continue to be managed in this manner. Drainage on site would be managed using proposed infrastructure, and would be conveyed to the Facility headworks and treated using existing facilities. These existing facilities would be sufficiently sized so as to enable stormwater management from the Project area without further modification. Therefore, this impact is considered less than significant.

d) **Less than Significant Impact.** The Project would require limited water during construction in support of dust suppression and on site earth moving activities. During operations, negligible water would be required (the Project would not include cooling towers, which consume water, because heat from the proposed engines would be used for Facility operations). Therefore, existing water supplies at the Facility site would be sufficient to enable construction and operation of the proposed Project without requiring any new or expanded entitlements, or other new sources of water supply. This impact is considered less than significant. Additionally, the limited size and water demand of the Project would not trigger the need to complete a WSA.

e) **No Impact.** The Project would not generate wastewater. Therefore, the Project would not require additional wastewater treatment capacity in order to serve the Project. No impact would occur.

f) **Less than Significant Impact.** During construction, the Project would generate various construction-related waste and debris. This could include rubble from the removal of existing concrete or asphalt on site, as well as solid wastes generated during the construction process. During the construction process, solid wastes would include construction related wastes such as wood wastes, metals, concrete, plastics, and various other components. Operation would generate limited solid wastes associated with maintenance of the proposed facilities.

To the extent feasible, demolition rubble would be recycled, including concrete, asphalt, and other recyclable materials. Similarly, recyclable construction materials would also be recycled. Non-recyclable materials would be landfilled or otherwise disposed of in accordance with applicable regulatory requirements. As noted above, the Project would utilize one or more of the four landfills identified above to dispose of demolition and construction related solid wastes from the Project area, while recycling would rely on a local franchised recycler. Given that the county has at least 15 years of available landfill capacity,

and that the Project would generate a relatively limited volume of solid waste due to its limited extent, and because operation period waste generation would be extremely limited, available landfill capacity would not be noticeably affected by the Project. This impact is considered less than significant.

g) **Less than Significant Impact.** Project construction and operation would comply with all applicable regulatory requirements related to solid waste. Specifications for Project construction would contain requirements for the handling, storage, cleanup, and disposal of any hazardous materials, cement, or other construction pollutants. For additional discussion of hazardous materials and potential hazardous materials handling and impacts, please refer to Section 2.8 of this document.

Operation of the Project would also comply with all applicable regulatory requirements related to the handling, management, and disposal of solid waste. For additional information regarding the management of hazardous materials on site, please refer to Section 2.8 of this document. No mitigation is warranted and this impact is considered less than significant.

# 2.18 Mandatory Findings of Significance

| *Issues (and Supporting Information Sources):* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporation* | *Less Than Significant Impact* | *No Impact* | *Checklist Source(s)* |
|---|---|---|---|---|---|
| **18. MANDATORY FINDINGS OF SIGNIFICANCE — Would the project:** | | | | | |
| a) Have the potential to 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, 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? | ☐ | ☐ | ☒ | ☐ | 1, 2, 8, 9 |
| b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☐ | ☒ | ☐ | ☐ | 1, 2 |
| c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | ☒ | ☐ | 1, 2 |

## 2.18.1 Discussion

a) **Less than Significant Impact.** As discussed for potential impacts to biological resources, the Project would not result in the substantial loss or degradation of habitat for special status species, and would not affect an endangered species. Additionally, the Project would not result in actions that would degrade the quality of the environment, nor would it affect any known important historic or prehistoric resources. For additional discussion, please refer to the impact analysis for relevant impact criteria, above. No further mitigation would be required.

b) **Less than Significant with Mitigation.** Cumulative environmental effects are multiple individual effects that, when considered together are considerable or compound or increase other environmental impacts. The individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time. Cumulative projects identified that are ongoing at present or anticipated in the reasonably foreseeable future that would be relevant to the proposed Project include the proposed projects associated with implementation of the Plant Master Plan, as well as other anticipated facility upgrades at the Facility site including near term installation of a proposed emergency backup power generation facility, and upgrades to the existing digesters. The text below characterizes the project's potential to contribute to significant cumulative impacts.

***Air quality, Greenhouse Gas Emissions.*** The Project's air quality impacts would largely be limited to the construction period. Temporary construction related air quality and GHG emissions would be minimized through the adherence to BAAQMD standards and requirements, the City's GHG Strategy, and BAAQMD basic construction mitigation measures. Operation period emissions would occur on an ongoing basis, but would adhere to applicable BAAQMD permit conditions and other applied mitigation measures, as discussed for direct impacts. The methodology for assessing cumulative air quality impacts is based on BAAQMD guidance, as noted above. As described for Checklist Item 3c of Section 2.3.2., Air Quality, with implementation of Mitigation Measure AIR-1, the Project would not result in a cumulatively considerable net increase in criteria air pollutants. The analysis of greenhouse gas emissions is inherently a cumulative analysis (with the geographic scope of the impact being the global climate). As described in Section 2.7.2, the Project would not result in significant impacts related to greenhouse gas emissions.

***Biological Resources.*** The Project would have no direct impacts on riparian habitat or other sensitive natural communities, federally protected wetlands, migration of species, or applicable biological resources protection ordinances. Therefore, the Project would not contribute to any cumulative impact for these resources. Additionally, biological resources mitigation measures identified in the Master Plan EIR would include reserving approximately 180 acres of burrowing owl nesting and foraging habitat, which according to the Master Plan Draft EIR would be sufficient to offset impacts incurred by Master Plan implementation. Therefore, a cumulatively considerable impact to biological resources would not occur.

**Impact C-TR:** ***Traffic***. As noted in Section 2.3 and the Project Description, construction traffic generation and on site activity would be limited. However, construction of the proposed Project could overlap with construction of other projects at the Facility. Based on preliminary schedules currently available for projects at the Facility, the projects shown in Table 2.18-1 could overlap with Project construction.

Because the extent of construction of potentially overlapping projects is not fully known at this time, it is possible that service levels along affected roadways could be temporarily degraded.

Mitigation Measure: Implementation of the following mitigation measure would reduce the project's contribution to any potential traffic impacts to the surrounding network; implementation of this measure would ensure that the Project's contribution to the impact is less-than-cumulatively considerable.

**TABLE 2.18-1**
**MASTER PLAN PROJECTS WITH CONSTRUCTION SCHEDULES OVERLAPPING WITH THE PROJECT**

| Process Area | Project Title | Project Summary | Estimated Construction Schedule |
|---|---|---|---|
| Headworks | Headworks Immediate & Short-Term Improvements | Includes, but is not limited to: repair submerged concrete surfaces, coatings, and equipment; various electrical & instrumentation improvements; replace climber screen; replace sluice way with belt conveyor; replace wash press; install additional grit pumps; install pressure sensor rings; provide benching/baffling within EBOS. | Mid-2014 to 2018 |
| Secondary | Cooling Tower C (A-Side) Replacement | Entails replacing the cooling tower in the SBB. | 2014 |
| Filtration and Disinfection | Miscellaneous Filtration Repairs | Entails the reparations required through transition to a new filter complex, and include valve replacement, electrical control replacement, and concrete repair. | 2015-2017 |
| Biosolids | DAFT Final Upgrades (6 DAFTs) | Upgrade of six of the existing (Dissolved Air Flotation Thickener) DAFT units (new pumps, retrofits of tank systems, new polymer system, saturation system upgrades, and piping modifications). Odor containment modifications include covers, air ducting, and fans and addition of biofilter. | Combined as one project: Digester and Thickener Upgrade, Mid 2015-2017 |
| | Biogas Manifold and Tunnel Improvements | Includes new above-ground gas manifold to connect all biogas laterals and related piping and valving, removal of hazardous piping form tunnels, sealing tunnels from other classified areas, and relocating ventilation intakes. | |
| | Digester Cover and Mixing Upgrades: 3 phases | Includes installation of new covers and mixers and related equipment at digesters in 3 phases. | |
| | Digester Heating Upgrades | Entails piping, equipment, and control modifications to the individual digester heat supply systems. | |
| | Dissolved Air Flotation Dissolution Improvements | Replace discharge pipes for Pressure Pump Systems (PPS) 3 & 4, replace check and gate valves for PPS 2-4, install electric actuators on new and existing gate valves. | 2014 |
| | Biosolids Facility (Drying and dewatering) | Inactive lagoon biosolids removal, new mechanical dewatering and thermal drying systems, feed storage tank, 14-inch digested sludge line, covered lagoons, and greenhouse. | 2014-2018 |
| Energy | Emergency Generators | Construction of new emergency generators facility that would house approximately 12 MW nameplate capacity of diesel reciprocating engine generators. The engine generators would be used for emergency backup purposes only. | 2014-2016 |
| | 115kV Circuit Breaker Replacement | Replace two existing 115KV Circuit Breakers, 52T1 & 52T2 and two 115KV Potential Devices: PD3 & PD4. | Through June 2014 |
| | Biogas Compressor Upgrade | Design & build a new Biogas Compressor Facility north of existing Sludge Building to house two new biogas compressors. New inlet and discharge headers will be connected to existing biogas inlet and discharge headers. | Through Summer 2014 |
| | Biogas Storage Replacement | Demolish existing large gas holding tank, including outer shell, and construct new dual membrane gas tank at same location. | Through Fall 2014 |

| | | | |
|---|---|---|---|
| Site Facility Improvements | DCS Fiber Optics Network Expansion | Install approx 34,000 ft of new fiber optic cable through ex. conduits/manholes for upcoming upgrade to Plant's Distributed Control System; incl. approx. 1,800 ft of 3 new 2" conduits from ex. electrical vault to RSM Building. | Through January 2014 |
| | Ammonia & TSS Meter Installation | Install new ammonia & TSS meters at the Secondary & Nitrification Areas. Consolidate instrument signals, terminate at new S800 panels and separate the electrical circuits for flowmeters and Dissolved Oxygen meter at Secondary Area. | Mid-2014 to Mid-2015 |
| | No. 3 Water Pump Replacement | Modify No. 3 Water System and replace two pumps and associated piping located in the FIPS building in order to improve the efficiency and reliability of the system... | Mid 2014 to end of 2015 |

Source: San Jose/Santa Clara Water Pollution Control Plant Master Plan Environmental Impact Report.

**Mitigation Measure C-TR: Implement Coordinated Transportation Management Plan.**

Prior to construction, the City's contractor(s) shall develop a Coordinated Transportation Management Plan and work with other projects' contractors and appropriate City departments (e.g., Emergency Services, Fire, Police, Transportation) to prepare and implement a transportation management plan for roadways adjacent to and directly affected by the Project as well as planned Facility improvements and land uses, and to address the transportation impact of the overlapping construction projects within the vicinity of the Project in the region. The transportation management plan shall include, but not be limited to, the following requirements:

- Coordination of individual traffic control plans for the Project with nearby projects.
- Coordination between the Project contractor and other project contractors in developing circulation and detour plans that include safety features (e.g., signage and flaggers). The circulation and detour plans shall address:
  - Full and partial roadways closures
  - Circulation and detour plans to include the use of signage and flagging to guide vehicles through and/or around the construction zone, as well as any temporary traffic control devices
  - Bicycle/Pedestrian detour plans, where applicable
  - Parking along public roadways
  - Haul routes for construction trucks and staging areas for instances when multiple trucks arrive at the work sites
- Protocols for updating the transportation management plan to account for delays or changes in the schedules of individual projects.
- A comprehensive and continual outreach program to notify affected citizens (i.e. residents of Alviso, commuters, etc.) of all construction activity and roadway closures for the duration of the projects.

c) **Less than Significant Impact.** All potential environmental impacts identified in support of the Project would be minimal/less than significant without mitigation, or would be minimized via implementation of applicable mitigation measures. All potential hazards and hazardous materials impacts would be minimized. No potentially significant impacts, which could cause substantial adverse direct or indirect effects on human beings were identified.

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# CHAPTER 3
# Checklist Sources

1. CEQA Guidelines and professional expertise of consultant
2. Project plan/description and site review
3. Envision San José 2040 (San José General Plan)
4. Santa Clara Valley Habitat Plan
5. Santa Clara County's Five-Year CIWMP/RAIWMP Review Report (August, 2007)
6. California Geological Survey Alquist-Priolo maps
7. California Department of Transportation Officially Designated State Scenic Highways and Historic Parkways (http://www.dot.ca.gov/hq/LandArch/scenic_highways/)
8. Satellite imagery from 2007, 2012, 2013, and 2014 available via Google Earth
9. Santa Clara Valley Habitat Plan
10. Bay Area Air Quality Management District (BAAQMD), 2011. *CEQA Air Quality Guidelines*, revised May 2011.
11. FEMA 100-year floodplain delineations

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# APPENDIX A
# Air Quality

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# Construction Emissions

ESA

**Average Annual Daily Criteria Pollutant Emissions** San Jose CoGen Construction

| Unmitigated Construction | | | tpy | |
|---|---|---|---|---|
| Year | ROG | Nox | PM10 exh | PM2.5 exh |
| 2015 | 0.2399 | 1.8324 | 0.0981 | 0.0931 |
| 2016 | 0.7455 | 2.475 | 0.1516 | 0.1454 |
| 2017 | 0.0624 | 0.00753 | 0.00046 | 0.00046 |

| Unmitigated Construction | | | average lbs/day | |
|---|---|---|---|---|
| Year | ROG | Nox | PM10 exh | PM2.5 exh |
| 2015 | 3.6 | 27.3 | 1.5 | 1.4 |
| 2016 | 5.7 | 19.0 | 1.2 | 1.1 |
| 2017 | 25.0 | 3.0 | 0.2 | 0.2 |

| Construction Duration: | | |
|---|---|---|
| 134 | days | 2015 |
| 261 | days | 2016 |
| 5 | days | 2017 |

# San Jose CoGen Construction

**Santa Clara County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Light Industry | 36.30 | 1000sqft | 0.83 | 36,300.00 | 0 |
| Parking Lot | 25.00 | 1000sqft | 0.57 | 25,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 58 |
| **Climate Zone** | 4 | | | **Operational Year** | 2017 |
| **Utility Company** | Pacific Gas & Electric Company | | | | |
| **CO2 Intensity (lb/MWhr)** | 641.35 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - 400 working days assumed

Trips and VMT - Total Truck Trips = 7,964 One Way

Grading - Cut/Fill Provided

Vehicle Trips - Construction Only Calc - No Ops

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 150.00 | 250.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 100.00 | 250.00 |
| tblArchitecturalCoating | EF_Residential_Exterior | 150.00 | 250.00 |
| tblArchitecturalCoating | EF_Residential_Interior | 100.00 | 250.00 |
| tblConstructionPhase | NumDays | 10.00 | 35.00 |
| tblConstructionPhase | NumDays | 200.00 | 270.00 |
| tblConstructionPhase | NumDays | 4.00 | 50.00 |
| tblConstructionPhase | NumDays | 10.00 | 45.00 |
| tblConstructionPhase | PhaseEndDate | 1/6/2017 | 1/7/2017 |
| tblConstructionPhase | PhaseEndDate | 9/16/2016 | 9/17/2016 |
| tblConstructionPhase | PhaseEndDate | 9/4/2015 | 9/5/2015 |
| tblConstructionPhase | PhaseEndDate | 11/18/2016 | 11/19/2016 |
| tblGrading | AcresOfGrading | 18.75 | 1.50 |
| tblGrading | MaterialExported | 0.00 | 6,723.00 |
| tblGrading | MaterialImported | 0.00 | 4,710.00 |
| tblProjectCharacteristics | OperationalYear | 2014 | 2017 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 11.00 |
| tblTripsAndVMT | VendorTripNumber | 10.00 | 19.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 12.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 9.00 |
| tblVehicleTrips | ST_TR | 1.32 | 0.00 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2015 | 0.2399 | 1.8324 | 1.3881 | 2.2000e-003 | 0.1451 | 0.0981 | 0.2432 | 0.0707 | 0.0931 | 0.1638 | 0.0000 | 195.6184 | 195.6184 | 0.0293 | 0.0000 | 196.2342 |
| 2016 | 0.7455 | 2.4750 | 2.0358 | 3.2000e-003 | 0.0394 | 0.1516 | 0.1910 | 0.0108 | 0.1454 | 0.1562 | 0.0000 | 273.7758 | 273.7758 | 0.0483 | 0.0000 | 274.7891 |
| 2017 | 0.0624 | 7.5300e-003 | 8.0400e-003 | 1.0000e-005 | 2.6000e-004 | 4.6000e-004 | 7.2000e-004 | 7.0000e-005 | 4.6000e-004 | 5.3000e-004 | 0.0000 | 1.2130 | 1.2130 | 8.0000e-005 | 0.0000 | 1.2146 |
| **Total** | **1.0479** | **4.3149** | **3.4319** | **5.4100e-003** | **0.1848** | **0.2501** | **0.4349** | **0.0815** | **0.2390** | **0.3205** | **0.0000** | **470.6072** | **470.6072** | **0.0777** | **0.0000** | **472.2378** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2015 | 0.2399 | 1.8324 | 1.3881 | 2.2000e-003 | 0.1451 | 0.0981 | 0.2432 | 0.0707 | 0.0931 | 0.1638 | 0.0000 | 195.6183 | 195.6183 | 0.0293 | 0.0000 | 196.2340 |
| 2016 | 0.7455 | 2.4750 | 2.0358 | 3.2000e-003 | 0.0394 | 0.1516 | 0.1910 | 0.0108 | 0.1454 | 0.1562 | 0.0000 | 273.7756 | 273.7756 | 0.0483 | 0.0000 | 274.7889 |
| 2017 | 0.0624 | 7.5300e-003 | 8.0400e-003 | 1.0000e-005 | 2.6000e-004 | 4.6000e-004 | 7.2000e-004 | 7.0000e-005 | 4.6000e-004 | 5.3000e-004 | 0.0000 | 1.2130 | 1.2130 | 8.0000e-005 | 0.0000 | 1.2146 |
| **Total** | **1.0479** | **4.3149** | **3.4319** | **5.4100e-003** | **0.1848** | **0.2501** | **0.4349** | **0.0815** | **0.2390** | **0.3205** | **0.0000** | **470.6068** | **470.6068** | **0.0777** | **0.0000** | **472.2375** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

### Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.2588 | 1.0000e-005 | 5.7000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.1000e-003 | 1.1000e-003 | 0.0000 | 0.0000 | 1.1600e-003 |
| Energy | 5.3700e-003 | 0.0488 | 0.0410 | 2.9000e-004 | | 3.7100e-003 | 3.7100e-003 | | 3.7100e-003 | 3.7100e-003 | 0.0000 | 154.8537 | 154.8537 | 5.6200e-003 | 1.9300e-003 | 155.5686 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 9.1366 | 0.0000 | 9.1366 | 0.5400 | 0.0000 | 20.4758 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.6632 | 13.2138 | 15.8769 | 0.2741 | 6.5800e-003 | 23.6741 |
| **Total** | **0.2642** | **0.0488** | **0.0415** | **2.9000e-004** | **0.0000** | **3.7100e-003** | **3.7100e-003** | **0.0000** | **3.7100e-003** | **3.7100e-003** | **11.7998** | **168.0686** | **179.8684** | **0.8197** | **8.5100e-003** | **199.7196** |

## 2.2 Overall Operational

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 0.2588 | 1.0000e-005 | 5.7000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.1000e-003 | 1.1000e-003 | 0.0000 | 0.0000 | 1.1600e-003 |
| Energy | 5.3700e-003 | 0.0488 | 0.0410 | 2.9000e-004 | | 3.7100e-003 | 3.7100e-003 | | 3.7100e-003 | 3.7100e-003 | 0.0000 | 154.8537 | 154.8537 | 5.6200e-003 | 1.9300e-003 | 155.5686 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 9.1366 | 0.0000 | 9.1366 | 0.5400 | 0.0000 | 20.4758 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 2.6632 | 13.2138 | 15.8769 | 0.2741 | 6.5700e-003 | 23.6699 |
| **Total** | **0.2642** | **0.0488** | **0.0415** | **2.9000e-004** | **0.0000** | **3.7100e-003** | **3.7100e-003** | **0.0000** | **3.7100e-003** | **3.7100e-003** | **11.7998** | **168.0686** | **179.8684** | **0.8197** | **8.5000e-003** | **199.7154** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.01** | **0.12** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Grading | Grading | 6/27/2015 | 9/5/2015 | 5 | 50 | |
| 2 | Building Construction | Building Construction | 9/6/2015 | 9/17/2016 | 5 | 270 | |
| 3 | Paving | Paving | 9/18/2016 | 11/19/2016 | 5 | 45 | |
| 4 | Architectural Coating | Architectural Coating | 11/20/2016 | 1/7/2017 | 5 | 35 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 55,575; Non-Residential Outdoor: 18,525 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Grading | Graders | 1 | 6.00 | 174 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 255 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 6.00 | 226 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 6.00 | 125 | 0.42 |
| Paving | Paving Equipment | 1 | 8.00 | 130 | 0.36 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Grading | 3 | 8.00 | 11.00 | 1,429.00 | 12.40 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 26.00 | 19.00 | 0.00 | 12.40 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 13.00 | 12.00 | 0.00 | 12.40 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 5.00 | 9.00 | 0.00 | 12.40 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Grading - 2015

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1144 | 0.0000 | 0.1144 | 0.0623 | 0.0000 | 0.0623 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0517 | 0.5486 | 0.3523 | 3.5000e-004 | | 0.0299 | 0.0299 | | 0.0275 | 0.0275 | 0.0000 | 33.5613 | 33.5613 | 0.0100 | 0.0000 | 33.7717 |
| **Total** | **0.0517** | **0.5486** | **0.3523** | **3.5000e-004** | **0.1144** | **0.0299** | **0.1443** | **0.0623** | **0.0275** | **0.0898** | **0.0000** | **33.5613** | **33.5613** | **0.0100** | **0.0000** | **33.7717** |

## 3.2 Grading - 2015

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0175 | 0.2473 | 0.1780 | 5.4000e-004 | 0.0121 | 3.6900e-003 | 0.0158 | 3.3200e-003 | 3.3900e-003 | 6.7100e-003 | 0.0000 | 49.5239 | 49.5239 | 4.2000e-004 | 0.0000 | 49.5327 |
| Vendor | 3.6400e-003 | 0.0316 | 0.0395 | 7.0000e-005 | 1.7800e-003 | 5.1000e-004 | 2.2900e-003 | 5.1000e-004 | 4.7000e-004 | 9.8000e-004 | 0.0000 | 6.0162 | 6.0162 | 5.0000e-005 | 0.0000 | 6.0173 |
| Worker | 8.3000e-004 | 1.1700e-003 | 0.0114 | 2.0000e-005 | 1.8200e-003 | 2.0000e-005 | 1.8400e-003 | 4.8000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.6619 | 1.6619 | 9.0000e-005 | 0.0000 | 1.6639 |
| **Total** | **0.0220** | **0.2801** | **0.2289** | **6.3000e-004** | **0.0157** | **4.2200e-003** | **0.0199** | **4.3100e-003** | **3.8700e-003** | **8.1900e-003** | **0.0000** | **57.2021** | **57.2021** | **5.6000e-004** | **0.0000** | **57.2139** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1144 | 0.0000 | 0.1144 | 0.0623 | 0.0000 | 0.0623 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0517 | 0.5486 | 0.3523 | 3.5000e-004 | | 0.0299 | 0.0299 | | 0.0275 | 0.0275 | 0.0000 | 33.5613 | 33.5613 | 0.0100 | 0.0000 | 33.7717 |
| **Total** | **0.0517** | **0.5486** | **0.3523** | **3.5000e-004** | **0.1144** | **0.0299** | **0.1443** | **0.0623** | **0.0275** | **0.0898** | **0.0000** | **33.5613** | **33.5613** | **0.0100** | **0.0000** | **33.7717** |

## 3.2 Grading - 2015

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0175 | 0.2473 | 0.1780 | 5.4000e-004 | 0.0121 | 3.6900e-003 | 0.0158 | 3.3200e-003 | 3.3900e-003 | 6.7100e-003 | 0.0000 | 49.5239 | 49.5239 | 4.2000e-004 | 0.0000 | 49.5327 |
| Vendor | 3.6400e-003 | 0.0316 | 0.0395 | 7.0000e-005 | 1.7800e-003 | 5.1000e-004 | 2.2900e-003 | 5.1000e-004 | 4.7000e-004 | 9.8000e-004 | 0.0000 | 6.0162 | 6.0162 | 5.0000e-005 | 0.0000 | 6.0173 |
| Worker | 8.3000e-004 | 1.1700e-003 | 0.0114 | 2.0000e-005 | 1.8200e-003 | 2.0000e-005 | 1.8400e-003 | 4.8000e-004 | 1.0000e-005 | 5.0000e-004 | 0.0000 | 1.6619 | 1.6619 | 9.0000e-005 | 0.0000 | 1.6639 |
| **Total** | **0.0220** | **0.2801** | **0.2289** | **6.3000e-004** | **0.0157** | **4.2200e-003** | **0.0199** | **4.3100e-003** | **3.8700e-003** | **8.1900e-003** | **0.0000** | **57.2021** | **57.2021** | **5.6000e-004** | **0.0000** | **57.2139** |

## 3.3 Building Construction - 2015

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1512 | 0.9057 | 0.6302 | 9.2000e-004 | | 0.0624 | 0.0624 | | 0.0602 | 0.0602 | 0.0000 | 78.3229 | 78.3229 | 0.0181 | 0.0000 | 78.7023 |
| **Total** | **0.1512** | **0.9057** | **0.6302** | **9.2000e-004** | | **0.0624** | **0.0624** | | **0.0602** | **0.0602** | **0.0000** | **78.3229** | **78.3229** | **0.0181** | **0.0000** | **78.7023** |

## 3.3 Building Construction - 2015

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0106 | 0.0916 | 0.1147 | 1.9000e-004 | 5.1500e-003 | 1.4900e-003 | 6.6500e-003 | 1.4800e-003 | 1.3700e-003 | 2.8500e-003 | 0.0000 | 17.4579 | 17.4579 | 1.6000e-004 | 0.0000 | 17.4612 |
| Worker | 4.5300e-003 | 6.3800e-003 | 0.0621 | 1.2000e-004 | 9.9400e-003 | 8.0000e-005 | 0.0100 | 2.6400e-003 | 8.0000e-005 | 2.7200e-003 | 0.0000 | 9.0742 | 9.0742 | 5.1000e-004 | 0.0000 | 9.0850 |
| **Total** | **0.0151** | **0.0980** | **0.1768** | **3.1000e-004** | **0.0151** | **1.5700e-003** | **0.0167** | **4.1200e-003** | **1.4500e-003** | **5.5700e-003** | **0.0000** | **26.5321** | **26.5321** | **6.7000e-004** | **0.0000** | **26.5462** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1512 | 0.9057 | 0.6302 | 9.2000e-004 | | 0.0624 | 0.0624 | | 0.0602 | 0.0602 | 0.0000 | 78.3228 | 78.3228 | 0.0181 | 0.0000 | 78.7022 |
| **Total** | **0.1512** | **0.9057** | **0.6302** | **9.2000e-004** | | **0.0624** | **0.0624** | | **0.0602** | **0.0602** | **0.0000** | **78.3228** | **78.3228** | **0.0181** | **0.0000** | **78.7022** |

## 3.3 Building Construction - 2015

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0106 | 0.0916 | 0.1147 | 1.9000e-004 | 5.1500e-003 | 1.4900e-003 | 6.6500e-003 | 1.4800e-003 | 1.3700e-003 | 2.8500e-003 | 0.0000 | 17.4579 | 17.4579 | 1.6000e-004 | 0.0000 | 17.4612 |
| Worker | 4.5300e-003 | 6.3800e-003 | 0.0621 | 1.2000e-004 | 9.9400e-003 | 8.0000e-005 | 0.0100 | 2.6400e-003 | 8.0000e-005 | 2.7200e-003 | 0.0000 | 9.0742 | 9.0742 | 5.1000e-004 | 0.0000 | 9.0850 |
| **Total** | **0.0151** | **0.0980** | **0.1768** | **3.1000e-004** | **0.0151** | **1.5700e-003** | **0.0167** | **4.1200e-003** | **1.4500e-003** | **5.5700e-003** | **0.0000** | **26.5321** | **26.5321** | **6.7000e-004** | **0.0000** | **26.5462** |

## 3.3 Building Construction - 2016

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.3061 | 1.9108 | 1.3678 | 2.0400e-003 | | 0.1270 | 0.1270 | | 0.1225 | 0.1225 | 0.0000 | 172.6969 | 172.6969 | 0.0380 | 0.0000 | 173.4940 |
| **Total** | **0.3061** | **1.9108** | **1.3678** | **2.0400e-003** | | **0.1270** | **0.1270** | | **0.1225** | **0.1225** | **0.0000** | **172.6969** | **172.6969** | **0.0380** | **0.0000** | **173.4940** |

## 3.3 Building Construction - 2016

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0210 | 0.1764 | 0.2389 | 4.2000e-004 | 0.0114 | 2.6400e-003 | 0.0141 | 3.2700e-003 | 2.4300e-003 | 5.7000e-003 | 0.0000 | 38.2124 | 38.2124 | 3.1000e-004 | 0.0000 | 38.2188 |
| Worker | 9.0000e-003 | 0.0127 | 0.1229 | 2.5000e-004 | 0.0220 | 1.8000e-004 | 0.0222 | 5.8500e-003 | 1.6000e-004 | 6.0200e-003 | 0.0000 | 19.3980 | 19.3980 | 1.0400e-003 | 0.0000 | 19.4198 |
| **Total** | **0.0300** | **0.1891** | **0.3618** | **6.7000e-004** | **0.0334** | **2.8200e-003** | **0.0363** | **9.1200e-003** | **2.5900e-003** | **0.0117** | **0.0000** | **57.6104** | **57.6104** | **1.3500e-003** | **0.0000** | **57.6386** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.3061 | 1.9108 | 1.3678 | 2.0400e-003 | | 0.1270 | 0.1270 | | 0.1225 | 0.1225 | 0.0000 | 172.6967 | 172.6967 | 0.0380 | 0.0000 | 173.4938 |
| **Total** | **0.3061** | **1.9108** | **1.3678** | **2.0400e-003** | | **0.1270** | **0.1270** | | **0.1225** | **0.1225** | **0.0000** | **172.6967** | **172.6967** | **0.0380** | **0.0000** | **173.4938** |

## 3.3 Building Construction - 2016

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0210 | 0.1764 | 0.2389 | 4.2000e-004 | 0.0114 | 2.6400e-003 | 0.0141 | 3.2700e-003 | 2.4300e-003 | 5.7000e-003 | 0.0000 | 38.2124 | 38.2124 | 3.1000e-004 | 0.0000 | 38.2188 |
| Worker | 9.0000e-003 | 0.0127 | 0.1229 | 2.5000e-004 | 0.0220 | 1.8000e-004 | 0.0222 | 5.8500e-003 | 1.6000e-004 | 6.0200e-003 | 0.0000 | 19.3980 | 19.3980 | 1.0400e-003 | 0.0000 | 19.4198 |
| **Total** | **0.0300** | **0.1891** | **0.3618** | **6.7000e-004** | **0.0334** | **2.8200e-003** | **0.0363** | **9.1200e-003** | **2.5900e-003** | **0.0117** | **0.0000** | **57.6104** | **57.6104** | **1.3500e-003** | **0.0000** | **57.6386** |

## 3.4 Paving - 2016

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0290 | 0.2972 | 0.2045 | 3.0000e-004 | | 0.0182 | 0.0182 | | 0.0167 | 0.0167 | 0.0000 | 27.9321 | 27.9321 | 8.2700e-003 | 0.0000 | 28.1058 |
| Paving | 7.5000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0297** | **0.2972** | **0.2045** | **3.0000e-004** | | **0.0182** | **0.0182** | | **0.0167** | **0.0167** | **0.0000** | **27.9321** | **27.9321** | **8.2700e-003** | **0.0000** | **28.1058** |

## 3.4 Paving - 2016

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 3.2000e-003 | 0.0270 | 0.0365 | 6.0000e-005 | 1.7400e-003 | 4.0000e-004 | 2.1500e-003 | 5.0000e-004 | 3.7000e-004 | 8.7000e-004 | 0.0000 | 5.8389 | 5.8389 | 5.0000e-005 | 0.0000 | 5.8399 |
| Worker | 1.0900e-003 | 1.5300e-003 | 0.0149 | 3.0000e-005 | 2.6600e-003 | 2.0000e-005 | 2.6800e-003 | 7.1000e-004 | 2.0000e-005 | 7.3000e-004 | 0.0000 | 2.3465 | 2.3465 | 1.3000e-004 | 0.0000 | 2.3492 |
| **Total** | **4.2900e-003** | **0.0285** | **0.0514** | **9.0000e-005** | **4.4000e-003** | **4.2000e-004** | **4.8300e-003** | **1.2100e-003** | **3.9000e-004** | **1.6000e-003** | **0.0000** | **8.1854** | **8.1854** | **1.8000e-004** | **0.0000** | **8.1891** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0290 | 0.2972 | 0.2045 | 3.0000e-004 | | 0.0182 | 0.0182 | | 0.0167 | 0.0167 | 0.0000 | 27.9320 | 27.9320 | 8.2700e-003 | 0.0000 | 28.1057 |
| Paving | 7.5000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0297** | **0.2972** | **0.2045** | **3.0000e-004** | | **0.0182** | **0.0182** | | **0.0167** | **0.0167** | **0.0000** | **27.9320** | **27.9320** | **8.2700e-003** | **0.0000** | **28.1057** |

## 3.4 Paving - 2016

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 3.2000e-003 | 0.0270 | 0.0365 | 6.0000e-005 | 1.7400e-003 | 4.0000e-004 | 2.1500e-003 | 5.0000e-004 | 3.7000e-004 | 8.7000e-004 | 0.0000 | 5.8389 | 5.8389 | 5.0000e-005 | 0.0000 | 5.8399 |
| Worker | 1.0900e-003 | 1.5300e-003 | 0.0149 | 3.0000e-005 | 2.6600e-003 | 2.0000e-005 | 2.6800e-003 | 7.1000e-004 | 2.0000e-005 | 7.3000e-004 | 0.0000 | 2.3465 | 2.3465 | 1.3000e-004 | 0.0000 | 2.3492 |
| **Total** | **4.2900e-003** | **0.0285** | **0.0514** | **9.0000e-005** | **4.4000e-003** | **4.2000e-004** | **4.8300e-003** | **1.2100e-003** | **3.9000e-004** | **1.6000e-003** | **0.0000** | **8.1854** | **8.1854** | **1.8000e-004** | **0.0000** | **8.1891** |

## 3.5 Architectural Coating - 2016

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.3680 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.5300e-003 | 0.0356 | 0.0283 | 4.0000e-005 | | 2.9500e-003 | 2.9500e-003 | | 2.9500e-003 | 2.9500e-003 | 0.0000 | 3.8299 | 3.8299 | 4.5000e-004 | 0.0000 | 3.8394 |
| **Total** | **0.3735** | **0.0356** | **0.0283** | **4.0000e-005** | | **2.9500e-003** | **2.9500e-003** | | **2.9500e-003** | **2.9500e-003** | **0.0000** | **3.8299** | **3.8299** | **4.5000e-004** | **0.0000** | **3.8394** |

## 3.5 Architectural Coating - 2016

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.6000e-003 | 0.0135 | 0.0183 | 3.0000e-005 | 8.7000e-004 | 2.0000e-004 | 1.0700e-003 | 2.5000e-004 | 1.9000e-004 | 4.4000e-004 | 0.0000 | 2.9195 | 2.9195 | 2.0000e-005 | 0.0000 | 2.9199 |
| Worker | 2.8000e-004 | 3.9000e-004 | 3.8100e-003 | 1.0000e-005 | 6.8000e-004 | 1.0000e-005 | 6.9000e-004 | 1.8000e-004 | 1.0000e-005 | 1.9000e-004 | 0.0000 | 0.6017 | 0.6017 | 3.0000e-005 | 0.0000 | 0.6024 |
| **Total** | **1.8800e-003** | **0.0139** | **0.0221** | **4.0000e-005** | **1.5500e-003** | **2.1000e-004** | **1.7600e-003** | **4.3000e-004** | **2.0000e-004** | **6.3000e-004** | **0.0000** | **3.5211** | **3.5211** | **5.0000e-005** | **0.0000** | **3.5223** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.3680 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 5.5300e-003 | 0.0356 | 0.0283 | 4.0000e-005 | | 2.9500e-003 | 2.9500e-003 | | 2.9500e-003 | 2.9500e-003 | 0.0000 | 3.8299 | 3.8299 | 4.5000e-004 | 0.0000 | 3.8394 |
| **Total** | **0.3735** | **0.0356** | **0.0283** | **4.0000e-005** | | **2.9500e-003** | **2.9500e-003** | | **2.9500e-003** | **2.9500e-003** | **0.0000** | **3.8299** | **3.8299** | **4.5000e-004** | **0.0000** | **3.8394** |

## 3.5 Architectural Coating - 2016

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 1.6000e-003 | 0.0135 | 0.0183 | 3.0000e-005 | 8.7000e-004 | 2.0000e-004 | 1.0700e-003 | 2.5000e-004 | 1.9000e-004 | 4.4000e-004 | 0.0000 | 2.9195 | 2.9195 | 2.0000e-005 | 0.0000 | 2.9199 |
| Worker | 2.8000e-004 | 3.9000e-004 | 3.8100e-003 | 1.0000e-005 | 6.8000e-004 | 1.0000e-005 | 6.9000e-004 | 1.8000e-004 | 1.0000e-005 | 1.9000e-004 | 0.0000 | 0.6017 | 0.6017 | 3.0000e-005 | 0.0000 | 0.6024 |
| **Total** | **1.8800e-003** | **0.0139** | **0.0221** | **4.0000e-005** | **1.5500e-003** | **2.1000e-004** | **1.7600e-003** | **4.3000e-004** | **2.0000e-004** | **6.3000e-004** | **0.0000** | **3.5211** | **3.5211** | **5.0000e-005** | **0.0000** | **3.5223** |

## 3.5 Architectural Coating - 2017

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0613 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 8.3000e-004 | 5.4600e-003 | 4.6700e-003 | 1.0000e-005 | | 4.3000e-004 | 4.3000e-004 | | 4.3000e-004 | 4.3000e-004 | 0.0000 | 0.6383 | 0.6383 | 7.0000e-005 | 0.0000 | 0.6397 |
| **Total** | **0.0622** | **5.4600e-003** | **4.6700e-003** | **1.0000e-005** | | **4.3000e-004** | **4.3000e-004** | | **4.3000e-004** | **4.3000e-004** | **0.0000** | **0.6383** | **0.6383** | **7.0000e-005** | **0.0000** | **0.6397** |

## 3.5 Architectural Coating - 2017

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.3000e-004 | 2.0100e-003 | 2.8000e-003 | 1.0000e-005 | 1.5000e-004 | 3.0000e-005 | 1.7000e-004 | 4.0000e-005 | 3.0000e-005 | 7.0000e-005 | 0.0000 | 0.4782 | 0.4782 | 0.0000 | 0.0000 | 0.4783 |
| Worker | 4.0000e-005 | 6.0000e-005 | 5.7000e-004 | 0.0000 | 1.1000e-004 | 0.0000 | 1.1000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0965 | 0.0965 | 0.0000 | 0.0000 | 0.0966 |
| **Total** | **2.7000e-004** | **2.0700e-003** | **3.3700e-003** | **1.0000e-005** | **2.6000e-004** | **3.0000e-005** | **2.8000e-004** | **7.0000e-005** | **3.0000e-005** | **1.0000e-004** | **0.0000** | **0.5747** | **0.5747** | **0.0000** | **0.0000** | **0.5749** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.0613 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 8.3000e-004 | 5.4600e-003 | 4.6700e-003 | 1.0000e-005 | | 4.3000e-004 | 4.3000e-004 | | 4.3000e-004 | 4.3000e-004 | 0.0000 | 0.6383 | 0.6383 | 7.0000e-005 | 0.0000 | 0.6397 |
| **Total** | **0.0622** | **5.4600e-003** | **4.6700e-003** | **1.0000e-005** | | **4.3000e-004** | **4.3000e-004** | | **4.3000e-004** | **4.3000e-004** | **0.0000** | **0.6383** | **0.6383** | **7.0000e-005** | **0.0000** | **0.6397** |

### 3.5 Architectural Coating - 2017

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.3000e-004 | 2.0100e-003 | 2.8000e-003 | 1.0000e-005 | 1.5000e-004 | 3.0000e-005 | 1.7000e-004 | 4.0000e-005 | 3.0000e-005 | 7.0000e-005 | 0.0000 | 0.4782 | 0.4782 | 0.0000 | 0.0000 | 0.4783 |
| Worker | 4.0000e-005 | 6.0000e-005 | 5.7000e-004 | 0.0000 | 1.1000e-004 | 0.0000 | 1.1000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0965 | 0.0965 | 0.0000 | 0.0000 | 0.0966 |
| **Total** | **2.7000e-004** | **2.0700e-003** | **3.3700e-003** | **1.0000e-005** | **2.6000e-004** | **3.0000e-005** | **2.8000e-004** | **7.0000e-005** | **3.0000e-005** | **1.0000e-004** | **0.0000** | **0.5747** | **0.5747** | **0.0000** | **0.0000** | **0.5749** |

## 4.0 Operational Detail - Mobile

### 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

### 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 0.00 | 0.00 | 0.00 | | |
| Parking Lot | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

### 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 9.50 | 7.30 | 7.30 | 59.00 | 28.00 | 13.00 | 92 | 5 | 3 |
| Parking Lot | 9.50 | 7.30 | 7.30 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

| LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.551854 | 0.058218 | 0.185395 | 0.123453 | 0.029544 | 0.004438 | 0.012761 | 0.022956 | 0.001780 | 0.001269 | 0.006045 | 0.000523 | 0.001763 |

## 5.0 Energy Detail

### 4.4 Fleet Mix

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 101.7576 | 101.7576 | 4.6000e-003 | 9.5000e-004 | 102.1494 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 101.7576 | 101.7576 | 4.6000e-003 | 9.5000e-004 | 102.1494 |
| NaturalGas Mitigated | 5.3700e-003 | 0.0488 | 0.0410 | 2.9000e-004 | | 3.7100e-003 | 3.7100e-003 | | 3.7100e-003 | 3.7100e-003 | 0.0000 | 53.0961 | 53.0961 | 1.0200e-003 | 9.7000e-004 | 53.4192 |
| NaturalGas Unmitigated | 5.3700e-003 | 0.0488 | 0.0410 | 2.9000e-004 | | 3.7100e-003 | 3.7100e-003 | | 3.7100e-003 | 3.7100e-003 | 0.0000 | 53.0961 | 53.0961 | 1.0200e-003 | 9.7000e-004 | 53.4192 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Light Industry | 994983 | 5.3700e-003 | 0.0488 | 0.0410 | 2.9000e-004 | | 3.7100e-003 | 3.7100e-003 | | 3.7100e-003 | 3.7100e-003 | 0.0000 | 53.0961 | 53.0961 | 1.0200e-003 | 9.7000e-004 | 53.4192 |
| **Total** | | **5.3700e-003** | **0.0488** | **0.0410** | **2.9000e-004** | | **3.7100e-003** | **3.7100e-003** | | **3.7100e-003** | **3.7100e-003** | **0.0000** | **53.0961** | **53.0961** | **1.0200e-003** | **9.7000e-004** | **53.4192** |

## 5.2 Energy by Land Use - NaturalGas

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| General Light Industry | 994983 | 5.3700e-003 | 0.0488 | 0.0410 | 2.9000e-004 | | 3.7100e-003 | 3.7100e-003 | | 3.7100e-003 | 3.7100e-003 | 0.0000 | 53.0961 | 53.0961 | 1.0200e-003 | 9.7000e-004 | 53.4192 |
| **Total** | | **5.3700e-003** | **0.0488** | **0.0410** | **2.9000e-004** | | **3.7100e-003** | **3.7100e-003** | | **3.7100e-003** | **3.7100e-003** | **0.0000** | **53.0961** | **53.0961** | **1.0200e-003** | **9.7000e-004** | **53.4192** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| General Light Industry | 327789 | 95.3576 | 4.3100e-003 | 8.9000e-004 | 95.7247 |
| Parking Lot | 22000 | 6.4001 | 2.9000e-004 | 6.0000e-005 | 6.4247 |
| **Total** | | **101.7576** | **4.6000e-003** | **9.5000e-004** | **102.1494** |

### 5.3 Energy by Land Use - Electricity

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| General Light Industry | 327789 | 95.3576 | 4.3100e-003 | 8.9000e-004 | 95.7247 |
| Parking Lot | 22000 | 6.4001 | 2.9000e-004 | 6.0000e-005 | 6.4247 |
| **Total** | | **101.7576** | **4.6000e-003** | **9.5000e-004** | **102.1494** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.2588 | 1.0000e-005 | 5.7000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.1000e-003 | 1.1000e-003 | 0.0000 | 0.0000 | 1.1600e-003 |
| Unmitigated | 0.2588 | 1.0000e-005 | 5.7000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.1000e-003 | 1.1000e-003 | 0.0000 | 0.0000 | 1.1600e-003 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0193 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.2394 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 6.0000e-005 | 1.0000e-005 | 5.7000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.1000e-003 | 1.1000e-003 | 0.0000 | 0.0000 | 1.1600e-003 |
| **Total** | **0.2588** | **1.0000e-005** | **5.7000e-004** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **1.1000e-003** | **1.1000e-003** | **0.0000** | **0.0000** | **1.1600e-003** |

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0193 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.2394 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 6.0000e-005 | 1.0000e-005 | 5.7000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.1000e-003 | 1.1000e-003 | 0.0000 | 0.0000 | 1.1600e-003 |
| **Total** | **0.2588** | **1.0000e-005** | **5.7000e-004** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **1.1000e-003** | **1.1000e-003** | **0.0000** | **0.0000** | **1.1600e-003** |

## 7.0 Water Detail

## 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 15.8769 | 0.2741 | 6.5700e-003 | 23.6699 |
| Unmitigated | 15.8769 | 0.2741 | 6.5800e-003 | 23.6741 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 8.39438 / 0 | 15.8769 | 0.2741 | 6.5800e-003 | 23.6741 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **15.8769** | **0.2741** | **6.5800e-003** | **23.6741** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 8.39438 / 0 | 15.8769 | 0.2741 | 6.5700e-003 | 23.6699 |
| Parking Lot | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **15.8769** | **0.2741** | **6.5700e-003** | **23.6699** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 9.1366 | 0.5400 | 0.0000 | 20.4758 |
| Unmitigated | 9.1366 | 0.5400 | 0.0000 | 20.4758 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 45.01 | 9.1366 | 0.5400 | 0.0000 | 20.4758 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **9.1366** | **0.5400** | **0.0000** | **20.4758** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 45.01 | 9.1366 | 0.5400 | 0.0000 | 20.4758 |
| Parking Lot | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **9.1366** | **0.5400** | **0.0000** | **20.4758** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

## 10.0 Vegetation

# Operational Emissions

ESA

**San Jose CoGen AQ Emission Assessment - Engine Operations**

BAAQMD Best Available Control Technology (BACT) Guideline - Biogas Fired IC Engine

| g/bhp-hr | POC | Nox | CO | SO2 | PM10 |
|---|---|---|---|---|---|
| 1. Technologically Feasible | 0.12 | NA | 0.89 | 100ppmv | 0.07 |
| 2. Achieved in Practice | 0.16 | 0.15 | 1.8 | 150ppmv | 0.1 |

To calculate daily emissions…
lb/day = BACT g/hp-hr * hrs/day * Total Hp * 1 lb/453.5924g

| | | |
|---|---|---|
| **Insert Megawatts** | 12.5 | **MW** |
| | 16762.77613 | HP |
| Capacity Factor* | 100% | *use 100% for maximum possible emissions |
| HP-h/hour | 16762.77613 | HP-h/hour |
| HP-h/day | 402306.627 | HP-h/day |
| HP-h/year | 146841918.9 | HP-h/year |

**Emissions Results**

| ***Technologically Feasible*** | ROG | NOx | PM10 | PM2.5 |
|---|---|---|---|---|
| lb/day | 106.4 | N/A | 62.1 | 62.1 |
| tons/year | 19.4 | N/A | 11.3 | 11.3 |

| ***Achieved in Practice*** | ROG | NOx | PM10 | PM2.5 |
|---|---|---|---|---|
| lb/day | 141.9 | 133.0 | 88.7 | 88.7 |
| tons/year | 25.9 | 24.3 | 16.2 | 16.2 |

**BAAQMD Operational Thresholds**

| Average Daily Emissions (lb/day) | ROG | NOx | PM10 | PM2.5 |
|---|---|---|---|---|
| | 54 | 54 | 82 | 54 |

| Max Annual Emissions (ton/year) | ROG | NOx | PM10 | PM2.5 |
|---|---|---|---|---|
| | 10 | 10 | 15 | 10 |

Scenarios

**Achieved in Practice - BACT**

Project - Existing Engines to be Decommissioned (lbs/day)

| | Criteria Pollutant Emissions | | | |
|---|---|---|---|---|
| | ROG | NOx | PM10 | PM2.5 |
| Project | 141.9 | 133.0 | 88.7 | 88.7 |
| Minus Existing Decomm. | 520.0 | 530.0 | 30.4 | 30.4 |
| Net Increase | -378.1 | -397.0 | 58.3 | 58.3 |
| Threshold | 54 | 54 | 82 | 54 |
| Significant? | N | N | N | Y |

Project - Existing Engines to be Decommissioned (tons/yr)

| | Criteria Pollutant Emissions | | | |
|---|---|---|---|---|
| | ROG | NOx | PM10 | PM2.5 |
| Project | 25.9 | 24.3 | 16.2 | 16.2 |
| Minus Existing Decomm. | 94.9 | 96.7 | 5.6 | 5.6 |
| Net Increase | -69.0 | -72.5 | 10.6 | 10.6 |
| Threshold | 10 | 10 | 15 | 10 |
| Significant? | N | N | N | Y |

**Technologically Feasible - BACT [NOTE: NOx EF based on "Achieved in Practice" level]**

Project - Existing Engines to be Decommissioned (lbs/day)

| | ROG | NOx | PM10 | PM2.5 |
|---|---|---|---|---|
| Project | 106.4 | 133.0 | 62.1 | 62.1 |
| Minus Existing Decomm. | 520.0 | 530.0 | 30.4 | 30.4 |
| Net Increase | -413.6 | -397.0 | 31.7 | 31.7 |
| Threshold | 54 | 54 | 82 | 54 |
| Significant? | N | N | N | N |

Project - Existing Engines to be Decommissioned (tons/yr)

| | ROG | NOx | PM10 | PM2.5 |
|---|---|---|---|---|
| Project | 19.4 | 24.3 | 11.3 | 11.3 |
| Minus Existing Decomm. | 94.9 | 96.7 | 5.6 | 5.6 |
| Net Increase | -75.5 | -72.5 | 5.8 | 5.8 |
| Threshold | 10 | 10 | 15 | 10 |
| Significant? | N | N | N | N |

# APPENDIX B

# Mitigation Monitoring and Reporting Program

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## MITIGATION MONITORING AND REPORTING PROGRAM

| Environmental Impacts | Mitigation Measures | Responsibility for Monitoring Compliance | Method of Monitoring Compliance | Timing of Compliance |
|---|---|---|---|---|
| **Air Quality** | | | | |
| Project construction would be required to comply with applicable Bay Area Air Quality Management District (BAAQMD) basic construction control measures. | **Measure AIR-1:** During Project construction, the City, through its construction contractor(s), shall ensure that the following BAAQMD construction control measures are implemented.<br>BAAQMD Basic Construction Mitigation Measures<br>1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.<br>2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.<br>3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.<br>4. All vehicle speeds on unpaved roads shall be limited to 15 mph.<br>5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.<br>6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.<br>7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.<br>8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. | Director of Planning, Building & Code Enforcement | Submittal of construction contractor agreement | Prior to and during construction |
| Project construction would result in criteria pollutant emissions relevant to applicable air quality standards, and would be | **Mitigation Measure AIR-2:**<br>See **Mitigation Measure AIR-1** | Director of Planning, Building & Code Enforcement | The City shall coordinate with BAAQMD and ensure construction contractor incorporates Technology Feasible BACT into the | Prior to construction, and on-going: operation |

## MITIGATION MONITORING AND REPORTING PROGRAM

| | | | | |
|---|---|---|---|---|
| required to implement BAAQMD basic construction control measures. | | | proposed cogeneration engines. | |
| Project construction could contribute to a cumulatively considerable net increase of criteria air pollutants | **Mitigation Measure AIR-3:**<br>See **Mitigation Measure AIR-1** | | | |
| **Biological Resources** | | | | |
| Project construction could affect or interfere with special-status bird species. | **Mitigation Measure BIO-1:**<br>**Raptor and Migratory Bird Nest Measure.**<br>If Project construction is scheduled during the breeding season for raptors or migratory birds (February 1–August 31), a qualified wildlife biologist will be retained to conduct a survey for nesting raptors and migratory bird nests. If an active nest is discovered, a no-disturbance buffer zone around the nest tree (or, for ground-nesting species, the nest itself) shall be established. The no-disturbance zone shall be marked with flagging or fencing that is easily identified by the construction crew. In general, the minimum buffer zone widths shall be as follows: 100 feet (radius) for non-raptor species and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with the California Department of Fish and Wildlife (CDFW). Buffers shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest.<br>Construction activities that are scheduled to begin before the breeding season (i.e., begin between September 1 and January 31) can proceed without surveys. Optimally, all necessary vegetation removal should be conducted before the breeding season (generally between February 1 and August 31) so that nesting birds or raptors would not occur in the construction area during construction activities. | Director of Planning, Building & Code Enforcement and CDFW, USFWS | The City shall incorporate appropriate language into contract documents; monitor to ensure contractor implements measures in contract documents; report noncompliance to the Director of Planning, Building & Code Enforcement; and ensure corrective action documentation for consulting biologist and provide copy to the Director of Planning,<br>Building & Code Enforcement. The City or consulting biologist shall conduct surveys as required; if nesting raptors and/or migratory bird nests are found, establish and maintain buffer zones as required. | Prior to, during, and after ground disturbing activities |
| The Project would remove or damage trees protected under the City's Tree Ordinance. | **Mitigation Measure BIO-2:**<br>**Minimize Construction Effects on Ordinance Trees to Be Retained.**<br>The Project proponent shall implement the following tree-protection measures prior to and during project construction.<br>• Retain a certified arborist to oversee protection of native trees to be retained on the Project area.<br>• Require that any tree or root pruning occurring for construction is first approved by the certified arborist.<br>• Require that the certified arborist evaluate injuries to retained trees as soon as possible for appropriate treatment. | Director of Planning, Building & Code Enforcement | The City shall incorporate appropriate language into contract documents; monitor to ensure contractor implements measures in contract documents; report noncompliance to the Director of Planning, Building & Code Enforcement; and ensure corrective action documentation for consulting arborist and provide copy to the Director of Planning, | Prior to final design approval |

## MITIGATION MONITORING AND REPORTING PROGRAM

| | | | | |
|---|---|---|---|---|
| | | | The certified arborist shall conduct surveys as required; protected trees shall be replaced as required. | |
| **Cultural Resources** | | | | |
| Project construction could cause accidental discovery and disturbance to previously unknown archaeological resources. | **Mitigation Measure CUL-1:**<br>**Accidental Discovery of Archaeological Resources.**<br>If discovery is made of items of historic or archaeological interest, the City's contractor shall immediately cease all work activities in the vicinity (within approximately 100 feet) of the discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, baked clay fragments, or faunal food remains (bone and shell); stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include the remains of stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation the contractor shall immediately contact the City. The contractor shall not resume work until authorization is received from the City.<br>Any inadvertent discovery of cultural resources during construction shall be evaluated by a qualified archaeologist. If it is determined that the project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with PRC Section 21083.2 and Section 15126.4 of the CEQA *Guidelines*, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, the archaeologist shall develop a treatment plan in consultation with the City and appropriate Native American representatives (if the find is of Native American origin). | Director of Planning, Building & Code Enforcement, Qualified archaeologist | The City shall incorporate language into contract documents related to archaeological discoveries. If a discovery of cultural resources is made, City shall ensure that contractor ceases construction, contacts the City, and halts construction until authorization is received from the City.<br>If qualified archaeologist finds the inadvertent discovery be potentially significant, the archaeologist shall develop a treatment plan in consultation with the City and appropriate Native American representatives. | During construction |
| Project construction could cause accidental discovery and/or disturbance to previously unknown human remains. | **Mitigation Measure CUL-2:**<br>**Accidental Discovery of Human Remains.**<br>Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner | Director of Planning, Building & Code Enforcement | The City shall incorporate language into contract documents related to accidental discovery of human remains. In the event of an accidental discovery, ensure that contractor notifies the Santa Clara County Coroner | During construction |

## MITIGATION MONITORING AND REPORTING PROGRAM

| | | | | |
|---|---|---|---|---|
| | shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. | | and, if necessary, the Native American Heritage Commission. | |
| **Hazards and Hazardous Materials** | | | | |
| Project construction could encounter contaminated soils, potentially causing release of hazardous materials into the environment and/or exposing workers to hazardous materials. | **Mitigation Measure HAZ-1a:**<br>**Pre-Construction Hazardous Materials Assessment.**<br>Prior to issuance of grading permits for Project construction, the City or its contractor shall ensure that a limited soil and/or groundwater investigation is performed at proposed construction work areas to characterize soil and/or groundwater quality. Generally, for projects within 250 feet of a known underground fuel tank leak or spill, the City shall perform the site assessment in general accordance with protocols described in the SWRCB Leaking Underground Fuel Tank Guidance Manual (September 2012), and coordinate with the RWQCB as required. For all other projects, the City shall conduct a site assessment including potential testing of soil and/or groundwater, and if testing reveals soil and/or groundwater concentrations that exceed applicable regulatory screening levels, the City shall contact the SCCDEH or RWQCB, as appropriate, to secure regulatory oversight.<br>The work plan will establish the sampling and laboratory analysis program which may include the following: analysis of subsurface soil samples within the WPCP for total petroleum hydrocarbons (as gasoline, diesel, and waste oil), Title 22 metals, and VOCs or any other chemicals of concern to evaluate the potential presence of contamination; groundwater samples if subsurface excavations are anticipated to require dewatering;. and additional analyses for VOCs and SVOCs for groundwater samples collected at construction locations within 1000 feet of adjacent landfills.<br>The results of the hazardous materials assessment shall be incorporated into the Site Health and Safety Plan prepared in accordance with Mitigation Measure HAZ-1b and the Soil and Groundwater Management Plan prepared in accordance with Mitigation Measure HAZ-1c to determine whether: specific soil and groundwater management and disposal procedures for contaminated materials are required; excavated soils are suitable for reuse; and construction worker health and safety procedures for working with contaminated materials are required. If the pre-construction hazardous materials assessment identifies the presence of soil and/or | Director of Planning, Building & Code Enforcement | The City shall incorporate appropriate language into contract documents; monitor to ensure soil and/or groundwater investigation is performed; report to the Santa Clara County Department of Environmental Health or RWQCB, as appropriate; and ensure incorporation of hazardous materials assessment into the Health and Safety Plan; and ensure corrective action. | Prior to construction |

## MITIGATION MONITORING AND REPORTING PROGRAM

| | | | |
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| groundwater contamination at concentrations in excess of applicable regulatory screening levels (ESLs or CHHSLs) for proposed site use, the City shall complete site assessment and remedial activities required by the regulatory agency to ensure that residual soil and/or groundwater contamination, if any, shall not pose a continuing significant threat to groundwater resources, human health, or the environment. | | | |
| **Mitigation Measure HAZ-1b:**<br>**Health and Safety Plan.**<br>The City shall require the construction contractor to retain a qualified environmental professional to prepare a site-specific Health and Safety Plan (HASP) in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal/OSHA regulations (8 CCR Title 8, Section 5192). Because anticipated contaminants vary depending upon the location of proposed improvements in the project area and may vary over time, the HASP shall address site-specific worker health and safety issues during construction of the individual projects. The HASP shall include the following information.<br>• Results of sampling conducted in accordance with Mitigation Measure HAZ-1a.<br>• All required measures to protect construction workers and the general public by including engineering controls, monitoring, and security measures to prevent unauthorized entry to the construction area and to reduce hazards outside of the construction area. If prescribed contaminant exposure levels are exceeded, personal protective equipment shall be required for workers in accordance with state and federal regulations.<br>• Required worker health and safety provisions for all workers potentially exposed to contaminated materials, in accordance with state and federal worker safety regulations, and designated qualified individual personnel responsible for implementation of the HASP.<br>• The contractor shall have a site health and safety supervisor fully trained pursuant to hazardous materials regulations be present during excavation, trenching, or cut and fill operations to monitor for evidence of potential soil contamination, including soil staining, noxious odors, debris or buried storage containers. The site health and safety supervisor must be capable of evaluating whether hazardous materials encountered constitute an incidental release of a hazardous substance or an emergency spill. The site health and safety supervisor shall direct procedures to be followed in the event that an unanticipated hazardous materials release with the potential to impact health and safety is | Director of Planning, Building & Code Enforcement | The City shall incorporate appropriate language into contract documents; retain a qualified environmental professional to prepare the site-specific Health and Safety Plan; and ensure implementation of the plan throughout the construction phase.<br>The City and/or contractor shall retain a site health and safety supervisor to be on-site during the construction phase; monitor and document implementation of HASP protection measures; report noncompliance to the Director of Planning, Building & Code Enforcement; and ensure corrective action. | Prior to and during construction |

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| encountered. These procedures shall be in accordance with hazardous waste operations and regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release; notifying Santa Clara County Department of Environmental Health and retaining a qualified environmental firm to perform sampling, remediation, and/or disposal.<br>• Documentation that HASP measures have been implemented during construction.<br>• Provision that submittal of the HASP to the City, or any review of the contractor's HASP by the City, shall not be construed as approval of the adequacy of the contractor's health and safety professional, the contractor's HASP, or any safety measure taken in or near the construction site. The contractor shall be solely and fully responsible for compliance with all laws, rules, and regulations applicable to health and safety during the performance of the construction work. | | | |
| **Mitigation Measure HAZ-1c:**<br>**Soil and Groundwater Management Plan.**<br>The City shall require the construction contractor to prepare and implement a Soil and Groundwater Management Plan, subject to review by the City, that specifies the method for handling and disposal of contaminated soil and groundwater prior to construction. The plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The plan shall include the following information.<br>• Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling. In addition, excavated materials shall be inspected for buried building materials, debris, and evidence of underground storage tanks; if identified, these materials shall be stockpiled separately and characterized in accordance with landfill disposal requirements. If some of the spoils do not meet the reuse criteria and/or debris is identified, these materials shall be disposed of at a permitted landfill facility.<br>• Procedures to be implemented if unknown subsurface conditions | Director of Planning, Building & Code Enforcement | The City shall incorporate appropriate language into contract documents; retain a qualified environmental professional to prepare the Soil and Groundwater Management Plan; and ensure implementation of the plan throughout the construction phase. | Prior to and during construction |

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| | or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils.<br>• Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method to analyzed groundwater for hazardous materials likely to be encountered and the appropriate treatment and/or disposal methods. | |
| Project construction could intersect contaminated groundwater from adjacent hazardous materials site listings. | **Mitigation Measure HAZ-1a:**<br>See **Mitigation Measure HAZ-1a**<br>**Mitigation Measure HAZ-1b:**<br>See **Mitigation Measure HAZ-1b**<br>**Mitigation Measure HAZ-1c:**<br>See **Mitigation Measure HAZ-1c** | |

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| **Cumulative**<br>When considered in combination with other cumulative scenario projects, Project construction could overlap with the construction of other cumulative scenario projects, resulting in cumulative scenario traffic impacts. | **Mitigation Measure C-TR: Implement Coordinated Transportation Management Plan.**<br>Prior to construction, the City's contractor(s) shall develop a Coordinated Transportation Management Plan and work with other projects' contractors and appropriate City departments (e.g., Emergency Services, Fire, Police, Transportation) to prepare and implement a transportation management plan for roadways adjacent to and directly affected by the Project as well as planned Facility improvements and land uses, and to address the transportation impact of the overlapping construction projects within the vicinity of the Project in the region. The transportation management plan shall include, but not be limited to, the following requirements:<br>• Coordination of individual traffic control plans for the Project with nearby projects.<br>• Coordination between the Project contractor and other project contractors in developing circulation and detour plans that include safety features (e.g., signage and flaggers). The circulation and detour plans shall address:<br>– Full and partial roadways closures<br>– Circulation and detour plans to include the use of signage and flagging to guide vehicles through and/or around the construction zone, as well as any temporary traffic control devices<br>– Bicycle/Pedestrian detour plans, where applicable<br>– Parking along public roadways<br>– Haul routes for construction trucks and staging areas for instances when multiple trucks arrive at the work sites<br>• Protocols for updating the transportation management plan to account for delays or changes in the schedules of individual projects.<br>• A comprehensive and continual outreach program to notify affected citizens (i.e. residents of Alviso, commuters, etc.) of all construction activity and roadway closures for the duration of the projects. | Director of Planning, Building & Code Enforcement | The City shall incorporate appropriate language into contract documents related to development of a Coordinated Transportation Management Plan; ensure that contractor(s) coordinate with appropriate City departments to prepare plan; and ensure that contractor(s) coordinate with other project contractors through development of the transportation management plan. | Prior to and during construction |