South County Regional Wastewater Authority Wastewater Treatment Plant Facility Expansion Project

Initial Study/Mitigated Negative Declaration

August 26, 2020

Prepared for:

South County Regional Wastewater Authority

Prepared by:

Stantec Consulting Services Inc.

Table of Contents

ABBREVIATIONS III

1.0 INTRODUCTION 1.1
1.1 CEQA PROCESS 1.3
1.2 DOCUMENT ORGANIZATION 1.3

2.0 PROJECT DESCRIPTION 2.4
2.1 PROJECT HISTORY 2.7
2.1.1 Previous Environmental Evaluations 2.7
2.1.2 Wastewater Treatment Plant Operations and Planning 2.8
2.2 PURPOSE OF THE PROJECT 2.9
2.3 PROJECT OBJECTIVES 2.9
2.4 PROJECT COMPONENTS 2.9
2.4.1 Headworks and Screening Facility 2.10
2.4.2 Bioreactors 2.10
2.4.3 Membrane Basins 2.11
2.4.4 Membrane Bioreactor Blower and Electrical Building 2.11
2.4.5 Chemical Feed and Storage Facilities 2.12
2.4.6 Solids Handling Facility 2.12
2.5 WASTEWATER TREATMENT PLANT OPERATION AND MAINTENANCE 2.13
2.6 CONSTRUCTION ACTIVITIES AND ESTIMATED SCHEDULE 2.13

3.0 ENVIRONMENTAL CHECKLIST 3.17
3.1 AESTHETICS 3.18
3.1.1 Discussion 3.18
3.2 AGRICULTURE AND FORESTRY RESOURCES 3.20
3.2.1 Discussion 3.20
3.3 AIR QUALITY AND GREENHOUSE GASES 3.22
3.3.1 Discussion 3.22
3.3.2 Mitigation Measures 3.26
3.4 BIOLOGICAL RESOURCES 3.28
3.4.1 Discussion 3.28
3.4.2 Mitigation Measures 3.36
3.5 CULTURAL AND TRIBAL CULTURAL RESOURCES 3.40
3.5.1 Discussion 3.40
3.6 ENERGY RESOURCES 3.43
3.6.1 Discussion 3.43
3.7 GEOLOGY AND SOILS 3.45
3.7.1 Discussion 3.45
3.8 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRES 3.50
3.8.1 Discussion 3.51
3.9 HYDROLOGY AND WATER QUALITY 3.55
3.9.1 Discussion 3.55

3.10 LAND USE AND PLANNING 3.60
3.10.1 Discussion 3.60
3.11 MINERAL RESOURCES 3.62
3.11.1 Discussion 3.62
3.12 NOISE 3.63
3.12.1 Discussion 3.63
3.13 POPULATION AND HOUSING 3.65
3.13.1 Discussion 3.65
3.14 PUBLIC SERVICES 3.66
3.14.1 Discussion 3.66
3.15 RECREATION 3.67
3.15.1 Discussion 3.67
3.16 TRANSPORTATION 3.68
3.16.1 Discussion 3.68
3.17 UTILITIES AND SERVICE SYSTEMS 3.70
3.17.1 Discussion 3.70
3.18 MANDATORY FINDINGS OF SIGNIFICANCE 3.73
3.18.1 Discussion 3.73

4.0 REPORT PREPARATION 4.75
4.1 LIST OF PREPARERS 4.75

5.0 REFERENCES 5.76

LIST OF TABLES

Table 1.1-1 Project Details CEQA Appendix G Checklist Form 1.1
Table 2.1-1 Alternative Technologies Considered for the SCRWA WWTP Plant Capacity Expansion Project 2.8
Table 2.4-1 Project Construction Details and Schedule 2.16

LIST OF FIGURES

Figure 1-1 Project Vicinity 1.2
Figure 2-1 Project Footprint 2.5
Figure 2-3 Access, Staging, and Spoils Sites 2.15

LIST OF APPENDICES

APPENDIX A MITIGATION MONITORING AND REPORTING PROGRAM ..... A

APPENDIX B AIR QUALITY AND GREENHOUSE GAS ASSUMPTIONS ..... B

APPENDIX C BIOLOGICAL RESOURCES C

Abbreviations

ADWF	average dry weather flow
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
CAL FIRE	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNPS	California Native Plant Society
CRLF	California red-legged frog
CTS	California tiger salamander
CWA	Clean Water Act
EIR	Environmental Impact Report
FGC	Fish and Game Code
GHG	greenhouse gas
HCP/NCCP	Habitat Conservation Plan and Natural Community Conservation Plan
IS/MND	Initial Study/Mitigated Negative Declaration
MBR	Membrane Bioreactor
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MM	Mitigation Measure
$MTCO_2e$	metric tons of carbon dioxide equivalent
MW	megawatt
NAHC	Native American Heritage Commission
NO_x	Nitrogen Oxide
NPDES	National Pollution Discharge Elimination System
PM	Particulate Matter
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
UBC	Uniform Building Code

USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program
WWTP	Wastewater Treatment Plant

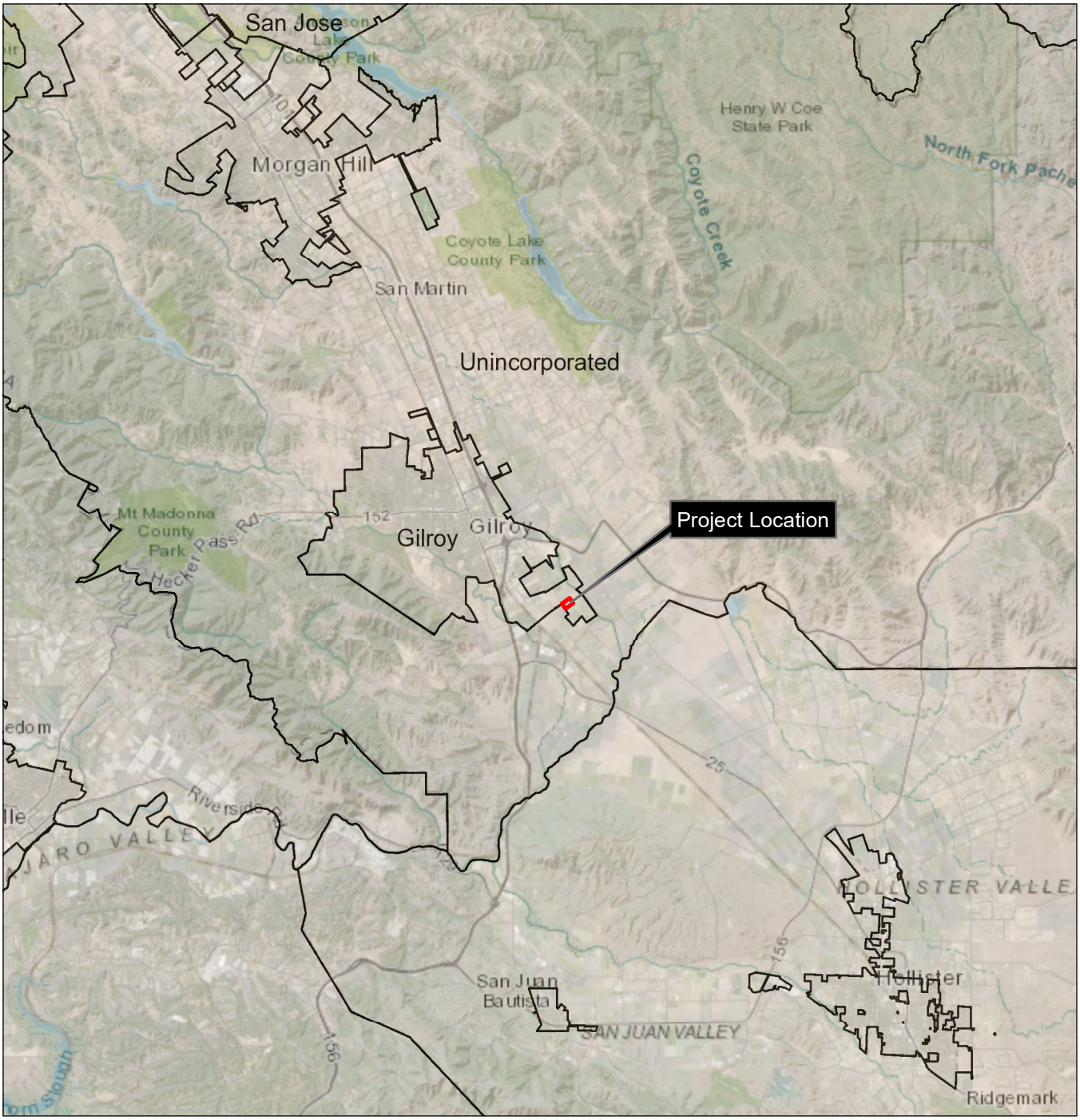
1.0 INTRODUCTION

The South County Regional Wastewater Authority (SCRWA) is a joint powers authority between the City of Gilroy (Gilroy) and the City of Morgan Hill (Morgan Hill). SCRWA proposes to implement the Wastewater Treatment Plant (WWTP) Facility Expansion Project (Project, proposed Project). This Initial Study/Mitigated Negative Declaration (IS/MND) evaluates the potential environmental impacts associated with the proposed Project in accordance with the laws and rules governing the California Environmental Quality Act (CEQA) process contained in the CEQA statute (Public Resources Code Section 21000 and following), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 and following), published court decisions interpreting CEQA, and locally adopted CEQA procedures. Table 1.1-1 provides the CEQA Appendix G overview of the proposed Project.

Table 1.1-1 Project Details CEQA Appendix G Checklist Form

1.	Project Title:	South County Regional Wastewater Authority Wastewater Treatment Plant Facility Expansion Project
2/5.	Lead Agency/ Project Sponsor's Name and Address:	South County Regional Wastewater Authority (SCRWA) 1500 Southside Drive, Gilroy, CA 95020
3.	Contact Person and Phone Number:	Contact: Saeid Vaziry, PE Phone: (408)846-8842 Email: Saeid.Vaziry@ci.gilroy.ca.us
4.	Project Location:	The proposed Project is located at 36.98221 N, 121.5303 W within the SCRWA WWTP in Gilroy at 1500 Southside Drive, east of U.S. Highway 101. (Figure 1-1)
6/7.	General Plan Designation and Zoning:	• City of Gilroy General Plan: Public/Quasi Public Facilities • Santa Clara County General Plan: Major Public Facilities • City of Gilroy Zoning: Park/Public Facility • Santa Clara County Zoning: Agricultural Large Scale
8.	Description of Project:	The SCRWA Project, proposes to expand the existing wastewater treatment plant using membrane bioreactor (MBR) technology from the current capacity of 8.5 million gallons per day (MGD) to 11 MGD to provide wastewater services to accommodate the growth identified in Gilroy's and Morgan Hill's General Plans.
9.	Surrounding Land Uses and Setting:	The Project area is predominantly surrounded by agricultural land and the SCRWA WWTP. A residential area affiliated with seasonal agricultural production is located within an approximately 14-acre lot about 0.5 miles north of the Project site at Southside Drive. Additionally, there is a police shooting range near the spoils area near the location of the bridge over Llagas Creek at the end of Southside Drive.
10.	Other public agencies whose approvals are required (e.g., permits, financing approval, or participation agreement):	• Central Coast Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements • Santa Clara County Grading Permit • Bay Area Air Quality Management District (BAAQMD) Permit to Operate

C:\Users\kcalyma\Documents\ArcGIS\Projects\Fig1_scrwa_mbr_vicinity.mxd Revised: 2020-06-15 By: kcalyma





Legend

Project Area

Figure No.
1-1

Title
Project Vicinity

Client/Project

South County Regional Wastewater Authority
Wastewater Treatment Plant Facility Expansion Project

Project Location 184031177

Gilroy, Santa Clara County, CA

0 9,200 18,400 Feet

1:224,575 (at original document size of 8.5x11)

N

Stantec

Notes
1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
2. Data Sources Include: CDFW CNDDB, USFWS NWI, USGS NHD
3. Orthophotography: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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1.1 CEQA PROCESS

CEQA is the State of California's environmental law that generally requires state and local government agencies to inform decision makers and the public about the potential environmental impacts of proposed projects, and to reduce those environmental impacts to the extent feasible. The intent of CEQA is to foster good planning and to inform agencies and the public about environmental issues during the planning process. In accordance with CEQA statute Section 21067, SCRWA is the public agency with the responsibility for carrying out or approving the Project, known as the Lead Agency. As the Lead Agency, SCRWA has prepared this IS/MND which documents substantial evidence that, when viewed in light of the whole record, supports the determination that the Project would not have a significant effect on the environment (CEQA Guidelines Sections 15063(a), 15070(a)).

Under CEQA guidelines, a significant effect on the environment is defined as 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 (CEQA Guidelines Section 15382). Based on the analysis presented in Chapter 3.0 this document and the field surveys conducted in support of that analysis, the proposed Project has the potential to result in significant impacts on certain resources, but these potentially significant impacts would be reduced to a less than significant level with the implementation of mitigation identified in Chapter 3.0 of this IS/MND. The mitigation measures presented in this IS/MND form the basis of the Mitigation, Monitoring, and Reporting Program, which is included in Appendix A.

As the Lead Agency, SCRWA is responsible for implementing and monitoring all components of the proposed Project and maintaining file documentation of compliance. The public, Morgan Hill, Gilroy, and other local and State resource agencies will be given the opportunity to review and comment on this document during the 30-day public review period. Comments received during the 30-day review period will be considered by SCRWA prior to considering the adoption of the IS/MND and approving the proposed Project.

1.2 DOCUMENT ORGANIZATION

This IS/MND is organized as follows:

- **Chapter 1.0 Introduction.** This section provides introductory information about the proposed Project, the IS/MND process, and document organization.
- **Chapter 2.0 Project Description.** This section describes the purpose of and need for the proposed Project, identifies Project objectives, and provides a detailed description of the proposed Project.
- **Chapter 3.0 Environmental Checklist.** This section establishes and evaluates the proposed Project's potential for substantial deviation from baseline conditions (aka environmental setting) that would result in significant environmental impacts. Significant impacts were established in accordance with CEQA Guidelines. The proposed Project was evaluated based on substantial evidence against agency, industry, and professional standards. For this proposed Project, mitigation measures reduced all potentially significant impacts to less than significant levels and no environmental impact report (EIR) is required.
- **Chapter 4.0 Report Preparation.** This section identifies report preparers**.**
- **Chapter 5.0 References.** This section lists the references used in preparation of this IS/MND.

2.0 PROJECT DESCRIPTION

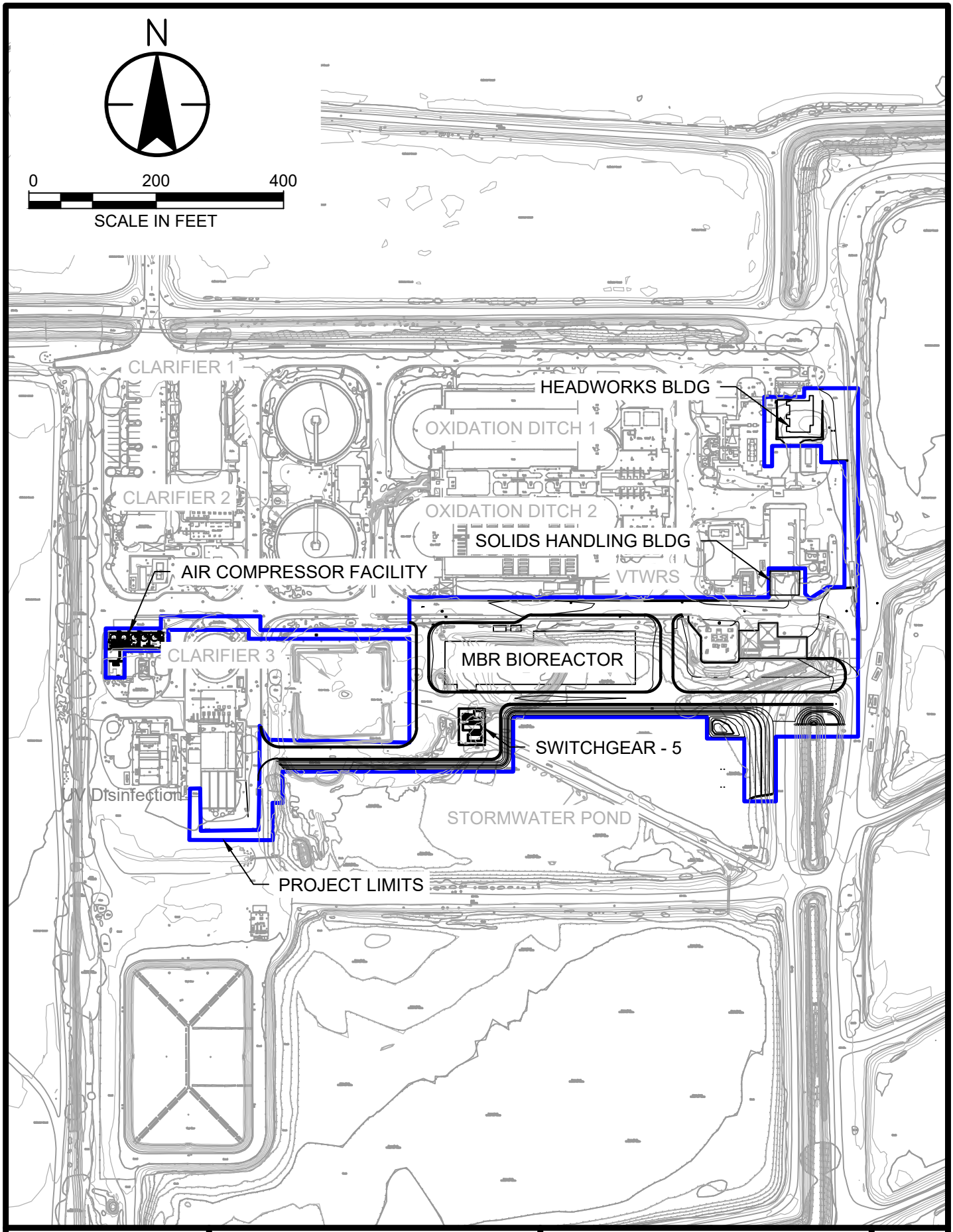
SCRWA currently owns, operates, and maintains the WWTP that is located within the southeast corner of the Gilroy city limits at 1500 Southside Drive and provides tertiary wastewater treatment for the two cities (See Figure 1-1).

A **membrane bioreactor** is a treatment process that combines filtering the wastewater through a thin pliable sheet of material that forms a barrier or lining (the membrane process called microfiltration or ultrafiltration) with a biological wastewater treatment process (like activated sludge).

The proposed Project would expand the existing WWTP by installing a parallel treatment process using MBR technology. Currently, the WWTP's treatment process meets treatment standards for primary, secondary, and tertiary treatment for up to 8.5 MGD of wastewater. The proposed Project would expand the treatment capacity of the WWTP by adding an MBR treatment process that could treat an additional 2.5 MGD of average dry weather flow. The MBR process would work in parallel with the existing oxidation ditch aeration, clarification, and granular media filtration processes and would produce effluent that meets the same standards required by the WWTP's Central Coast RWQCB National Pollutant Discharge Elimination System (NPDES) Permit (Order No. R3-2017-0028 NPDES No. CA0049964). The proposed Project would include installation of an MBR headworks and screening facility, bioreactor aeration and membrane basins, a blower and electrical building, solids handling facility, an air compressor facility, switchgear, and chemical feed and storage facility (See Figure 2-1). Flows from the MBR process train would then be sent for disinfection at the existing ultraviolet light disinfection system.

The WWTP is currently permitted by the RWQCB NPDES Permit (Order No. R3-2017-0028 NPDES No. CA0049964) to treat an average dry weather flow (ADWF) of 8.5 MGD of wastewater. The WWTP is approaching 75 percent of its rated capacity with the current average wastewater inflow of approximately 6.2 MGD. The proposed Project would expand the WWTP to 11.0 MGD treatment capacity which is a step towards accommodating the planned growth identified in the 2020 Gilroy General Plan and the 2035 Morgan Hill General Plan (City of Gilroy 2002; City of Morgan Hill 2016a). Gilroy is in the process of updating their General Plan to the planning year 2040 (City of Gilroy 2020a). The proposed Project expansion is consistent with both the planned growth within both the 2020 General Plan and the Public Draft 2040 General Plan (City of Gilroy 2002, 2020a).

Currently, effluent from the WWTP can be handled in three ways: disposal to onsite percolation ponds, discharge to the Pajaro River, or it can be sent to recycled water users throughout the region. Different effluent requirements apply depending on effluent discharge location. The new MBR facilities must also meet all the NPDES requirements for discharge (SCRWA 2017) and the permit would require modification prior to Project operation. The MBR filtrate would be disinfected and used in the existing SCRWA reclamation system or discharged to the river or to the percolation system without disinfection. Before disinfection, the MBR filtrate would meet the water quality requirements for filtered wastewater as put forward in the California Department of Public Health's Recycled Water Regulations, Title 22, Section 60301.320, Filtered Wastewater.



Stantec	South County Regional Wastewater Authority	Project Footprint	FIGURE 2-1 184031177

The proposed MBR facilities are to be constructed on approximately three acres in the northern portion of two diked stormwater ponds located just south of the access road along the south side of the existing oxidation ditches. The Project site is generally wet in winter and spring and dries out in summer. The site is flat except for the dike slope along the north border. As with the surrounding percolation ponds, the stormwater pond area on which the Project is to be constructed is currently maintained by the WWTP staff by mowing (annually) and sometimes disking so the area is covered with grassland-type vegetation, without trees. Past projects at the site resulted in disturbed areas on the eastern portion of the site near the vacuum truck receiving facilities and the western portion near the third clarifier. Apart from these activities, the unpaved portions of the site are normally undisturbed by equipment traffic or other human activity.

The 10-acre stormwater ponds were originally constructed in the 1970s on farmland by constructing earthen dikes approximately five feet high. After initially being used for wastewater percolation, the ponds were converted to use for stormwater management in the early 1990s. Currently, stormwater is collected from the site around the SCRWA oxidation ditches, clarifiers, solids handling, and administration building by a storm drain system consisting of drop inlets and manholes connected to underground piping, which discharges to northeast corner of the stormwater pond area. In addition, stormwater drainage from the SCRWA tertiary filters and disinfection facilities flows overland onto the western side of the stormwater ponds. The ponds have no outlet and all incoming stormwater is retained and then percolated or evaporated. There has been no surface release of stormwater from the ponds since they went into service and the retention and disposal capacity is estimated to be significantly in excess of the amount of stormwater generated at the site.

The stormwater that has been discharging to the Project site is considered to be industrial stormwater and is managed according to the site Stormwater Pollution Prevention Plan (SWPPP) and regulated by the General Permit for Stormwater Discharges Associated With Industrial Activities under the NPDES. As noted in the SWPPP, diesel oil and several water treatment chemicals (polymer, sodium hypochlorite, aluminum sulfate, and sodium bisulfite) are used at the treatment facility and could pose a risk to stormwater. However, release of these materials is prevented using covered, double-contained tanks and pipe with automatic leak detection and other design features in accordance with applicable codes and standards, and stormwater monitoring is conducted routinely for performance verification.

In addition to the MBR equipment site, the Project would affect other areas within the SCRWA facility, including the spoils area located toward the northeast corner of the WWTP site. This spoils area is part of a larger area on which excavated soil materials were placed in the early 1980s as part of a major dike and channel modification project conducted by the Santa Clara Valley Water District (SCVWD) along Llagas Creek. The hill at this location was created at that time and has since been used as a source for fill materials for various projects. Most of the area is currently covered with grassy vegetation and small shrubs, interrupted by equipment access tracks and disturbed soil piles.

2.1 PROJECT HISTORY

2.1.1 Previous Environmental Evaluations

Wastewater treatment planning, like City planning, is an evolutionary process that needs to be updated over time based on the demands and needs identified of planned and non-planned growth within the service area. Planning for growth in the cities of Gilroy and Morgan is done within the Cities' respect General Plans which contemplate the growth projections and associated infrastructure required to support the growth (City of Gilroy 2002, 2020a; City of Morgan Hill 2016a). These General Plans often have accompanying environmental documents that evaluate the environmental effects of the growth and development laid out by the plan. Both the City of Gilroy and City of Morgan Hill General Plans and accompanying EIRs have contemplated the future growth of the two cities including the associated infrastructure needs that accompanying that growth (City of Gilroy 2001, 2020a, 2020b; City of Morgan Hill 2016a, 2016b). To that point, the 2001 City of Gilroy 2020 General Plan EIR, the 2020 City of Gilroy 2040 Public Draft General Plan EIR, and the 2016 City of Morgan Hill 2035 General Plan EIR evaluated the environmental effects of the infrastructure expansions, like the proposed Project (City of Gilroy 2001, 2020b; City of Morgan Hill 2016b).

The proposed Project constitutes a part of the associated infrastructure required for growth within the limits covered in these General Plans. This means that possible environmental effects of the proposed Project have already been evaluated in the associated General Plan EIRs, at the level of detail of the General Plan descriptions. This applies for general, valley-wide impacts relating to transportation, electrical power, air quality, groundwater quality and quantity, storm drainage, and drinking water supply. These General Plan EIRs also accomplish the need to evaluate growth inducing effects and cumulative impacts relating to expansion of wastewater facilities. However, in some cases the level of detail of the General Plans may not be fine enough to address activities or changes that are specific to the site or nature of the proposed Project. To cover these potential situations, the function of this IS/MND is to evaluate the potential environmental impacts associated with the specific project aspects that are not covered in the EIRs for the prior General Plans or other general water or wastewater plans.

Gilroy is in the process of updating and reissuing their General Plan and has recently published a draft EIR for a 2040 General Plan, for public comment. Based on the documents currently available, the proposed Project and its effects will fit within the community growth and infrastructure expansion described and evaluated in this 2040 General Plan just as they do within the prior 2020 General Plan. Therefore, the prior General Plan EIRs can be relied on in accordance with CEQA for environmental review for general, valley-wide effects.

Between 1984 and 1991, the cities of Gilroy and Morgan Hill developed a Long-Term Plan that called for the incremental construction of up to 15 MGD of ADWF wastewater treatment capacity at the site (James M. Montgomery Consulting Engineers, Inc. 1984). The Draft Long-Term Plan Report was first released in 1984 describing the long-term wastewater treatment facility goals. The Draft Long-Term Plan Report was then analyzed in a two-volume EIR in 1986 that summarized the planning document and evaluated the associated environmental impacts (James M. Montgomery Consulting Engineers, Inc. 1984; Earth Metrics Inc. 1986). Changes made in response to public comments were published in the certified Final EIR report dated 1991 (Cities of Gilroy and Morgan Hill 1991). The information, discussion, and evaluation in these studies was subsequently relied upon and incorporated into the General Plans for the two cities.

The prior General Plan EIRs described and evaluated the level of wastewater treatment conducted at the SCRWA facility as well as the performance standards to be met in compliance with the applicable NPDES permit. The proposed Project would continue to accomplish wastewater treatment equivalent to industry-standard primary, secondary, and tertiary treatment and produce recycled water in compliance with Title 22. Treated water would continue to be recycled or disposed of by percolation (normally) or possibly discharged to the Pajaro River under extreme wet-weather conditions. The environmental effects of these activities have been fully evaluated in the prior general EIRs. However, the choice of MBR technology is a project-specific aspect for which the effects could not be evaluated at the General Plan or Long-Term Plan level-of-detail. Therefore, any environmental effects specifically related to this technology selection are to be addressed in this IS/MND.

2.1.2 Wastewater Treatment Plant Operations and Planning

Operation and maintenance of a high-quality wastewater treatment system requires long-term planning to meet the treatment needs of the communities they serve. When SCRWA was formed in 1992, it continued the planning process for improvements for the wastewater system that had been operated at the site by Gilroy and Morgan Hill for decades, with the goal of maintaining high quality service to system users. As part of this planning process, a WWTP Capacity Verification Study was performed in 2007 that developed alternatives for expanding treatment to handle expected future flows through 2030 (MWH 2007). At the time of that study, flow projections suggested that the ADWF would exceed the rated capacity of 8.5 MGD by the end of the planning period. As a result, five potential treatment technologies for meeting increased flows were evaluated as part of the Wastewater Treatment Plant Capacity Verification Study, Technical Memorandum 6, Treatment Technology Evaluation (MWH 2007).

Based on the conclusions and accepted recommendations of the studies, SCRWA investigated and evaluated alternatives identified in the WWTP Capacity Verification Study (MWH 2007). Table 2.1-1 below identifies the five treatment technologies investigated for further evaluation as a result of a workshop conducted in 2006.

Table 2.1-1 Alternative Technologies Considered for the SCRWA WWTP Plant Capacity Expansion Project

Alternative	Description
1 – Oxidation Ditch Baseline	Construction of a third oxidation ditch and related facilities.
2a – Parallel MBR	Similar to the facility described by the Plant Capacity Expansion Project – Phase II Draft Final Preliminary Design Report (SCRWA 2017).
2b – MBR Conversion	Converting the existing oxidation ditch into an MBR facility by replacing the clarifiers and tertiary filters with submerged membrane basins capable of treating the entire plant flow. The oxidation ditch, under this configuration would serve as the aeration basins, with a need for increased aeration capacity due to increased (MLSS) and projected flow increases.
2c – MBR Half Conversion	Converting one of the two oxidation ditches into an MBR facility and leaving the other as is. The submerged membrane basins will be capable of treating half of the plant flow. Both clarifiers would remain dedicated to a single oxidation ditch under this configuration, allowing it to operate at a higher mixed liquor suspended solids. Additional aeration would be required in both ditches.

Alternative	Description
3 – Oxidation Ditch with Denitrification Filters	This alternative includes increasing the capacity of the existing system by adding aeration and clarification capacity. Denitrification filters would be installed to ensure adequate denitrification occurs.

These alternatives were evaluated based on costs, operational flexibility and challenges, constructability, and agency/public acceptance. Alternatives 2a through 2c consist of MBR technology. Alternatives 2b and 2c were eliminated based on life cycle costs and qualitative factors discussed in the evaluation. The remaining three alternatives were further evaluated based on refined cost estimates and SCRWA staff input. Alternative 2a was ultimately selected, and identified as the proposed Project, based on the evaluation criteria and because the parallel MBR technology provided a number of other benefits including superior effluent quality, decreasing membrane costs, increased recycled water production capacity, and the potential for phased installation. Alternative 2a was ultimately selected as the preferred alternative by the SCRWA Board of Directors at their April 10, 2007 meeting.

2.2 PURPOSE OF THE PROJECT

The proposed capacity of 11.0 MGD accommodates both Gilroy's and Morgan Hill's growth projections in their respective General Plans (City of Gilroy 2002, 2020a; City of Morgan Hill 2016a). Each year, the scheduled timing of plant expansion is updated with new flow projections, calculated using the following two methods: a) using anticipated building permit issuances and associated wastewater allocations; and b) using projected population data. In addition, computerized process simulations have been run using the Biowin computer model to determine the limiting organic loadings at which the plant may experience failure of processes such as nitrogen removal. The most recent detailed reporting of the results (in April 2019) identified the date range 2024 to 2026 for the next treatment expansion. Based on these projections, the proposed Project is currently expected to be required before 2026.

2.3 PROJECT OBJECTIVES

SCRWA has two primary objectives for implementing the Project. The first is to install sufficient WWTP capacity to properly manage the wastewater quantities generated by planned population growth and development within SCRWA's service area. The second is to install technology and processes that continue to meet current and future regulatory limits for effluent quality.

2.4 PROJECT COMPONENTS

The construction of proposed Project would consist of the following facilities:

- Headworks and Screenings Facility
- Bioreactors
- Membrane Basins
- Blower and Electrical Building
- Chemical Feed and Storage Facility
- Solids Handling Facility

Collectively these components would make up the MBR process train. These components would be constructed in parallel to the two existing oxidation ditches and the granular media filters. Initially, influent to the plant enters the existing plant headworks for preliminary treatment with screening and grit removal. The existing headworks would be modified to divert a portion of the influent flow to the MBR treatment facilities. After preliminary treatment, influent will be pumped at an MBR influent pump station and directed to fine screens; bioreactors with pre-anoxic cells, aeration cells, and post-anoxic cells; and submerged membrane basins. Membrane effluent would be pumped to the existing ultraviolet disinfection facilities and distributed to reclaimed water users. Facilities supporting the MBR treatment train include blowers, chemical storage and feed, and solids handling. These facilities are discussed in the remainder of this section.

2.4.1 Headworks and Screening Facility

The MBR headworks facilities would function to:

- Control the diversion of flow to the MBR treatment train; and
- Provide fine screening to protect downstream membrane facilities.

Pumps would lift flow from the existing WWTP headworks to the new MBR headworks facilities. This approach was selected in lieu of relying solely on gravity to avoid deep subsurface construction, and to provide additional pretreatment upstream from the new MBR facility. The new MBR headworks would be a two-level facility consisting of influent pumps at the lower level and fine screening equipment at the upper level.

The MBR headworks would be located in close proximity to the existing WWTP headworks to consolidate screenings disposal. The electrical equipment that supports the MBR headworks would be fully enclosed in an adjacent electrical room to provide a controlled environment that would protect the electrical equipment. The MBR headworks facility would include two walls to shield the facility from prevailing winds and a canopy roof. The MBR headworks facility would be approximately 2,850 square feet in total size. The remainder of the facility would be open to the atmosphere. An odor control system, including exhaust fans, would also be provided for the MBR headworks.

2.4.2 Bioreactors

The MBR bioreactors provide biological treatment necessary for meeting both NPDES limits and Title 22 Water Recycling Regulations. The MBR bioreactors would be designed to remove total suspended solids, biochemical oxygen demand, and nitrogen. The MBR bioreactors would consist of two parallel and equally sized/configured treatment tanks. Flow would enter the MBR bioreactors from a splitter box downstream of the MBR headworks and would progress on to the MBR Membrane Basins.

Aerated and un-aerated (anoxic) zones would be used to provide the required biochemical oxygen demand and nitrogen removal. Additionally, a recycle flow of up to four times the influent flow would be provided to recirculate flow within the basin and promote removal of nitrogen. Fine bubble diffusers would provide aeration to the aerobic cells. Blowers would deliver air to the fine bubble diffusers. In the un-aerated zones (pre-anoxic and post-anoxic), mixing is required to keep the suspended solids from settling to the bottom of the basin. Mixing would be provided by one vertical shaft mixer in each of the pre-anoxic and post-anoxic cells.

2.4.3 Membrane Basins

Submerged membranes would separate solids from the MBR bioreactor effluent. The expanded facility would have two parallel MBR membrane basins with eight membrane cassettes each. The MBR gallery would be an enclosed building that would be common-wall construction with the MBR membrane basins. The gallery will house pumps, valves, instruments, piping, and appurtenances required to support the MBR treatment processes.

Effluent from the last post-anoxic cell of the MBR bioreactors would flow to the MBR membrane basin. Additionally, a recycle flow of up to four times the influent flow would be used from the membrane basins and sent to the first aerobic cell of the MBR bioreactor to provide sufficient fluid velocity within the membrane basin to avoid fouling of the membranes.

The membrane basin would include an air scour control process to avoid fouling. Provisions for membrane cleaning with chemicals (sodium hypochlorite and citric acid) are also necessary. Progressive levels of membrane cleaning capabilities would be provided to minimize the potential for sludge thickening at the membrane surface and to prevent organic and inorganic fouling of the membrane pores.

2.4.4 Membrane Bioreactor Blower and Electrical Building

An enclosed building would be provided to house the MBR aeration blowers, MBR air scour blowers, utility air system, the electrical equipment required to support the processes of the MBR bioreactors and the MBR membrane basin, and control room with workstation. The location of the building was selected to minimize the distance of conduit runs and to minimize the distance of air piping. Given these considerations, the building would be located near the discharge end of the membrane basins, placing this building close to the MBR bioreactor air demand, the MBR membrane basin air scour demand, and the pumps housed in the MBR membrane basin gallery. The total approximately size of the MBR Blower and Electrical building would be approximately 1,700 square feet.

The building would be separated into three rooms. The blower room and electrical room would be located on the lower level and a control room would be located above. A vestibule on the lower level of the building would provide access to the membrane gallery, the electrical room, the blower room, and the stairway to the control room. The control room would be positioned to have a view of the membrane basins.

Electrical equipment housed in the building includes:

- Motor control centers and variable-frequency drives for the MBR bioreactor and membrane basin equipment;
- Switchboard;
- Switchgear battery; and
- Control panels with programmable logic controllers.

All high voltage equipment would be housed in an enclosed portion of the building with restricted access for approved personnel. This room would be constructed with sufficient space for all electrical equipment required for the expansion. The control room would be located on the second floor with access to the top deck of the membrane gallery as well as stairs to the lower level of the building.

The proposed Project would add new electrical load which would increase the overall facility demand load from the current 1.2 megawatts (MW) to a future total ranging from 2.7 MW (in winter) to 3.3 MW (in summer), depending on seasonal load variations. Pacific Gas and Electric Company would not need to do a large-load study and would instead do a load transfer at the existing substation to accommodate the new proposed load on the circuit feeding the SCRWA WWTP.

2.4.5 Chemical Feed and Storage Facilities

The MBR facilities would require sodium hypochlorite and citric acid for their operation. Sodium hypochlorite would be used for backwash and membrane cleaning operations to mitigate organic fouling of the membranes. Citric acid is used to clean inorganic fouling. Sodium hypochlorite is currently in use at the facility for disinfection and is stored in an existing 1,000-gallon chemical storage tank at the existing storage facility (Area 72) while the citric acid would be stored at the new chemical storage facility (Area 172) adjacent to the MBR basins. Sodium hypochlorite from Area 72 would also be dosed into the new utility pump discharge piping to control biological growth. The citric acid storage and feed area would be semi-open (two walls and canopy) and located near the MBR gallery. Walls along the south and west side of the chemical storage and feed area would provide a wind break from the prevailing winds at the site. Design of the chemical storage and feed facilities was determined by the chemical cleaning requirements indicated by the membrane suppliers, chemical delivery schedules, requirements for secondary containment, and spill control for chemical storage. Sodium hypochlorite would be delivered by truck and stored in the existing 1,000-gallon chemical storage tank. Citric acid would be delivered and stored on site in 330-pound totes. An emergency eyewash and shower with heated water would be provided inside the citric acid storage/feed area. Hose bibs and hose racks for washdown would also be provided, similar to those within the existing facility. Additionally, a double-contained underground pipeline carrying hypochlorite would be utilized onsite. The design of this pipeline includes special monitoring equipment that would track the pressure of the materials in the pipeline and alert the on-site staff in the event of possible lower pressure or release of materials due to breakage or a leak.

Carbon addition (sucrose or glycerin) may be required in the future for the post-anoxic zone. The current experience with the oxidation ditch process indicated that this supplemental carbon feed should not be required. Space is available east of the citric acid storage area for future carbon storage and feed area if needed.

2.4.6 Solids Handling Facility

Solids must be removed from the MBR bioreactors and membrane basins to maintain steady state conditions. Removed solids would be dewatered prior to disposal to reduce the weight and volume of the sludge hauling for off-site disposal. A new two-story solids handling building, totaling approximately 3,500 square feet, would be constructed adjacent to the existing solids handling building to accommodate this dewatering.

A screw press which consists of a slow-moving helical screw conveyor inside a fixed cylindrical screen was selected for dewatering on the basis of its ease of operation and low maintenance requirements. Polymer would be dosed to the solids stream prior to dewatering to improve the performance of the equipment. The screw presses would be housed on the second story of the solids handling building. A new common transfer conveyor will deliver solids from the existing belt presses and new screw presses to the new horizontal load out conveyor which will distribute solids in the existing sludge storage hopper. The existing hopper has live bottom screws and multiple chute discharge locations for disposal to a truck.

In addition, the MBR solids handling building would be incorporated into the overall solids management strategy at the SCRWA facility. This solids management approach would be investigated further in separate studies and documented in technical memoranda in parallel with future expansion designs.

2.5 WASTEWATER TREATMENT PLANT OPERATION AND MAINTENANCE

Upgrades to the WWTP through the proposed Project are not anticipated to require significantly more operations staffing. The existing WWTP staff will operate the proposed Project as a part of daily treatment operations. Some of the new equipment for the MBR train would be different than that for the existing oxidation ditch, so there would be additional maintenance needs. However, the proportional increase in personnel is expected to be lower than the proportional increase in flow capacity and would add a nominal number of daily worker trips (approximately five). The Project does not include or need to include any additional parking, office space, restrooms, or other provisions for added personnel. Similar to existing chemical deliveries, sodium hypochlorite will be delivered by truck every three to four weeks and stored in an existing 1,000-gallon chemical storage tank and citric acid would be delivered every five to six months and stored on site in 330-pound totes. The MBR solids handling building would be incorporated into the overall solids management strategy at SCRWA and the MBR solids handling building would rely on the existing polymer storage tanks for polymer storage in the existing solids handling building. Additionally, the new screw presses would use the same polymer as the existing belt press and the existing four polymer feed pumps would be replaced with five new polymer pumps that serve both the existing belt presses and the new screw presses at the MBR solids handling building.

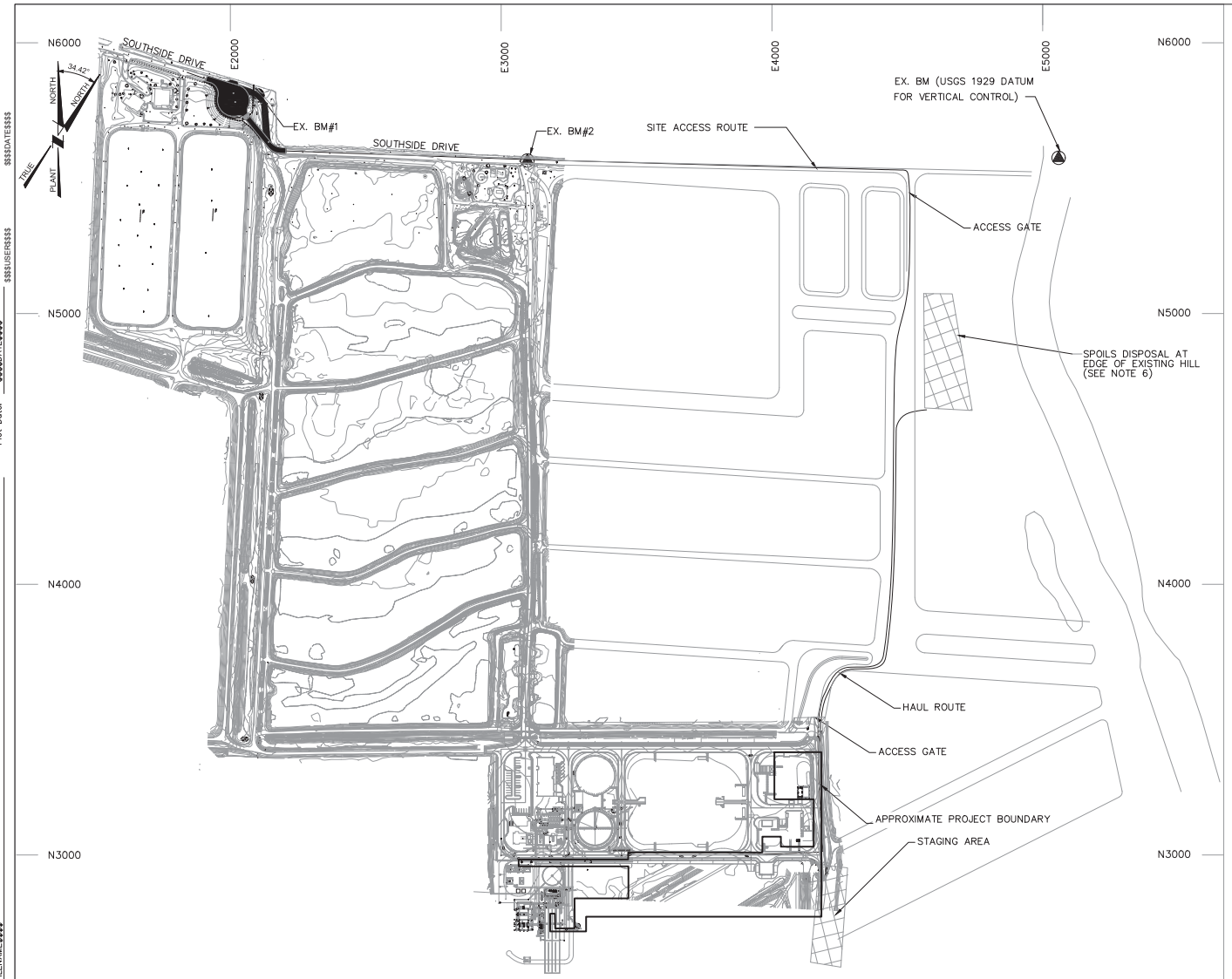
If new facilities are required for these chemicals in the future, they would be designed and constructed in accordance with current code requirements in effect at the time. If the new components require different chemicals than what is currently in use at the existing WWTP, those chemicals would be managed accordingly.

2.6 CONSTRUCTION ACTIVITIES AND ESTIMATED SCHEDULE

The proposed Project is projected to be completed by 2024. The total duration of construction activity is estimated at approximately three years with the possibly of extending to three and half years if wet conditions cause construction delays. Hours of construction would be during the daytime hours of 7:00 a.m. to 6:00 p.m.

The primary construction access would be at the WWTP access gate from Southside Drive. Secondary access from the east gate also from Southside Drive is available for deliveries and construction access to avoid traffic near the administration building. Structure access is provided by access roads and walkways throughout the site. The upper levels of aboveground structures are accessible by localized outdoor stairways, as necessary. Outside the Project area, site access would occur from Southside Drive. A spoils disposal site would be located east of the headworks facility just north of the proposed Project footprint, within the WWTP property. Staging, spoils storage, and access routes will be located within the boundaries of the existing WWTP on disturbed surfaces and existing access roads. At peak construction periods an average of 30 truck trips per day are anticipated through the access routes.

Key structures such as buildings and process train tanks would dictate the proposed grading area. In general, the overall site is lower in elevation when compared to the existing treatment plant site since part of the facility is located within the limits of the existing stormwater detention pond. As such, the site would be raised to match grade along the new improvements. Approximately 11,600 cubic yards of gross fill would be required for the proposed Project. It is anticipated that 2,000 to 3,000 cubic yards of material may be available on-site from previous WWTP improvements. If suitable this material would be used as fill material. The remainder of fill material would be imported from an off-site location assumed to be no more than 25 miles away. All site grading will be done in a manner that would facilitate stormwater drainage away from structure foundations and roads. Finished grades would be designed to slope away from structure perimeters in all directions for a distance of at least ten feet at a slope of at least five percent. Slopes adjacent to structures that are to be sealed by asphalt or concrete pavement would be designed to slope away at a slope of at least two percent for a distance of five feet. Where practical, the areas around the structures would be covered with asphalt pavement or exterior concrete flatwork to ensure that all water is directed away from the structures as rapidly as possible. Where structure elevations and access requirements prevent drainage away from structures, drop inlets would be used to convey stormwater away from the site towards the historic drainage direction into the existing stormwater detention basin where flows are currently directed



GENERAL SHEET NOTES

1. PLANT COORDINATES ARE USED THROUGHOUT DRAWINGS FOR LOCATION OF EQUIPMENT AND STRUCTURES.
2. CONTRACTOR TO COORDINATE W/ OWNER TO DETERMINE ACTUAL DEWATERING DISPOSAL AREAS.
3. CONTRACTOR SHALL MINIMIZE DISRUPTIONS TO THE WASTEWATER TREATMENT PLANT OPERATION.
4. THE CONTRACTOR SHALL COORDINATE WITH THE SCRWA PLANT OPERATIONS STAFF TO PERFORM ALL SITE WORK. THE CONTRACTOR SHALL PHASE THE WORK AND UTILIZE VALVES TO MINIMIZE OUTAGES OF SYSTEMS. THE TREATMENT PLANT SHALL REMAIN ACTIVE DURING ALL PHASES OF WORK. SECTIONS OF THE SYSTEM MAY BE SHUTDOWN BY THE CONTRACTOR UPON THE APPROVAL OF THE SCRWA. REFER TO SPECIFICATION 02 41 18 DEMOLITION AND RECONSTRUCTION.
5. DRAWINGS SHALL BE USED IN COORDINATION WITH DRAWINGS PROVIDED BY MANUFACTURERS OF EQUIPMENT.
6. CONTRACTOR TO PLACE AND COLLECT CLEAN DIRT ONLY, FREE OF DEBRIS, AT SOILS DISPOSAL AREA.

Plot Date: $$$$DATE$$$$ $$$$USERNAME$$$$ $$$$DATE$$$$
File: $$$$FILENAME$$$$
Job No: 105077710

REV	DATE	BY	DESCRIPTION
A	6/27	HHD	90% DESIGN PROGRESS SET

SCALE

WARNING
0 ? 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED
DRAWN
CHECKED

CONSTRUCTION DOCUMENT PHASE - JUNE 2019

NOT FOR CONSTRUCTION

This document is an interim document and not suitable for construction. As an interim document, it may contain data that is potentially inaccurate or incomplete and is not to be relied upon without the express written consent of the preparer.

Stantec

SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY

PLANT CAPACITY EXPANSION PROJECT

GENERAL
TRUCK ROUTE, SOIL STOCKPILE AND BENCHMARKS

SHEET:
DWG No.:
PROJECT No.: 184030862
DATE: 8-30-2017

Table 2.4-1 Project Construction Details and Schedule

Project Component	Specific Activities	Equipment Required	Area of Impact	Estimated Schedule	Anticipated Truck Haul Trips
Site Preparation / Surface Restoration	• Mobilization of equipment • Site grading	• Backhoe • Dozer • Water Truck	Improvements within the existing WWTP, a total of 14 acres. Approximately 7 acres of temporary or permanent disturbance	2 weeks	200
Site Demolition	• Demolition	• Backhoe • Concrete Saw • Excavator • Loader		1 month	24
Storm Drain/Yard Piping	• Trenching	• Excavator • Loader		3 months	16
Site Work/ Earthwork	• Site preparation • Grading	• Backhoe • Dozer • Excavator • Dump Truck • Water Truck • Loader		6 months	992
Preload	• Site preparation	• Backhoe • Dozer • Excavator • Dump Truck • Water Truck • Loader		2 months	1040
Building Construction	• Construct Project components: – Headworks and Screenings Facility Bioreactor Trains – Membrane Basins – Blower and Electrical Building – Switchgear / Engine Generator / Fuel Storage Area – Chemical Feed and Storage Facility – Solids Handling Facility • Structural • Mechanical • HVAC	• Generator • Crane • Power Trowel • Material Handler • Excavator • Loader		24 months	0
Electrical Finishes and Architectural Coating	• Add electrical controls • Paint and add architectural coatings to structures to match existing WWTP structures • Demobilization of equipment	• Backhoe • Jumping Jack Compactor • Skid Steer • Dump Truck • Vibratory Plate Compactor • Mixer, Stucco/Misc Concrete		22 months	0

3.0 ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that requires mitigation to reduce the impact from "Potentially Significant" to "Less than Significant" as indicated by the checklist on the following pages.

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

Determination:

On the basis of this initial evaluation:

☐	I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed Project MAY have a significant effect on the environment, and an environmental impact report is required.
☐	I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Signature	8.26.20
	Date
Saeid Vaziry, P.E., Environmental Programs Manager	SCRWA
Printed Name	On Behalf of

3.1 AESTHETICS

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

3.1.1 Discussion

During construction, the various construction activities would be visible from roads or other public viewsheds. Implementation of the proposed Project could result in temporary visual disturbance along Southside Drive during construction as material stockpiles and the operation of construction equipment occur. Furthermore, short-term construction-related impacts would be reduced or eliminated upon the completion of construction. The terrain of the proposed Project area and the surrounding area is relatively flat and consists mostly of agricultural lands. The dikes surrounding the SCRWA percolation ponds tend to block views of the interior of the site from nearby roads and pedestrian areas. The nearest sensitive receptors to the proposed Project site include a residential area affiliated with seasonal agricultural production which is located approximately 0.7-miles northwest, on the northern side of Southside Drive.

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

Finding: No Impact

The proposed Project site is not located in an area that has been designated as a scenic vista by the city of Gilroy. The proposed Project site would not degrade the existing visual character of the Hecker Pass Specific Plan Area (General Plan Policy 1.07), Uvas Park Drive or Miller Avenue from First Street to Mesa Road (General Plan Policy 6.02), the hillside areas of Gilroy, or the areas surrounding the scenic highways within Gilroy (General Plan Policy 6.01, General Plan Policy 12.04) which are designated as scenic vistas, or areas with scenic importance by the Gilroy

General Plan. These scenic areas are located more than 1.5-miles from the proposed Project site and therefore would not be visible from the proposed Project area. Additionally, the WWTP improvements would have minimal visual effect during construction and after completion because proposed Project construction and operation would blend with the existing operations that are currently performed at the WWTP, and because the nearest sensitive receptors are approximately 0.7-miles northwest of the proposed Project site. Therefore, there would be no impact.

b) Would the project substantially degrade scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Finding: No Impact

The proposed Project would not substantially degrade or damage scenic resources viewed from Hecker Pass Highway (located 3.5-miles northwest of the proposed Project site), Santa Teresa Boulevard (located approximately 2-miles west of the proposed Project site), and Pacheco Pass Highway (located 1.5-miles north of the proposed Project site) which are designated State Scenic Highways (General Plan Policy 6.01, General Plan Policy 12.04). These state scenic Highways would not be visible from the proposed Project site due to topography and existing structures in the area. Therefore, there would be no impact.

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

Finding: Less than Significant Impact

Construction of the proposed Project would occur within the SCRWA WWTP property, with intermittent trucks traveling to and from the proposed Project site. These short-term construction related views would be limited and would occur next to existing WWTP buildings and ongoing operations at the WWTP. Sensitive receptors in the area, which are limited to residents along Southside Drive (approximately 0.7-miles northwest of the proposed Project site), would have limited and temporary views of construction activities, with the majority of these activities blending in with the existing operations of the WWTP. Therefore, there would be a less than significant impact to the existing visual character of the site and its surroundings.

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

Finding: Less than Significant Impact

Existing light in the proposed project site is limited to operational lighting on buildings and other structures at the WWTP. Construction activities are set to occur during daylight hours only. The proposed Project would comply with applicable Gilroy General Plan policies and actions and with the City's Lighting Standards (Gilroy City Code Section 30.50.44 I Exterior lighting). The proposed Project would not create a new source of substantial light or glare and would only slightly increase the already-existing lighting at the SCRWA WWTP site. Therefore, there would be less than significant impact.

3.2 AGRICULTURE AND FORESTRY RESOURCES

AGRICULTURE AND FORESTRY RESOURCES Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.2.1 Discussion

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

Finding: No Impact

Portions of the property within the SCRWA-owned WWTP facility are within land designated as Prime Farmland by the California Department of Conservation, however, a majority of the property (including the proposed Project site) is designated as nonagricultural land (i.e. urban and built-up land) (California Department of Conservation 2016). Therefore, the proposed Project would not convert any land designated as prime farmland to nonagricultural use. There would be no impact.

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

Finding: No Impact

The proposed Project site is not located within or adjacent to a Williamson Act contract site (California Department of Conservation 2016). Therefore, the proposed Project would not conflict with an existing zoning designation for agriculture use or a Williamson Act contract and there would be no impact.

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

Finding: No Impact

There is no existing zoning designation for forest land, timberland, or timberland production within the proposed Project area, therefore, there would be no impact.

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

Finding: No Impact

There is no forest land within the proposed Project area, therefore, there would be no impact.

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

Finding: No Impact

As discussed above in item “a)”, the proposed Project would not have an effect on farmland or convert any farmland to nonagricultural use. Therefore, there would be no impact on the conversion of farmland to nonagricultural use.

3.3 AIR QUALITY AND GREENHOUSE GASES

AIR QUALITY and GREENHOUSE GAS EMISSIONS Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐
e) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
f) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.3.1 Discussion

The Project site is located within the San Francisco Bay Area Air Basin and is under the jurisdiction of the BAAQMD, the California Air Resources Board (CARB), and the United States Environmental Protection Agency (USEPA). The San Francisco Area Air Basin does not meet state or federal ambient air quality standards for ozone precursors (reactive organic gases [ROG] and nitrogen oxide [NO_x]), and particulate matter (PM_{10} and $PM_{2.5}$) (CARB 2018a). The following analysis was prepared consistent with 2017 BAAQMD CEQA Air Quality Guidelines, which are the most recent guidelines (BAAQMD 2017a).

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

Finding: Less than Significant Impact with Mitigation Incorporation

The applicable air quality plan associated with the proposed Project site is the 2017 BAAQMD Clean Air Plan (BAAQMD 2017b). The primary goals of the 2017 BAAQMD Clean Air Plan are to attain air quality standards and reduce population exposure to unhealthy air and protect public health in the Bay Area. The BAAQMD has developed its air quality thresholds with the understanding that they are protective of public health.

Implementation of the proposed Project would involve various construction activities such as demolition, earthwork activities, and installation of structural, mechanical, and electrical components. Construction activities would occur over a maximum of three and a half years within the existing SCRWA WWTP property. Construction Mitigation Measures required by the 2017 BAAQMD CEQA Air Quality Guidelines would be implemented into the proposed Project through Mitigation Measure (MM) AIR-1, Implement Basic Construction Measures and Best Management Practices. MM AIR-1 would include the implementation of the basic construction measures identified in the 2017 BAAQMD CEQA Air Quality Guidelines, as well as the Best Management Practices (BMPs) required by the Gilroy General Plan Draft EIR for projects greater than four acres in size (BAAQMD 2017a; City of Gilroy 2001) which would reduce the potential for fugitive dust and PM by limiting things such as idling time and setting criteria for applying speed limits and water to the site.

Once constructed, the proposed Project would be operated mainly by existing staff, with some additional maintenance personnel for new types of equipment (e.g. MBR membranes). The number of workers would decrease after construction completion. The proposed Project would not result in a noticeable amount of new vehicle trips from workers. Overall, operations of the proposed Project would not result in a significant increase in criteria pollutant and greenhouse gas (GHG) emissions. As shown in the Table 3.3-1, construction emissions associated with the proposed Project would be below BAAQMD daily significance thresholds for criteria pollutants. As shown in the Table 3.3-2 and Table 3.3-3, operational emissions would be below BAAQMD daily and annual significance thresholds for criteria pollutants. Based on this, the proposed Project would not conflict with or obstruct implementation of the 2017 BAAQMD Clean Air Plan, therefore, impacts would be less than significant. Furthermore, construction mitigation measures outlined in MM AIR-1 are required by the BAAQMD to be implemented and would further reduce emissions associated with the proposed Project.

Table 3.3-1 Proposed Project Average Daily Construction Emissions

Construction Year	ROG	NO_x	PM_{10}	$PM_{2.5}$
	Average Daily Emissions (lb/day)			
2021	0.64	7.63	0.23	0.21
2022	14.23	18.36	0.26	0.25
2023	1.05	16.13	0.24	0.22
BAAQMD Thresholds	54	54	82	54
Exceed Thresholds	**No**	**No**	**No**	**No**

Source: Appendix B

Table 3.3-2 Proposed Project Average Daily Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
	Average Daily Emissions (lb/day)			
Project Total	7.93	0.02	0.003	0.001
BAAQMD Thresholds	54	54	82	54
Exceed Thresholds	**No**	**No**	**No**	**No**

Source: Appendix B

Table 3.3-3 Proposed Project Annual Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
	Annual Emissions (tons/year)			
Project Total	1.45	0.004	0.0005	0.0002
BAAQMD Thresholds	10	10	15	10
Exceed Thresholds	**No**	**No**	**No**	**No**

Source: Appendix B

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

Finding: Less than Significant Impact

The proposed Project would be considered to contribute to a significant impact if it would result in exceedance of BAAQMD significance thresholds for ROG, NO_x, PM_{10}, and $PM_{2.5}$. It should be noted that PM thresholds for construction emissions only apply to PM exhaust emissions only and PM thresholds for operations are based on total PM emissions from fugitive dust and exhaust emissions. As shown in the Table 3.3-1, proposed Project construction emissions would be below BAAQMD daily significance thresholds for criteria pollutants. As shown in the Table 3.3-2 and Table 3.3-3, operational emissions would be below BAAQMD daily and annual significance thresholds for criteria pollutants. Based on this, proposed Project construction and operational emissions would not result in a considerable net increase of criteria pollutants for which the region is non-attainment, therefore, impacts would be less than significant.

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

Finding: Less than Significant Impact with Mitigation Incorporation

The proposed Project site is surrounded by land in active agricultural use and the SCRWA WWTP percolation ponds. A residential area affiliated with seasonal agricultural production is located within an approximately 14-acre lot about 0.7-miles northwest of the proposed Project site at Southside Drive. There are no schools located within 1-mile of the proposed Project area and no sensitive receptors directly surrounding the proposed Project site. However, because construction activities would result in localized emissions of dust and diesel exhaust, these emissions could dissipate to surrounding areas which could result in temporary impacts to nearby land uses. As such, MM AIR-1 would be implemented which would reduce dust and localized emissions in the proposed Project area from construction activities by imposing specific controls on construction designed to limit emissions of pollutants. Based on this, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations, therefore, impacts would be less than significant with mitigation incorporated.

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

Finding: Less than Significant Impact

Operation of the proposed Project would not increase the potential to produce odors beyond that which currently exists at the SCRWA WWTP. During construction, use of diesel-powered vehicles and equipment could create temporary, localized odors that are less than significant due to the lack of sensitive receptors within the proposed Project area and short-term nature of the construction activities. The Project consists of expanding wastewater treatment facilities, and such facilities have a well-known potential for generating odors. However, SCRWA places a high priority on odor control both operationally and in facility design. Over the past three decades, the facility operations staff has demonstrated aggressive attention to odor control in the facility as well as in the upstream wastewater collection system, where they have been assisted by Gilroy and Morgan Hill maintenance and industrial pretreatment program personnel. The bulk of the facility treatment equipment (and all the proposed new MBR equipment) is located toward the center of the relatively large SCRWA site to provide good separation between any potential sources and the site boundary. The facility design includes an odor control system at the headworks and covers on anaerobic wastewater treatment basins. Aerobic solids processing is used rather than more odor-prone anaerobic digestion. Past experience at this facility has shown that the substantial design margins and thorough process monitoring and control procedures required to maintain steady nitrification and denitrification in the oxidation ditches also reliably prevents the release of odors. Investigations at other sites (e.g. Hollister) operating denitrifying MBR units have shown that this is also true for this selected Project technology. Based on this, the proposed Project would not result in emissions or odors that would adversely affect a substantial number of people; therefore, impacts would be less than significant.

e, f) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Finding: Less than Significant Impact

Assembly Bill 32 was established by CARB to provide statewide GHG emissions cap for 2020, adopt mandatory reporting rules for significant sources of GHG, and adopt comprehensive Climate Action Scoping Plans to help identify how emission reductions will be achieved. Assembly Bill 32 was then amended by Senate Bill 32 on September 16, 2016 and further required that statewide GHG emissions are reduced to 40 percent below the 1990 level by the year 2030 (CARB 2018b). In addition to the 2030 goal, BAAQMD established a goal to reduce GHG emissions 80 percent below 1990 levels by 2050 in its 2017 BAAQMD Clean Air Plan (BAAQMD 2017b). Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a bright-line threshold of 660 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year based on the GHG reduction goals of Executive Order B-30-15. The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 $MTCO_2e$/year threshold. The 2030 thresholds were then interpolated to develop thresholds for 2024, the first year of proposed Project operation. Based on the interpolation of the 2020 and 2030 bright-line thresholds, the threshold for 2024 would be 924 $MTCO_2e$/year. Total construction GHG emissions were amortized over 30 years (lifetime of the proposed Project) and added to total operational emissions.

As shown in Table 3.3-4, the proposed Project's total GHG emissions would be below BAAQMD's significance threshold. Furthermore, the proposed Project is expanding an existing wastewater treatment plant which accommodates the planned growth within Gilroy and Morgan Hill's General Plans and is consistent with both BAAQMD's Clean Air Plan and the wastewater treatment and water conservation policies of the City's General Plans. Since the proposed Project would not exceed the BAAQMD's annual significance threshold and is consistent with applicable plans and policies to reduce GHG emissions, therefore, impacts from the proposed Project GHG emissions would be less than significant.

Table 3.3-4 Proposed Project Annual GHG Emissions

Source Category	$MTCO_2e$/year
Area	<1
Electricity	255
Mobile	0
Waste	0
Water	0
Delivery Trucks	2
Construction	49
Proposed Project Total	**306**
BAAQMD Threshold	924
Exceed Thresholds	**No**

3.3.2 Mitigation Measures

3.3.2.1 Mitigation Measure AIR-1: Basic Construction Mitigation Measures and Best Management Practices

The following Basic Construction Measures from the BAAQMD 2017 CEQA Guidelines (or most recent BAAQMD CEQA Guidelines) shall be implemented throughout construction of the proposed Project:

a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

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

c) 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.

d) All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

e) 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.

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

g) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

h) 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 BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

In addition to the above measures, the following Gilroy General Plan Draft EIR BMPs shall be implemented throughout construction activities:

- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.);
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways; and
- Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure AIR-1 Implementation

Responsible Party: SCRWA and contractor.

Timing: The Basic Construction Measures and BMPs shall be implemented throughout construction activities.

Monitoring and Reporting Program: The contractor shall prepare and monthly report documenting compliance with the BAAQMD's Basic Construction Measures, including any corrective actions taken, dust complaints filed, how the complaints were resolved, and documentation of hours of construction activities. The monthly report shall be submitted to SCRWA and be kept on file and made available upon request.

Standards for Success: Compliance with all BAAQMD CEQA Air Quality Guidelines screening criteria.

3.4 BIOLOGICAL RESOURCES

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

3.4.1 Discussion

The proposed approximately 7-acre Project area includes previously disturbed and/or developed areas within the existing approximately 14-acre SCRWA WWTP property (Figure 2-1). The proposed MBR facilities are to be constructed in the area to the south of the existing WWTP which is currently used as a stormwater detention basin. This stormwater basin remains dry during most of the year and allows wet-weather stormwater to evaporate or percolate after it is collected from the WWTP site. The remaining land surrounding the existing WWTP site includes a mix of wastewater percolation ponds and agricultural fields. The study methods and results used to complete the impacts analysis below are included in Appendix C.

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

Finding: Less than Significant Impact with Mitigation Incorporation

Species listed in local or regional plans, policies, or regulations, or regulated by the California Department of Fish and Wildlife (CDFW) or the United States Fish and Wildlife Service (USFWS) are called special-status species. Special-status species within the Project area were identified by a desktop query of local general plans, California Native Plant Society (CNPS), CDFW, and USFWS lists and databases to identify a list of species known to occur within the Project region. That query was then refined by further research and reconnaissance-level biological field surveys to identify habitats that support special-status species and/or the species themselves that could occur on or around the Project site (otherwise referred to as the Project area) where they could potentially be adversely impacted by Project construction or operation. The special-status species query identified 43 special-status plant species and 23 wildlife species, not including nesting migratory birds and raptors, with the potential to occur within the region surrounding the proposed Project (Appendix C Table 1).

The reconnaissance-level biological field survey took place on January 3, 2020 where a Stantec biologist walked meandering transects of the Project area. The survey classified habitats on site to assess the suitability for the special-status species identified during the desktop query. Table 1 of Appendix C contains the results of the special-status species query and includes the habitat suitability ratings that establish the queried special-status species' potential to occur on the Project site or within the Project area. Species identified with potential to occur and to be potentially impacted by the proposed Project are further discussed and potential impacts are analyzed in the subheadings below.

The proposed Project has the greatest potential to have a substantial adverse effect on species with a moderate or high potential to occur on site as determined by high habitat suitability or by the species' variable range and mobility. While the potential for adverse effects on species with low or nil/no potential to occur is possible it is unlikely due to limited or no suitable habitat and/or a species limited mobility from a nearby occurrence to reach the Project area. The potential impacts to species with a moderate or high potential to occur are discussed in the following sections.

3.4.1.1 Impacts to Special-status Plant Species

The habitat classification identified the majority of the Project area as disturbed and/or already developed WWTP, therefore, the overall potential for impacts to special-status plant species as a result of proposed Project activities is low. However, of the 43 special-status plant species identified and assessed through desktop research and field surveys, one species, saline clover (*Trifolium hydrophilum*) (described below), was determined to have a moderate potential to occur within the proposed Project area.

Saline Clover

Saline clover is an annual herb that is endemic to California habitats such as marshes, swamps, vernal pools, and valley and foothill grasslands and is special-status by its listing by CNPS. It is part of the Fabaceae (or commonly known as the pea) family. Saline clover has a typical bloom period between April and June and can be found in

elevations ranging from 0 to 984 feet (0 to 300 meters) (CNPS 2020).This species is known to occur in the Bay Area of California, particularly in Solano, Alameda, and Santa Clara Counties (Calflora 2019; CNPS 2020). Threatened by development, trampling, road construction, and vehicles, this species is critically imperiled throughout the State, though it is not federally listed (CNPS 2020). Saline clover has a moderate potential to occur within the proposed Project area, with suitable habitat present and a known occurrence from 1995 within approximately 2.5-miles to the southeast of the proposed Project area off Highway 25 between Miller Canal and the Pajaro River on the San Benito and Santa Clara County Line (CDFW 2019a). The reconnaissance-level field survey conducted on January 3, 2020 resulted in no observations of saline clover, however, the survey was conducted outside the typical blooming period for this species (April−June), and therefore, the survey included a habitat assessment for suitability rather than surveying to determine presence/absence. Thus, there is a small potential for the species to be present on site and to be potentially impacted by proposed Project construction activities.

MM BIO-1, Pre-Construction Botanical Surveys, would be required to limit this potential impact by assessing the Project area for presence of saline clover during the bloom period, prior to construction, and if present provides avoidance or replanting procedures as well as a provision for consultation with CDFW, which would limit the potential of substantial adverse effects to saline clover to less than significant levels.

MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training, would further be required to educate workers to identify saline clover if the pre-construction surveys, contained within MM BIO-1, identify the species within the Project area and to provide protocols and contacts in the event of discovery. Implementation of MM BIO-1 and MM BIO-2 would adequately reduce any potential construction impacts to saline clover to a less than significant level.

Other Special-Status Plant Species

MM BIO-1 and MM BIO-2 would also reduce any potential impact to any of the other 42 identified special-status species with limited potential to occur through identification during the pre-construction surveys and avoidance or consultation since the majority of species have overlapping bloom periods with saline clover such that if surveys are conducted during the mid-bloom period (i.e., April to June, ideally in May) most target species are likely to be encountered and presence/absence confirmed.

With the implementation of MM BIO-1, Pre-Construction Botanical Surveys and MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training, potential impacts to saline clover and the other 42 identified special-status plant species would be considered less than significant.

3.4.1.2 Impacts to Special-status Wildlife Species

The habitat classification identified the majority of the Project area as disturbed and/or already developed WWTP, therefore, special-status species with the highest potential to occur are species who habituate in disturbed areas with frequent human disturbance and management or with the mobility to easily change location. As expected, of the 23 special-status wildlife species identified during the desktop query, the northern harrier (*Circus hudsonius*) and nesting raptors and other migratory birds where the only species identified with a high or moderate potential to occur on site or in the Project area and are analyzed below to assess the severity of potential Project impacts. Additionally, California tiger salamander, California red-legged frog, and San Joaquin Kit Fox are high profile species with a low

potential to occur, but due to their notoriety, mobility, and presence nearby further examination of potential effects resulting from the Project are described below.

Northern Harrier

The northern harrier is a medium-sized raptor and common resident in the proposed Project region and may inhabit a variety of habitats including wetlands, grasslands, marshes, meadows and upland habitats (Cornell 2019). The northern harrier is listed under the Migratory Bird Treaty Act (MBTA) as well as CDFW's Fish and Game Code (FGC) Sections 3503, 3503.5, and 3800. Unlike many other raptors, they are sexually dimorphic. Males gray above, whitish below, have black wingtips, a black-banded tail, while female northern harrier is brown with black bands on the tail, are whitish with brown streaks underneath. Both males and females have a white rump patch that is a distinguishing characteristic while in flight (Cornell 2019). Northern harrier hunt for small animals (e.g., mammals, reptiles, amphibians, and birds) by flying low and slow over the ground relying heavily on their sense of hearing to capture their prey (Cornell 2019). Their nest consists of a large mound of sticks and/or vegetation generally found in riparian edges and sometimes upland areas of agricultural and or grasslands (Cornell 2019; CDFW 2013). Both suitable foraging and nesting habitat exists within and adjacent to the proposed Project area and northern harrier were observed foraging along the existing storage ponds just north of the proposed Project area during surveys conducted on January 3, 2020. In addition to these observations, the presence of suitable nesting and foraging habitat within and adjacent to the proposed Project area results in a high potential of occurrence for nesting northern harrier to presence within the proposed Project area.

Proposed Project construction activities during the nesting season (approximately February 15 through August 31) have the potential to cause impacts to northern harriers such as; disturbance resulting in nest abandonment, the loss of eggs, or direct mortality to a nesting bird, which would be considered a significant impact. However, the implementation of MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training would educate workers to look for nests and/or the species present on site which would reduce potential construction impacts because a biologist and CDFW would be contacted to ensure avoidance or relocation. Further, MM BIO-3, Avoid Disturbance to Nesting Raptors and Other Migratory Birds provides measures specific to northern harrier and other nesting raptors and migratory birds and would ensure northern harrier are identified and appropriately avoided by scheduling disturbance activities during non-nesting season or implementing other proscribed avoidance measures by having workers prepared to identify sensitive resources themselves that would reduce the potential significance of any potential impact.

Nesting Migratory Birds and Raptors

Impacts to migratory birds are regulated under the MBTA and FGC Sections 3503, 3503.5, and 3800. Suitable habitat for migratory birds and raptors exists within and adjacent to the proposed Project area providing a moderate high potential of occurrence for birds protected under the MBTA and FGC to nest within the proposed Project areas and areas immediately adjacent. Common migratory bird species that have the potential to nest and/or forage within or adjacent to the proposed Project area may include ground nesting species such as killdeer (*Charadrius vociferus*) and western meadowlark (*Sturnella neglecta*); riparian or grassland species such red-winged blackbird (*Agelaius phoeniceus*) and song sparrow (*Melospiza melodia*); tree/cavity nesters such as western scrub-jay (*Aphelocoma californica*), western bluebird (*Sialia mexicana*), acorn woodpecker (*Melanerpes formicivorus*), red-tailed hawk (*Buteo jamaicensis*); and waterfowl such as mallard (Anas platyrhynchos).

Although impacts from the proposed Project activities would be incidental, activities during the nesting season (approximately February 15 through August 31 for most species for this region) have the potential to cause impacts to birds from temporary habitat loss or disturbance which could result in nest failure. Any disturbance resulting in nest abandonment, the loss of eggs, or direct mortality to a nesting bird would be considered a significant impact. However, the implementation of MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training and MM BIO-3, Avoid Disturbance to Nesting Raptors and Other Migratory Birds would ensure protected bird species are identified and appropriately avoided by scheduling disturbance activities during non-nesting season or implementing other prescribed avoidance measures that would reduce the potential significance of any potential impact. Therefore, with the implementation of MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training and MM BIO-3, Avoid Disturbance to Nesting Raptors and Other Migratory Birds, potential impacts to nesting migratory birds or raptors would be reduced to a less than significant level.

California Red-legged Frog

The California red-legged frog (CRLF), the largest native frog in the western U.S., measuring from 1.75- to 5.25-inches, spend most of their lives in ponds, stream courses, permanent pools, and intermittent streams fed by drainage areas no larger than 115 square miles (Hayes and Jennings 1988; USFWS 2010, 2011). CRLF is USFWS federally listed as Threatened and a CDFW state Species of Special Concern. This species occurs between zero and 5,000 feet mean sea level (USFWS 2006). Typical aquatic habitat characteristics include water depth of at least 2.5 feet, largely intact emergent or shoreline vegetation (e.g., cattails [*Typha* spp.], tules [*Scirpus* spp.], or willows) and absence of competitors or predators, such as the American bullfrog (*Lithobates catesbeiana)* and largemouth bass (*Micropterus salmoides*) (Hayes and Jennings 1988). Aquatic breeding habitat is characterized mainly by bodies of fresh water that hold water for a minimum of 20 weeks, while non-breeding aquatic habitat may hold water for a shorter period of time, but provide refuge from predators, foraging, shelter, and aquatic dispersal for both adult and juvenile CRLF up to an average of one mile from their aquatic breeding habitat (USFWS 2010). Both aquatic breeding habitat and non-breeding aquatic habitats are essential to the survival of CRLF populations and are defined as primary constituent elements by USFWS.

Breeding typically begins between late November and mid-December and may last through May in most years but is dictated by winter rainfall (Jennings and Hayes 1994; USFWS 2005a). Breeding typically occurs in permanent ponds and may occur in slower water of streams (i.e., pools or backwaters) (Hayes and Jennings 1988). CRLF also make use of terrestrial habitat, especially after precipitation events, for nonmigratory forays into adjacent upland habitats and for migratory overland movements to breeding sites. Upland dispersal habitat typically includes areas within one mile of aquatic breeding habitat with no impassable dispersal barriers and is used primarily by CRLF during the non-breeding season for dispersal and/or aestivation (USFWS 2002). Upland habitat, a primary constituent element for CRLF, provides shelter, predator avoidance, and forage and may include grasslands, woodlands, and/or wetland/riparian plant species (USFWS 2006). A large portion of Santa Clara County contains critical habitat for CRLF.

The potential for impacts to CRLF or its habitat as a result of the proposed Project is low. There are three known occurrences of CRLF from 1997, and one known occurrence from 2017 on land managed by the SCVWD, all of which are located approximately three miles to the southwest of the proposed Project area (CDFW 2019a). Observations of CRLF include descriptions of aquatic habitats (i.e., ponds and shallow creek channel) with habitats

surrounded by grassland and oak woodland or agricultural areas (CDFW 2019a). The field survey and habitat assessment conducted on January 3, 2020 resulted in no evidence of CRLF including observations that no suitable aquatic breeding habitat occurs within the proposed Project area. The proposed Project would be implemented within the existing developed WWTP property. MM BIO-2 would ensure that workers are educated to identify and report potential occurrences of CRLF which would avoid potential impacts. Therefore, with the implementation of MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training, potential impacts to CRLF would be considered less than significant.

California Tiger Salamander

The California tiger salamander (CTS) is a stocky wide-mouthed amphibian that can reach up to 8-inches (20-centimeters) in length. CTS is USFWS federally and CDFW state listed as Threatened and is also a state watch list species. Adult CTS have dots and/or bars of white or pale yellow against black background on their back, sides, legs, and tail and has protruding eyes from the top of its blunt round head (USFWS 2017). Larvae are yellowish gray, have wide flat heads, and bushy gills. Endemic to California, the historic range of CTS likely included most of the Central Valley; however, it is not well known due to fragmentation (CaliforniaHerps 2019).

The CTS's, preferred habitat includes areas of seasonal wetlands and/or vernal pools, grasslands, oak savanna, and mixed or coniferous forest edges from sea level up to 1,500 feet (457 meters) in elevation (CaliforniaHerps 2019; USFWS 2017). CTS can be found in aquatic environments during the rainy season (e.g., typically October through May), and may migrate up to a mile away from their upland habitat, which includes the burrows of small mammals, most commonly the California ground squirrel and Botta's pocket gopher (*Thomomys bottae*). Breeding usually occurs from December through February, depending on rainfall, in fish-free ephemeral or seasonal ponds (CaliforniaHerps 2019). Larvae typically metamorphose and remain in ponds for three to six months. Larvae then leave the ponds in June or July to seek shelter during the warm and dry summer months (USFWS 2017). If ponds fail to fill in years of extreme drought, no breeding season would occur.

There are seven known occurrences confirmed within three miles of the proposed Project area and the closest final critical habitat for CTS is located approximately 2.5-miles east of the proposed Project area (CDFW 2019a; USFWS 2019). Six of the seven known CTS observations within one mile (their maximum known dispersal distance) are from 1996−2006 with habitats described as artificial ponds (e.g. stock pond) surrounded by grazed grassland and oak woodland often with the presence of California ground squirrel burrows nearby (CDFW 2019a). The most recent observation (2017) is located approximately three miles to the southwest of the proposed Project area on the western side of Highway 101 and Highway 25 (CDFW 2019a).

The potential for impacts to CTS or its habitat as a result of the proposed Project is low. The field survey and habitat assessment conducted on January 3, 2020 resulted in no evidence of CTS including observation of no suitable aquatic breeding habitat within the proposed Project area. The proposed Project would be implemented within the existing developed WWTP property. Similar to CRLF, the implementation of MM BIO-2 would educate construction workers to identify and report potential occurrences of CTS to promote avoidance and/or consultation. Therefore, with the implementation of MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training, potential impacts to CTS would be considered less than significant with mitigation incorporated.

San Joaquin Kit Fox

The San Joaquin kit fox is USFWS federally listed as Endangered and a CDFW state listed as Threatened. Nocturnal and active year-round, San Joaquin kit fox feed primarily on rodents such as the California ground squirrel, white-footed mice (*Peromyscus leucopus*), kangaroo rats (*Dipodomys sp.*), and San Joaquin antelope squirrels (*Ammospermophilus nelson*). However, their diet may also include black-tailed jack rabbit (*Lepus californicus*), ground-nesting birds, insects, and some vegetation. Prey availability plays a key role in the reproductive success of this species (USEPA 2010a). Dens of the San Joaquin kit fox may be used for both housing and protection. Loose soils are preferred when constructing their den, however, they also have been known to modify those of other animals as well as human-made structures such as culverts or abandoned pipes. Many dens may be used by any one kit fox within a home range of one to 12 miles (USEPA 2010a). Their current range has been reduced by over half since 1930 when it was thought to inhabit most of the San Joaquin Valley due to the conversion of valley grassland to agricultural and various urban development uses, resulting in their decline and their federal and state protection status. The largest remaining intact habitat is found in and near the Carrizo Plain National Monument of San Luis Obispo County, in western Kern County in the Elk Hills, and in and near Tejon Ranch located in southwest Kern County (USEPA 2010a).

The potential for impacts to the San Joaquin kit fox or its habitat as a result of the proposed Project is low. There is limited suitable denning and/or foraging habitat within the proposed Project area and there are no known occurrences within three miles of the proposed Project area (CDFW 2019a). During the field survey conducted on January 3, 2020, no evidence (i.e., active den sites, tracks, scat, prey remains) of San Joaquin kit fox was observed within or directly adjacent to the proposed Project area. In recent years successful dispersal of juvenile kit foxes has shown a decrease from their core habitat areas (i.e., western Kern County and Carrizo Plain National Monument), which shows that movement of kit foxes from those core areas is becoming less likely. This factor, the lack of potential denning habitat and/or signs of San Joaquin kit fox during the field survey, combined with the proposed Project activities occurring within the developed area within the WWTP property, the proposed Project poses a low risk of contact with breeding and/or foraging kit fox.

However, with the implementation of MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training, any potential active kit fox denning sites would be identified and appropriately avoided. Therefore, potential impacts to San Joaquin kit fox would be considered less than significant with mitigation incorporated.

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

Finding: Less than Significant Impact

The reconnaissance-level field survey revealed primarily disturbed/ruderal and non-native annual grassland vegetation communities within the proposed Project area and determined there is no riparian habitat present. However, riparian and wetland habitats do exist adjacent to the proposed Project area and have the potential to be important habitat for a variety of wildlife including birds, mammals, reptiles, amphibians, and invertebrates alike. Wildlife species have been known to use these habitats during all stages of their life cycles including breeding, feeding, nesting, and/or migration. However, the biological vegetation communities and habitats present within the

proposed Project area (actual footprint) provide minimal suitable habitat for both special-status vegetation and wildlife species.

Additionally, the proposed Project would not have an impact on other sensitive biological communities such as native grassland. The proposed Project would not cause changes to habitat value and species composition, cause habitat fragmentation, remove understory, alter drainage patterns, disrupt the tree canopy, or disrupt animal movement through a woodland. Therefore, there would be a less than significant impact on riparian habitat or other sensitive natural communities.

The proposed Project would not involve the direct removal of riparian vegetation, disruption of riparian wildlife habitat (animal dispersal corridors and/or understory vegetation), intrusion within the upland edge of the riparian canopy, disruption of animal migration or breeding, the disruption of a substantial amount of adjacent upland vegetation where such vegetation plays a critical role in riparian-dependent wildlife species, or where such vegetation aids in stabilizing steep slopes adjacent to the riparian corridor, and construction of the proposed Project would not disrupt critical time periods for nesting and breeding fish or other wildlife species.

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

Finding: No Impact

The proposed Project is located within the existing WWTP property and includes the existing developed facilities, dirt access roads, and a stormwater detention percolation pond to the immediate south. Areas adjacent to the proposed Project area include other lands owned and operated by SCRWA as well as lands supporting agricultural purposes. There are no federally or state protected wetlands within the proposed Project area and therefore, there would be no impact to federally protected wetlands.

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

Finding: Less than Significant Impact

Wildlife movement corridors have been recognized by federal agencies and CDFW as important habitats worthy of conservation. Wildlife movement corridors provide seasonal migration between winter and summer habitats and provide non-migrant wildlife movement within their home range food, cover, and reproduction. While data on the locations and value of wildlife movement corridors specific to the proposed Project area is lacking, the surrounding lands adjacent to the proposed Project area has the potential to support migratory wildlife species, specifically nesting migratory bird species. However, with the temporary disturbance and small size of the proposed Project and its location being primarily in disturbed and/or developed areas, less than significant impacts are expected to occur and thus the proposed Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.

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

Finding: No Impact

The proposed Project does not include plans for tree removal. The proposed Project does not include the removal of on-site trees considered to be significant under the City's Consolidated Landscaping Policy, Section 6.0, or in the removal of trees that are considered part of a woodland or forest community. There would be no impact.

f) Would the project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

Finding: Less than Significant Impact with Mitigation Incorporation

The Santa Clara Valley Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) is a document that helps both private and public entities plan and execute projects that lessen the impacts on natural resources within the plan area. The planning document identifies reserves that are restored and/or preserved for specific species as well as how those reserves will be managed and monitored (Santa Clara Valley Habitat Agency 2012). The Santa Clara Valley HCP/NCCP covers approximately 835,449 acres, primarily within south Santa Clara County.

There are nine wildlife species and nine plant species covered under the Santa Clara Valley HCP/NCCP. All eighteen species were evaluated for the potential to occur within the proposed Project area and determined to have a very low to nil or low potential to occur within the proposed Project area (Appendix C, Table 1). However, three wildlife species (CRLF, CTS, and the San Joaquin kit fox) were further discussed above because they are considered high profile. With the implementation of MM BIO-1, Pre-Construction Botanical Surveys, MM BIO-2, Pre-construction Worker Environmental Awareness Program (WEAP) Training, and MM-BIO-3, Avoid Disturbance to Nesting Raptors and Other Migratory Birds (as described above), no impacts are expected to occur to the 18 covered species within the HCP/NCCP, and therefore, the proposed Project would not conflict with the Santa Clara Valley HCP/NCCP.

3.4.2 Mitigation Measures

3.4.2.1 Mitigation Measure BIO-1: Pre-Construction Botanical Surveys

A qualified botanist or biologist shall conduct special-status botanical surveys prior to construction activities in the proposed Project area. Surveys shall follow protocols designated by the USFWS (USFWS 1996), CDFW (CDFW 2018) and CNPS (CNPS 1991) and shall occur during the appropriate floristic bloom periods for the saline clover and any other special-status species identified as having a potential to occur in the proposed Project area (Appendix C). The majority of special-status species with a potential to occur in the proposed Project area have an overlapping bloom period such that if surveys are conducted between April and June (i.e., ideally mid-bloom period in May), target special-status species are most likely to be identifiable.

If special-status plants are not detected during pre-construction botanical surveys, no further mitigation is required. However, if special-status plant species are identified within the proposed Project are, their locations shall be mapped, and SCRWA shall require the implementation of the following measures:

1. If feasible, construction activities shall avoid special-status plants by installing an exclusion area with fencing and signage located at least 10 feet from special-status plant populations.

2. If avoidance is not feasible, SCRWA shall consult with the appropriate regulatory agency (i.e., USFWS for Federally listed species and CDFW for State- and CNPS- listed species) to identify appropriate procedures and measures capable of reducing impacts to a less than significant level. Recommended measures to mitigate impacts to special-status species may include those found in the Policy on Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants (CNPS 1991). Other measures may include compensation for any impacts to special-status plants via replacement (e.g., seed collection and replanting or transplanting of plants) or substitute resources (e.g., mitigation fees) as defined by regulatory agencies. SCRWA shall implement measures recommended by the appropriate regulatory agencies.

Mitigation Measure BIO-1 Implementation

Responsible Party: SCRWA and contractor.

Timing: Pre-construction botanical surveys for special-status species shall be conducted by a qualified botanist or biologist between April and June (i.e., ideally during the mid-bloom period in May), or as otherwise deemed appropriate by a qualified botanist.

Monitoring and Reporting Program: The survey shall be conducted by a qualified botanist or biologist and a brief Botanical Survey Results Report shall be completed and kept on-file with SCRWA. If special-status species are encountered, the Pre-Construction Botanical Survey Report shall be submitted to the appropriate regulatory agencies (i.e., CDFW and/or USFWS).

Standards for Success: The presence or absence of special-status plant species shall be documented and, if observed, shall be handled and mitigated according to the performance standards outlined above and developed with the appropriate regulatory agencies.

3.4.2.2 Mitigation Measure BIO-2: Pre-Construction Worker Environmental Awareness Program Training

The purpose of a WEAP training is to educate personnel (i.e., construction workers) about the existing on-site and surrounding sensitive biological resources and the measures required to protect these resources. The program will identify the special-status species and sensitive habitats that could potentially occur within the proposed Project area and identify the proposed Project features and BMPs incorporated to prevent impacts to those species. The WEAP training will be conducted by a qualified biologist and presented to the construction team and workers prior to construction and shall include information on the sensitive biological resources that could potentially occur within the proposed Project area and areas immediately adjacent including:

- How to identify the special-status species found and/or that have the potential to occur in the proposed Project area and the avoidance measures and BMPs incorporated to prevent impacts to those species.

- If special-status species are encountered in the work area, construction shall cease, and SCRWA and a qualified environmental representative shall be notified for guidance on appropriate measures to be implemented before any construction activities are resumed. Depending on the Federal or State listing, the observed species, and its persistence in the area, SCRWA shall consult with the USFWS and/or CDFW for guidance.

- Remove litter and other debris daily that might attract animals to enter the proposed Project area and store in enclosed containers.

Printed handouts and other materials, if deemed appropriate, will be distributed and used for future reference by the construction team. Following the initial training, the contractor construction foreman, or predetermined alternate contractor designee, will be responsible for making sure that other workers on the proposed Project receive WEAP training as they come onto the proposed Project area. A roster of WEAP-trained construction workers will be maintained with SCRWA and made available for review by regulatory agencies if needed.

Mitigation Measure BIO-2 Implementation

Responsible Party: SCRWA and contractor.

Timing: The WEAP training shall be conducted by a qualified biologist prior to construction of the proposed Project, and new workers will be trained before initiating on-site work. Avoidance or buffer zones will be marked before construction begins.

Monitoring and Reporting Program: The training shall be conducted by a qualified biologist and documented (by sign-in sheet or other method) for the dates the training occurred, and the staff trained. Retention of and Environmental Awareness Training reference materials shall also be kept on the construction site and within SCRWA's files.

Standards for Success: Construction personnel are trained in the key characteristics for identifying and avoiding impacts to special-status species and sensitive habitats.

3.4.2.3 Mitigation Measure BIO-3: Avoid Disturbance to Nesting Raptors and Other Nesting Migratory Birds

To the extent feasible, vegetation removal activities shall be conducted during the non-nesting season (September 1 to February 15). If construction, such as tree removal, grading, excavation, etc., that have the potential to disturb nesting birds occur during the nesting season (February 15 to August 31), a qualified biologist shall conduct a pre-construction nesting birds survey prior to vegetation removal or ground disturbing activities in a given area with the following criteria:

- Surveys shall be conducted within the proposed Project area and all potential nesting habitat for waterfowl and passerine species within 250 feet of this area and raptor species within 500 feet of the area.

- The surveys should be conducted within one week before initiation of construction activities at any time between February 15 and August 31. If no active nests are detected, then no additional mitigation is required.

- If surveys indicate the presence of nesting birds, the biologist shall establish an appropriate exclusion zone around the nest in which no work would be allowed until the young have successfully fledged or the nest has been abandoned. The size of the exclusion zone shall be determined by a qualified biologist and shall depend on the status of the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, other topographical or artificial barriers, and the sensitivity of the nesting bird to the disturbance. In general, exclusion zones of up to 250 feet for raptors and 50 feet for waterfowl and passerines are sufficient to prevent substantial disturbance to nesting birds. However, these buffers may be increased or decreased at the discretion of the biologist, as appropriate. Active nest sites shall be monitored periodically throughout the nesting season to identify any sign of disturbance.

- If nesting birds are documented to have established themselves in a given location within the proposed Project area during pre-existing construction activities, then it shall be assumed that the nesting birds are habituated to the construction activities. Under this scenario, the active nest shall be monitored by a qualified biologist periodically until the young have successfully fledged, or the nest has been abandoned, as described above.

- If active nests are identified on or immediately adjacent to the proposed Project area, then all non-essential construction activities (e.g., equipment storage and meetings) should be avoided in the immediate vicinity of the nest site, but the remainder of construction activities may proceed.

Mitigation Measure BIO-3 Implementation

Responsible Party: SCRWA and contractor.

Timing: One nesting survey shall be conducted by a qualified biologist within one week prior to construction, should the proposed Project be initiated between February 15 and August 31.

Monitoring and Reporting Program: The survey shall be conducted by a qualified biologist and a brief survey report shall be documented and kept on file with SCRWA.

Standards for Success: Special-status species and nesting birds including those covered under the MBTA and FGC shall not be disturbed during proposed Project construction activities; exclusion buffers will be installed and monitored.

3.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

CULTURAL and TRIBAL RESOURCES Would the Project:	**Potentially Significant Impact**	**Less than Significant Impact with Mitigation Incorporation**	**Less than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size, or object with cultural value to the California Native American tribe and that is:				
i. listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	☐	☐	☒	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

3.5.1 Discussion

The proposed Project is located in an area with a long history of use by both Native American and non-Native populations. Archaeological evidence suggests that Native American populations have occupied the area for 10,000 years and Spanish exploration/settlement of the area dates to the 1600s. At the time of non-Native contact, Native American groups of the Costanoan language family occupied the area from San Francisco Bay to southern Monterey Bay and the lower Salinas River. Unfortunately, Costanoan culture was dramatically affected by non-Native contact, and information (e.g., mission records and travelers logs) regarding its pre-contact organization is incomplete and inconsistent. In fact, Costanoan languages were probably extinct by 1935, and in 1971 the remaining Costanoan descendants united as a corporate entity identified as the Ohlone Indian Tribe (Levy 1978).

A records search of the California Historical Resources Information System at the Northwest Information Center was completed for the proposed Project on January 27, 2020. In addition, records were also examined in the City's list of Historic Resources, which contains information on locations of locally recognized historical significance.

The records at the Northwest Information Center indicated that nine cultural resources studies were previously completed within or near the proposed Project area. No cultural resources were identified within the Project area or within a 0.5-mile radius around the Project area. The City's list of historic resources did not identify any resources in the proposed Project area.

Subsequent to the records search, a Stantec archaeologist completed an intensive pedestrian survey of the entire proposed Project area on February 19, 2020. The survey did not identify and cultural resources within this area. Additionally, the proposed Project area lacked key indicators for buried cultural deposits and is previously disturbed by a variety of activities involved with construction and maintenance of the WWTP.

All Native American outreach and consultation efforts are being conducted by the SCRWA, the lead agency for the proposed Project. The Native American Heritage Commission (NAHC) indicated on April 21, 2020 that the results of the Sacred Lands File query for the Project area were positive and provided a list of Native American tribes who may have knowledge of cultural resources within the Project area. SCRWA subsequently sent letters by mail and email to the Native American tribe contacts provided on June 4, 2020 and followed up with phone calls to the known contacts on June 16, 2020. As of August 7, 2020, SCRWA has not been advised of cultural resources within the Project area.

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

Finding: Less Than Significant Impact

The cultural resource study for the proposed Project, which included a cultural resource records search, desktop review, and survey, did not identify cultural resources within the proposed Project area. Additionally, the study did not identify the proposed Project area as sensitive for buried cultural resources. Therefore, the potential to cause a substantial adverse change to the significance of historical resources is less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Finding: Less than Significant Impact

No archaeological resources are located within the proposed Project area. While the likelihood of encountering any buried archaeological resources during construction is low, the City's General Plan requires implementation of Policy 5.07 Archaeological Resources, which addresses inadvertent discovery of archaeological resources during construction (City of Gilroy 2014) and provides proper procedures and steps to stop work, evaluate and/or treat, or avoid the resource. As required by the City, SCRWA will include this General Plan Policy as part of the Project design and implement the Policy during construction which ensures that any potential resources found are not significantly impacted. Therefore, the potential to cause a substantial adverse change to the significance of historical resources is less than significant.

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

Finding: Less than Significant Impact

The proposed Project, as planned, is in the same footprint of the current SCRWA WWTP, which is a previously disturbed area. There is no record of human remains being uncovered during previous construction or development within the existing SCRWA WWTP property. As such, while the likelihood of encountering any human remains during construction is low, if human remains are encountered during construction of the proposed Project, implementation of the procedures required by State law (Public Resources Health and Safety Code 7050.5) and Gilroy General Plan Policy 5.07 would be followed. Additionally, Section 5097.98 of the California Public Resources Code would be implemented which would include stopping work within the vicinity of a discovery, notification to the County Coroner and NAHC, and consultation with the individually identified by the NAHC to be the "most likely descendent". Therefore, by following State required regulations and the City General Plan Policy, impacts associated with undiscovered human remains would be less than significant.

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

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

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

Finding: Less Than Significant Impact

The cultural resource study for the proposed Project, which included a cultural resource records search, desktop review, and survey, did not identify cultural resources or Tribal Cultural Resources within the proposed Project area. Additionally, the study did not identify the proposed Project area as sensitive for buried cultural resources or Tribal Cultural Resources and it is disturbed by construction of the existing facility. Although the Sacred Lands File inquiry for the area was positive, further follow up with Native American contacts provided by the NAHC did not identify cultural resources within the proposed Project area. As described above, Gilroy General Plan Policy 5.07 would be adhered to and would ensure the identification and proper treatment of any potential tribal cultural resources. Therefore, the potential to cause a substantial adverse change to the significance of a Tribal Cultural Resource is less than significant.

3.6 ENERGY RESOURCES

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

3.6.1 Discussion

a, b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency or result in significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Finding: Less than Significant Impact

Construction and operations of the proposed Project would involve energy consumption which would comply with the National Energy Efficiency requirements as applicable, including the Energy Independence and Security Act of 2007. In particular, Title 10 Code of Federal Regulations, Part 431, Energy Efficiency Program for Certain Commercial and Industrial Equipment, including Subpart B, Paragraph 431.25 for Electric Motors; and Subpart K, Paragraph 431.196 for Distribution Transformers would be followed. Additionally, construction work and materials as well as operation of equipment installed would be required to comply with the California Energy Code (Title 24, Part 6), California Building Code, and the United States Department of Energy specifications. These codes include specifications for type and efficiency requirements for motors used, lighting control requirements, and voltage drop requirements. Specifically, the upgraded and expanded WWTP facility would be specified to perform at or above code required minimum efficiency levels, according to the latest rules and regulations of the United States Department of Energy.

Energy consumption for the membrane bioreactor technology specifically would result in an increase in energy consumption beyond what currently exists on the Project site. The Project would require an increase in energy use, adding to the existing electrical power demand load at the site (which currently averages 1.2 MW) to result in a demand load ranging from 2.7 MW to 3.3 MW depending on seasonal (winter vs summer) variations. Recognizing that most of the SCRWA electrical demand is currently satisfied by on-site solar facilities, this energy consumption addition would be in proportion to the increase in wastewater treatment capacity provided by the Project and in proportion to the associated population growth and development per the Cities' General Plans. Assuming that this General Plan energy consumption would occur somewhere in south Santa Clara Valley, the decision to locate the consumption at this particular site achieves efficiencies due to co-location with associated wastewater treatment facilities and consequently reduces the consumption in comparison to location elsewhere.

Studies of MBR technology energy use find that the technology is dependent on many factors, such as system design and layout, volume of treated flow, membrane utilization and operational strategy (Kreminski 2012). Operation at optimal flow conditions results in a low specific energy consumption and energy efficient process. Energy consumption of membrane related modules was found to be in the range of 0.5–0.7 kilowatt hour per cubic meter and specific energy consumption for membrane aeration in flat sheet was 33–37 percent higher than in a hollow fibre system. The aeration component of MBR is a major energy consumer, often exceeding 50 percent share of total energy consumption. In consequence, coarse bubble aeration applied for continuous membrane cleaning remains the main target for energy saving actions. Also, a certain potential for energy optimization without immediate danger of affecting the quality of the produced effluent was observed. (Kreminski 2012). Often, an advantage to MBR technology is that it is scalable in smaller increments sized to meet current demands (e.g. a 2.5 MGD MBR can be installed versus a 4.25 MGD oxidation ditch) which means that energy use is much more targeted to what is needed and an efficient use of energy. Overall, the selection of MBR technology over the available technologies (e.g. oxidation ditch) would reduce the electrical power requirements for the proposed Project. Therefore, although the proposed Project would increase the overall energy consumption on site due to the increased treatment capacity, the use of new membrane bioreactor technology would improve the efficiency for this energy increase and it would be in compliance with all state and federal standards as discussed above.

Further, compliance with the standard building code and energy code requirements would result in the proposed Project construction and operations having a less than significant impact as a result of wasteful, inefficient, or unnecessary consumption of energy resources and would not conflict or obstruct any plans related to energy efficiency. The impact would therefore be less than significant.

3.7 GEOLOGY AND SOILS

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

3.7.1 Discussion

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

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

ii. Strong seismic ground shaking?

iii. Seismic-related ground failure, including liquefaction?

iv. Landslides?

Finding: No Impact

There are no earthquake fault zones, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, in the proposed Project area (USGS 2019). Additionally, the Geotechnical report for the proposed Project concluded: "Because the treatment plant is not located within a State of California Earthquake Fault Zone and no mapped active faults are known to cross the plant, the probability of ground surface rupture at the proposed project areas due to displacement along a fault is low" (Geo-Logic Associates 2017).

There is no substantial evidence of a known fault within 100 feet of the proposed Project area and the probability of ground surface fault rupture at the proposed Project site is low due to lack of historic earthquakes in the area (California Geological Survey 2019). To further support this during the 1984 6.1 magnitude earthquake near Morgan Hill, the administration building and the pump station buildings on Southside Drive where the current WWTP is located, did not sustain any damage. Additionally, the proposed Project area is not located in a landslide hazard area (California Geological Survey 2019). There would be no impact.

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

Finding: Less than Significant Impact

The proposed Project site is located within Pleistocene-Holocene age soils with unconsolidated and semi-consolidated alluvium, lake playa, and terrace deposits (California Geological Survey 2019). The WWTP property includes previously disturbed area from WWTP operations and surrounding agricultural land. During construction activities, soils within the proposed Project area have the possibility to be disturbed from excavation, grading, or other earthmoving activities which could lead to erosion and loss of topsoil. However, the drainage at the site is arranged to route any stormwater to a diked collection basin area just to the south where any eroded topsoil would be retained while the water percolated or evaporated. The proposed Project would develop and implement a SWPPP, as required under Section 402 of the Clean Water Act (CWA), that would include the implementation of standard BMPs which would reduce erosion on- and off-site. The impact would be less than significant.

c) Would the project 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?

Finding: Less than Significant Impact

Landslides

Any slope where relatively large masses of material are supported by soil that is likely to soften under strain is prone to a landslide. The risk increases in areas where the ground is steep, weak, or fractured; is saturated by heavy rain; or is compromised by historical ground movements. The proposed Project site is relatively flat and surface geologic units underlying the proposed Project site are not subject to landslide (California Geological Survey 2019). There would be no impact related to landslides

Lateral Movement and Spreading

Lateral movement (i.e., displacement, spreading, etc.) occurs when seismic shaking causes a mass of soil to lose cohesion and move relative to the surrounding soil. Lateral movement can be entirely horizontal and can occur on flat ground, but it is more likely to occur on or around sloping ground, such as adjacent to hillsides and waterways (Branz 2020).

The WWTP is located in an area of high seismicity. Based on general knowledge of the site seismicity, it would be anticipated that, during their useful life, the proposed structures associated with the proposed Project would be subject to at least one severe earthquake (magnitude 7 to 8+) that could cause considerable ground shaking within and surrounding the proposed Project site. It is also anticipated that the WWTP would periodically experience small to moderate magnitude earthquakes (Geo-Logic Associates 2017). However, because the proposed Project site is relatively flat and contains underlying soils that have not historically been subject to lateral spreading or displacement, the possibility of the proposed Project structures being subject to future lateral spreading or displacement from an earthquake is low. Additional, standard engineering design related to stability of underlying soils and foundation placement would further reduce the potential for any new structures on the site to become subject to lateral displacement or spreading. The impact would be less than significant.

Liquefaction

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits, along with recent Holocene age deposits, are more susceptible to liquefaction, while older deposits of clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking. The primary factors affecting liquefaction include 1) intensity and duration of seismic ground shaking; 2) soil type; 3) relative density of granular soils; 4) moisture contact and plasticity of fine-grained soils; 5) overburden pressure; and 6) depth to groundwater.

The Project area is located in a Santa Clara County Liquefaction Hazard Zone (Santa Clara County 2012). The results of the analysis for the Project Geotechnical Investigation suggest that some of the granular soil layers could be susceptible to liquefaction as a result of earthquake (Geo-Logic Associates 2017). A review of the Santa Clara County Geologic Hazard Zone maps indicates the Project area is in a County Compressible Soil Hazard zone.

Settlements could occur under the weight of new fills and structure loads that would be implemented as part of the proposed Project. These settlements could consist of elastic compression and consolidation settlements. Elastic compression typically occurs quickly as loads are being applied. Consolidation settlements would occur over a period of time. These settlements are in additional to settlements induced by liquefaction. However, based on the potential static and liquefaction-induced settlements which could occur in the Project area, drilled, cast-in-place, reinforced concrete piers were selected for support of the proposed Project structures. Also, excavation of unstable soils and site preloading measures have been considered and incorporated into the Project design to reduce the potential impact of these geologic site conditions. Compliance with state and local standards relative to structural stability and building code requirements would further limit the potential for structures to be subject to substantial damage or

stability failure to underlying liquefaction in the area. Therefore, the potential for liquefaction in the area would be less than significant with these design specifications.

Subsidence

Subsidence is caused by declining groundwater tables which in turn causes soils to sink down into the space that was previously occupied by groundwater. The proposed Project would not involve pumping groundwater or settlement of foundations as a result of Project implementation. Additionally, because the soils in this area are somewhat poorly drained, the groundwater table is higher, and the possibility of subsidence is limited. Engineering features and standard design specifications would further limit the potential for subsidence to occur as a result on the implementation of the proposed structures. There would be a less than significant impact.

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

Finding: Less than Significant Impact

Expansive or collapsible soils are characterized by the ability to undergo significant volume change (e.g., shrink and swell) as a result of variation in soil moisture content. Specifically, the causes of soil expansion or collapse are related to the type and amount of clay minerals in the soil, conditions under which the clay originated, and the original density of the soil. Clay minerals can form in-place by weathering of rocks, or they can be transported and deposited by water or wind. A change in the moisture content of a soil can cause clay minerals to shrink or expand (i.e., swell). Soil moisture content can change due to many factors, including perched groundwater, landscape irrigation, rainfall, and utility leakage. Engineering standards govern expansion potential evaluations and the expansion index (Table 3.6-1). Section 1803.2 of the 1994 UBC directs expansive soil tendency be graded by this method. The UBC mandates that “special [foundation] design consideration” be employed if the expansion index is 20 or greater.

The proposed Project would not include structures designed for human habitation (i.e. residences), however would include employees on-site to operate the WWTP 24-hours per day. These employees could be subject to risks related to expansive soils in new structures constructed as part of the proposed Project if these new structures are not designed and constructed appropriately. The geotechnical investigation completed for the Project site states that expansive soils could be a possibility in the Project area and as such, non-expansive fills would be required to ensure stability underlying soils and foundation support for these new structures. With use of non-expansive fills onsite, the potential to exposure of people and structures to substantial risk due to expansive soils would be minimized. There would be a less than significant impact.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Finding: No Impact

The proposed Project would not result in the use of septic tanks or alternative waste disposal systems. There would be no impact.

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

Finding: No Impact

The proposed Project, as planned, is in the same footprint of current intensive agricultural use. No known record of paleontological resource findings have occurred during the use of the land for agriculture. There would be no impact.

3.8 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRES

HAZARDS, HAZARDOUS MATERIALS, and WILDFIRES **Would the Project:**	**Potentially Significant Impact**	**Less than Significant Impact with Mitigation Incorporation**	**Less than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐
h) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones; i. Would the project impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
ii. Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒

HAZARDS, HAZARDOUS MATERIALS, and WILDFIRES Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
iii. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
iv. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

3.8.1 Discussion

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

Finding: Less than Significant Impact

Hazardous materials associated with proposed Project construction and operation would likely include use and transportation of substances such as fuels, oils, and solvents as well as provisions for membrane cleaning with chemicals (sodium hypochlorite and citric acid). However, as discussed in Chapter 2.0, Project Description, release of these materials would be prevented by using covered, double-contained tanks and pipe with automatic leak detection and other design features in accordance with applicable codes and standards, and stormwater monitoring is conducted routinely for performance verification.

Additional hazardous materials used onsite, such as oils and fuels, would be transported, stored, and handled in a manner consistent with relevant regulations and guidelines, including those recommended and enforced by the United States Department of Transportation, Santa Clara County Department of Environmental Health, and the RWQCB. In addition, the general contractors selected for proposed Project implementation would adhere to procedures as specified in the proposed Project SWPPP provisions, as required under Section 402 of the CWA. Likewise, the facility operators would adhere to the procedures specified in the established site Industrial SWPPP (State Water Resources Control Board [SWRCB] 2015). These provisions would include requirements for appropriate handling of any hazardous materials used on the proposed Project site, as well as a spill prevention and response measures to minimize the potential for and effects from spills occurring during proposed Project construction. These SWPPP documents would describe transport, storage, and disposal procedures; construction site housekeeping practices; and monitoring and spill response protocols. With the plan and procedures in place, potential impacts related to hazardous materials use, transport, storage, or disposal at the proposed Project site are anticipated to be less than significant.

In addition, the proposed Project site is surrounded by percolation ponds and farmland that provide separation from the public. Routine monitoring that is conducted to track the potential effects of percolated wastewater would also serve to detect any spilled chemicals before they move far enough to risk public exposure.

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

Finding: Less Than Significant Impact

The proposed Project does not have a high likelihood for the accidental release of significant amounts of hazardous materials, except for the double-contained underground pipeline carrying hypochlorite. This pipeline could potentially release hazardous materials into the underlying soils and groundwater if not designed and monitored appropriately. However, the design of this pipeline includes special monitoring equipment that would track the pressure of the materials in the pipeline and alert the onsite staff in the event of a possible lowing of pressure or release of materials due to breakage or a leak. Therefore, the potential for accidental release of hazardous materials as a result of this new pipeline would be considered less than significant with these design features. Additionally, materials during both construction and operation of the proposed Project would consist of typical hazardous materials used on construction sites and WWTPs, which are regulated by applicable state and federal laws and regulations. The proposed Project would not be located in proximity to any of identified release sites; thus, onsite soils are unlikely to have been adversely affected by known offsite contamination. There would be a less than significant impact related to accidental release of hazardous materials into the environment.

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

Finding: No Impact

No schools are located or proposed within one-quarter mile of the proposed Project site. There would be no impact.

d) Would the project 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?

Finding: No Impact

The proposed Project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (SWRCB 2019; DTSC 2019). There is one designated voluntary clean-up site, the Denice Cherry Orchard Property, which is located approximately one mile west of the existing WWTP, and several parcels included in the Irrigated Lands Regulatory Program surrounding the SCRWA WWTP (SWRCB 2019; DTSC 2019). These sites would not be affected by the proposed Project and would not create a significant hazard to the public or the environment. There are no other known contamination sites within the proposed Project area that would be a hazard to the public. Therefore, there would be no impact.

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 or private airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Finding: No Impact

There are no airports within two miles of the proposed Project site. The nearest airport is the Frazier Lake Airpark, which is located approximately 4-miles to the southeast of the proposed Project site. There would be no impact.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Finding: No Impact

The proposed Project would be located within the SCRWA WWTP property and adjacent to primarily agricultural land. Proposed Project construction would be done adjacent to the current WWTP and within the boundaries of the SCRWA WWTP which would not interfere with any major thoroughfares in the City in a way that would block or impede emergency access. Ingress and egress to the residential properties near the proposed Project area along Southside Drive would not be inhibited in any way. There would be no impact.

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

Finding: Less than Significant Impact

The proposed Project area is not located in the Very High Fire Hazard Severity Zone (Mutual Threat Zone) designated by the Santa Clara County Fire Protection District (Gilroy General Plan Figure 8.2). Additionally, the proposed Project is not located adjacent to an urbanized or residential area that is intermixed with wildlands. Construction equipment could have the potential to cause sparks if construction vehicles and equipment are parked on grassy areas while hot. However, the proposed Project would be constructed in compliance with all applicable local, state, and federal requirements, including the California Fire Code and therefore, there would be a less than significant impact to exposure of people or structures to significant loss, injury, or death involving wildland fires.

h) Would the project If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

i. Would the project impair an adopted emergency response plan or emergency evacuation plan;

ii. Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildlife or the uncontrolled spread of a wildfire;

iii. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exasperate fire risk or that may result in temporary or ongoing impacts to the environment;

iv. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Finding: No Impact

The proposed Project is not located in a California Department of Forestry and Fire Protection (CAL FIRE) state responsibility area but is located within a local responsibility area which is designated as an area with Non-Very High Fire Hazard Severity (CAL FIRE 2008). Additionally, the proposed Project area is located in an area that is relatively flat, contains minimal brush and trees, and is used predominantly for the SCRWA WWTP operations and agricultural purposes. Therefore, the proposed Project would not exacerbate wildfire risks due to slope, prevailing winds, or other factors, nor would the proposed Project require the installation of associated infrastructure that may exacerbate wildfire risks or expose people or structures to significant risks as a result of post-fire related issues. Therefore, there would be no impact.

3.9 HYDROLOGY AND WATER QUALITY

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

3.9.1 Discussion

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Finding: Less than Significant Impact

Construction of the proposed Project would require site preparation, mobilization of equipment to the construction site, installation of proposed Project components, and demobilization of equipment. These construction activities have the potential to degrade surface water quality by introducing sediment and adversely affecting both surface and groundwater quality by introducing pollutants to receiving waters in the proposed Project area. Construction activities

could also generate hazardous wastes that, if improperly managed, could enter both surface and groundwater sources.

The proposed Project would include development of a SWPPP for the construction, as required under Section 402 of the CWA, which would include implementation of standard BMPs to reduce erosion on- and off-site. The construction SWPPP would ensure that disturbed soils during construction activities are properly stored and managed throughout the duration of the construction activities, thus protecting water quality. Additionally, the provisions of the construction SWPPP would include requirements for appropriate handling of any hazardous materials used on the proposed Project site, as well as a spill prevention and response measures to minimize the potential for and effects from spills occurring during proposed Project construction. The construction SWPPP would describe transport, storage, and disposal procedures; construction site housekeeping practices; and monitoring and spill response protocols. No dewatering activities are anticipated for the proposed Project. As such, with the implementation of the construction SWPPP, as required by Section 402 of the CWA, impacts related to surface and groundwater quality during construction would be less than significant.

As noted above, the site is also covered by the Industrial SWPPP for the operations at SCRWA Facility (SWRCB 2015). This Industrial SWPPP will be revised to incorporate the proposed MBR facilities, so that impacts related to surface and groundwater quality during operations of the MBR facilities would be less than significant.

Additionally, increases in the disposal of wastewater into the aquifer under the site or the flow of recycled water to irrigation users in the county tend to increase the salt load to the aquifer and also possibly the risk of contamination by currently unregulated wastewater constituents. Because the proposed Project is increasing the capacity of the WWTP, increases in potential contamination could occur. However, the analysis and effects of groundwater quality related to increases in capacity at the WWTP have been adequately evaluated in other relevant environmental documents and planning studies such as the 2001 Gilroy General Plan EIR, the 2020 Public Draft 2040 General Plan EIR, the Morgan Hill General Plan EIR, the SCVWD Groundwater Management Plan for the Santa Clara and Llagas Subbasins, and the SCVWD Final Salt and Nutrient Management Plan (City of Gilroy 2001, 2020b; City of Morgan Hill 2016b; SCVWD 2014, 2016). The analysis and conclusions of these studies are incorporated by reference into this document and no further Project-specific analysis related to groundwater quality from the increase in capacity at the WWTP is required for this document.

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

Finding: Less than Significant Impact

The analysis and effects of groundwater recharge related to increases in capacity at the WWTP have been adequately evaluated in other relevant environmental documents and planning studies such as the 2001 Gilroy General Plan EIR, the 2020 Public Draft 2040 General Plan EIR, the Morgan Hill General Plan EIR, the SCVWD Groundwater Management Plan for the Santa Clara and Llagas Subbasins, and the SCVWD Final Salt and Nutrient Management Plan (City of Gilroy 2001, 2020b; City of Morgan Hill 2016b; SCVWD 2014, 2016). The analysis and conclusions of these studies are incorporated by reference into this document and no further Project-specific analysis related to groundwater recharge from the increase in capacity at the WWTP is required for this document.

Operation of the proposed Project would rely on the current water supply of the treatment plant. The small number of additional maintenance and operations personnel required for the new MBR equipment would not noticeably increase the usage of the bathrooms and break rooms in the existing administration facilities. While new potable water connections may be added for emergency eyewash/shower units, the usage rates for such equipment are very low, and there would be very limited additional water required to operate the WWTP improvements. Therefore, operational water demand of the proposed Project would not increase nor substantially deplete groundwater supplies. While there would be a slightly increase in impervious surfaces within the WWTP footprint all stormwater from the site would continue to be collected and directed to the stormwater detention basins. These stormwater basins currently cover an area of approximately 10 acres and provide retention and disposal capacity well in excess of the current need. While the proposed Project would reduce this acreage by about 25 percent, no change in the operation of the stormwater system is anticipated. In summary, substantial interference with groundwater recharge of the Gilroy-Hollister groundwater basin due to on-site proposed Project water use is not anticipated and any potential impact would be less than significant.

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

i. Result in substantial erosion or siltation on- or off-site;

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

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

iv. Impeded or redirect flood flows.

Finding: Less than Significant Impact

Construction activities associated with the proposed Project would occur in previously disturbed areas of the SCRWA property and would involve disturbance of soils from excavations, grading, and other earthmoving activities, which could lead to erosion and loss of topsoil. The proposed Project would develop a SWPPP, as required under Section 402 of the CWA, which would include implementation of standard BMPs to reduce erosion on- and off-site. Impacts from erosion would therefore be less than significant. The SWPPP would also include provisions for preventing polluted runoff-from potentially leaving the proposed Project site and would include post-construction stabilization measures to ensure drainage areas are restored and the site is stabilized. The site would be regraded to allow for adequate stormwater flow through the site which would match historic drainages.

The proposed Project facilities would be constructed within a pond currently used for stormwater retention and percolation. Construction of the Project would remove some of the area of this stormwater pond from service. In addition, much of the site area would become less pervious to stormwater. To compensate for these changes, the capacity of the stormwater flow path and retention depth in the remaining stormwater pond area would be verified and the adequacy of dike freeboard would be checked. Modifications would be made if necessary, possibly involving the under-utilized section of drainage trench located just east of the site. Based on observations of the performance of

the ponds over the past three decades, there is enough excess capacity in the ponds to manage the planned changes so the impacts would not be significant.

Therefore, the proposed Project would have a less than significant impact related to erosion, runoff, and flood flows.

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

Finding: No Impact

The proposed Project area is surrounded by dikes. One of the functions of these dikes is to retain the stormwater (and formerly treated wastewater) that is currently being discharged to the Project site. A second function is the protection of the site against the effects of flooding. The boundary of the 100-year flood plain (sometimes referred to as “Soap Lake”) runs along an east-west line just south of the SCRWA facility (See “Characterizing the Soap Lake Floodplain” by RMC, Chapter 2 of the Pajaro River Watershed Study [RMC 2006]). Other recent flood studies have mapped flood water elevations above grade at the Project site that would occur in the absence of dikes or fill placement. Recognizing these conditions, the proposed Project includes fill placement to raise the ground elevation up to match the level around the other nearby treatment units, above the 100-year flood plain. This fill placement would provide protection against the design flooding event for site personnel and equipment so there would be no impact on these. Because the fill will be placed inside areas that are already diked, there will be no reduction in the active flood plain area or the storage volume available for managing area-wide flood waters. Therefore, there will be no impact on off-site flood-sensitive receptors.

The proposed Project does not increase the exposure of people or structures to a significant risk of loss as a result of dam or levee failure and no large bodies of water normally exist near the proposed Project such that a tsunami or seiche could occur. Therefore, there would be no impact.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Finding: Less than Significant Impact

The proposed Project is under the jurisdiction of the Central Coast RWQCB. The Central Coast RWQCB currently has a Water Quality Control Plan, or Basin Plan, that was adopted in June 2019 (Central Coast Regional Water Quality Control Board 2019). This Basin Plan contains objectives necessary for the reasonable protection of beneficial uses and for the prevention of nuisance. The focus of these identified objectives is on protection of water quality in ocean waters, inland surface waters, and for groundwater sources.

As identified in threshold question “a)” above, the proposed Project would not violate any water quality standards or substantially degrade surface or groundwater quality. The proposed Project would be in compliance with the NPDES General Construction permit and SWPPP requirements, as well as the site SWPPP as regulated by the General Permit for Stormwater Discharges Associated With Industrial Activities under the NPDES (SWRCB 2015). Application of BMPs during construction and operation of the on-site stormwater collection system would prevent polluted runoff from leaving the proposed Project site, stabilize the proposed Project site, and prevent short- and long-term erosion

on the proposed Project site. Therefore, the proposed Project would not result in substantial impacts to water quality and as such, would not conflict with the Basin Plan, or any of the objectives identified in the Basin Plan.

The SCVWD has developed a groundwater management plan that has been formally submitted to the State of California as meeting the requirements for a sustainable groundwater management plan, covering the proposed Project area. The proposed Project is in conformance with this groundwater management plan. Therefore, the proposed Project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Impacts would be less than significant.

3.10 LAND USE AND PLANNING

LAND USE AND PLANNING Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect	☐	☐	☐	☒

3.10.1 Discussion

a) Would the project physically divide an established community?

Finding: No Impact

The proposed Project includes upgrades to the SCRWA WWTP which would occur in the SCRWA WWTP and would not physically divide an established community. There would be no impact.

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

Finding: No Impact

The proposed Project site has a Gilroy General Plan land use designation of “Public Facility” (City of Gilroy 2002) which allows for existing and planned public facilities (e.g. WWTPs and facilities). The proposed Project site has a Santa Clara County General Plan designation of “Major Public Facilities” for lands located outside city urban service areas owned or operated by federal, state, or local government for government purposes (Santa Clara County 2016). The proposed Project site within the City limits is zoned as Park/Public Facility under the City of Gilroy Zoning Code (City of Gilroy 2012). Public facilities are allowed within the A-40Ac designation and the proposed Project would not be subject to Architecture and Site Approval Committee and/or Use Permit approval.

Santa Clara County’s General Plan defines Prime Farmland as “Lands with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. Must be supported by developed irrigation water supply that is dependable and of adequate quality during the growing season.” (Santa Clara County 1994). The proposed Project area falls within Santa Clara County’s General Plan definition of Prime Farmland. Also, as stated in Section 3.2 “Agricultural Resources,” the proposed Project area is within land designated as Prime Farmland by the California Department of Conservation and adjacent to non-agricultural land to the north and east (California Department of Conservation 2016). Since no work would occur directly within the parcels designated as prime farmland, and no prime farmland would be converted to non-agricultural use, no impact would occur.

Therefore, the proposed Project would not conflict with any applicable land-use plan, policy, or regulation of an agency with jurisdiction over the proposed Project would not contradict the planned uses of the land in which the proposed Project is set to occur.

3.11 MINERAL RESOURCES

MINERAL RESOURCES Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

3.11.1 Discussion

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

Finding: No Impact

Mineral resources are not known to exist in the proposed Project site, which is adjacent to agricultural uses and an urbanized environment that is unsuitable for mineral resource extraction (California Department of Conservation 2011). Therefore, there would be no impact to the loss of availability of a known mineral resource classified as MRZ-2.

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

Finding: No Impact

The proposed Project site is located within the existing SCRWA WWTP and adjacent to agricultural lands which are not delineated as mineral resource areas in the Gilroy 2020 General Plan. Therefore, there would be no impact to loss of availability of locally important mineral resources.

3.12 NOISE

NOISE Would the Project result in:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels.	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

3.12.1 Discussion

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

Finding: Less than Significant Impact

The nearest sensitive receptors to the proposed Project site consist of a residential area affiliated with seasonal agricultural production which is located approximately 0.7-mile northwest, on the northern side of Southside Drive. The major source of existing noise in the proposed Project area is from vehicles traveling on nearby highways and surface roads, as well as noises associated with agricultural production. The proposed Project site is predominantly surrounded by agricultural land and would be located within the SCRWA WWTP property. Additionally, the Gilroy Noise Ordinance (Ordinance No. 2004-15) requires that construction activities are limited to the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 9:00 a.m. and 7:00 p.m. on Saturday. No construction activities should occur on Sundays or City holidays. The proposed Project would comply with these restrictions, therefore, there would be a less than significant impact related to temporary and permanent increases in ambient noise levels.

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

Finding: Less than Significant Impact

Pile driving or other construction methodologies that generate substantial groundbourne vibration or noise levels are not anticipated; however, even if they were required, they would be in short duration and located on the south side of the WWTP site more than 3,000 feet away from the nearest sensitive receptor. Thus, construction is not anticipated to result in perceptible vibration levels at nearby receiver locations. Minimal vibration could occur from movement of equipment and materials to and from the construction site, however, vibration would be temporary and momentary in duration and would not be excessive. Potential impacts would be a less than significant.

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

Finding: No Impact

The proposed Project is not located in the vicinity of any airports. The nearest airport to the proposed Project site is the Frazier Lake Airport, which is located approximately four miles southeast of the proposed Project site. Additionally, the proposed Project does not necessitate the need to hire new WWTP operators and therefore, would not expose additional workers to noise. Therefore, there would be no potential for exposure of people to excessive noise levels related to airport operations. Therefore, there would be no impact.

3.13 POPULATION AND HOUSING

POPULATION AND HOUSING Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.13.1 Discussion

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

Finding: Less than Significant Impact

While the proposed Project would not directly result in the construction of new homes or businesses, improved infrastructure at the SCRWA WWTP could indirectly induce population growth in both Gilroy and Morgan Hill by providing additional capacity to treat wastewater. However, the increase in capacity from 8.5 MGD to 11 MGD has been planned to accommodate both Gilroy's and Morgan Hill's growth projections which have been presented and analyzed in both the City's respective General Plan's (City of Gilroy 2002; City of Morgan Hill 2016a). In accordance with CEQA, the environmental effects of this population growth and related development has been evaluated in the EIRs prepared for these General Plans. Therefore, additional environmental review is not needed for possible impacts of future development of Gilroy and Morgan Hill enabled by the proposed Project. There would be a less than significant impact.

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

Finding: No Impact

The proposed Project would not displace any of the existing people or homes in the area. There would be no impact.

3.14 PUBLIC SERVICES

PUBLIC SERVICES Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

3.14.1 Discussion

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

Finding: No Impact

The proposed Project would not create any new structures or uses or result in unanticipated population growth that would require schools, parks, or other public facilities. There is a police shooting range near the spoils area near the location of the bridge over Llagas Creek at the end of Southside Drive. Construction access would generally use the access road adjacent to the shooting facility while the facility is not in use. When the facility is in use the contractor would use the main WWTP entrance and there would be no potential for impact to the operations of the shooting facility. Proposed Project construction and operational activities would occur within the existing WWTP footprint and would not otherwise affect any public services in the area. There would be no impact.

3.15 RECREATION

RECREATION Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.15.1 Discussion

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

Finding: No Impact

The proposed Project would not increase the use of existing parks. Construction and operations of the proposed Project would occur within the existing footprint of the WWTP and would not affect the use of any parks or require the construction or expansion of any new recreational facilities. There would be no impact.

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

Finding: No Impact

The proposed Project would not include new or expanded recreational facilities. Construction and operations of the proposed Project would occur within the existing footprint of the WWTP and would not affect the use of any parks or require the construction or expansion of any new recreational facilities. There would be no impact.

3.16 TRANSPORTATION

TRANSPORTATION Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection(s) or incompatible uses (e.g. farm equipment))?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

3.16.1 Discussion

a) Would the project conflict with a program plan, ordinance, or policy addressing the circulation systems, including transit, roadway, bicycle and pedestrian facilities?

Finding: Less than Significant Impact

The Cities' General Plans and associated EIRs accounts for regional movement and development throughout their respective planning area. As these plans take into account the need for expanded wastewater treatment, it can be inferred slight increases generated from the Project would be factored into the more regional planning approach. Excluding these, the site-specific aspects of the proposed Project would maintain traffic conditions within the commercial and industrial areas of Gilroy (Level of Service D) at intersections and roadways and are not anticipated to increase traffic congestion, impede access to driveways, or expressway access in any way (City of Gilroy 2002). Any impact to the Transportation and Circulation Element policies would be less than significant.

During construction, Project-generated traffic would temporarily increase truck volumes on East Luchessa Avenue, Rossi Lane, and Southside Drive. However, Project-generated truck trips would introduce an average of 30 truck trips per day during peak construction periods, although only scheduled to occur for short durations during materials transport phases. This temporary introduction of additional construction equipment is temporary. The majority of construction trips would during non-peak hours and would not substantially differ from current traffic operations importing and exporting supplies from the WWTP. Additionally, the Project would not result in long-term generation of transportation impacts with the potential to conflict with plans, ordinance, or policies addressing circulation systems. Therefore, no hazards related to high truck volumes would result in the short-term or long-term and impacts would be less than significant.

b) Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Finding: Less than Significant Impact

A project that would reduce or have no impact on vehicle miles travelled should be presumed to have a less than significant impact (pursuant to Section 15064.3(b) of the CEQA Guidelines). The proposed Project would not result in additional truck trips during operations beyond what exists under current conditions and therefore would be consistent with the CEQA Guidelines Section 15064.3(b). Construction of the proposed Project would result in temporary material haul trips and worker trips to the SCRWA WWTP facility throughout the construction period of the proposed Project. These truck trips would be limited in duration and daily quantity, averaging about 30 truck trips per day during short duration peak construction periods, and would be sporadic over the duration of construction, with more truck trips during material delivery and demolition and less truck trips during installation of proposed Project features. These additional truck trips would not result in a substantial increase in vehicle miles travelled and therefore construction of the proposed Project would also be consistent with the CEQA Guidelines Section 15064.3(b). The impact would be less than significant.

c) Would the project substantially increase hazards to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Finding: No Impact

The proposed Project does not increase hazards because of any of its design features, nor does it create incompatible uses with the existing traffic operations. Construction activities would largely occur within the existing SCRWA WWTP site with intermittent trucks entering and exiting the property. These truck trips would be temporary in nature and would be consistent with the existing operations of the WWTP, which includes trucks entering and existing the facility to perform daily operations. Therefore, there would be no impact.

d) Would the project result in inadequate emergency access?

Finding: No Impact

Proposed Project construction activities would not result in any physical changes to the transportation system or traffic operations that would potentially affect emergency access. Once construction activities are complete, no long-term sources of proposed Project traffic would occur that would interfere with emergency access. Therefore, there would be no impact.

3.17 UTILITIES AND SERVICE SYSTEMS

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

3.17.1 Discussion

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

Finding: Less than Significant Impact

The proposed Project would expand the capacity at the SCRWA WWTP from 8.5 MGD to 11 MGD to accommodate the growth projections for both Gilroy and Morgan Hill (City of Gilroy 2002; City of Morgan Hill 2016a). Therefore, the inherent nature of the proposed Project would be to improve the capacity and wastewater treatment facilities in this region through this expansion Project, and these activities are being analyzed as part of this document in order to determine the environmental effects. Pursuant to Section 3.6, electrical power would be provided by Pacific Gas and Electric Company with a substation load transfer, without a "large load study". Pursuant to Section 3.9, the reduction of retention pond area would not significantly affect the operation of the site stormwater system. Potentially significant environmental impacts from implementation of the proposed Project would be considered less than significant with

mitigation as discussed throughout Chapter 3.0 of this document Therefore, there would be a less than significant impact.

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

Finding: No Impact

No new or expanded entitlements are necessary for operation of the proposed WWTP improvements and the current use of the WWTP would remain. The current treatment plant water supply is sufficient to serve the new WWTP improvements. Therefore, there would be no impact.

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

Finding: Less than Significant Impact

The proposed Project would increase the capacity at the SCRWA WWTP from 8.5 MGD to 11 MGD to accommodate the growth projections for both Gilroy and Morgan Hill (City of Gilroy 2002; City of Morgan Hill 2016a). All RWQCB requirements, such as updated permit stipulations for increased capacity, would be met prior to construction of the proposed Project. Therefore, because the proposed Project would be implemented in order to meet the designated growth projections in Gilroy and Morgan Hill's respective general plans, there would be a less than significant impact.

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

Finding: Less than Significant Impact

Solid waste within the City is generally brought to the San Martin Transfer Station located at 14070 Llagas Avenue, San Martin, California 95046, which is operated by Recology South Valley. Waste brought to the transfer station is sorted and then distributed to the appropriate location based on material type (Recology 2019). This transfer station has a permitted capacity of 1,728 tons per year with a maximum of 500 tons per day of solid waste accepted (CalRecycle 2019).

Solid waste generated during construction would potentially include soils that are suitable for reuse and would be reused on site. Additional construction debris could include vegetation from clearing of brush, concrete, and other miscellaneous materials. This solid waste generated from construction of the proposed Project would not be expected to exceed the daily maximum capacity of the San Martin Transfer Station. Further, once construction has been completed, no further additional solid waste would be generated by the proposed Project because there would be no new employees or activities associated with the proposed improvements to the WWTP. Therefore, there would be a less than significant impact.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Finding: No Impact

As of January 1, 2017, the City has implemented a Construction Waste Management Plan to comply with the 2016 California Green Building Standard Code. This plan requires that 65 percent of construction materials waste generated during a project be diverted from landfills (City of Gilroy 2017). The proposed Project would comply with this regulation and therefore, there would be no impact.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

MANDATORY FINDINGS OF SIGNIFICANCE Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

3.18.1 Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Findings: No Impact

As discussed in Section 3.4, Biological Resources and Section 3.5, Cultural Resources, the proposed Project would not result in any of the effects listed in question "a)". The proposed Project would include improvements to the existing SCRWA WWTP within the SCRWA property.

Historic or subsurface cultural resources have not been identified in the Project area and are unlikely to occur within the Project area, which is located intensive agricultural land and adjacent to the existing wastewater treatment facility. Therefore, degradation to the cultural environment in the Project area is not anticipated to occur.

This proposed Project would have no effects on fish, wildlife, rare or endangered species or historical resources. All Project construction is located adjacent to the existing wastewater treatment facility and agricultural land-use areas. All potential impacts to special-status species would be reduced to a less than significant level with mitigation incorporated. Additionally, while the proposed Project could be considered a covered activity under the Santa Clara County HCP/NCCP, it does not have a reasonable potential or likelihood to take any of the covered species and therefore does not require any incidental take authorization from federal or State wildlife agencies.

There would be no impact.

b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative 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)?

Findings: No Impact

The proposed Project would not have effects that would be cumulatively considerable when considered with effects of past, current or probably future Projects. Cumulative area-wide impacts associated with expansion of wastewater treatment have been considered in prior general EIRs and no need for further evaluation has been identified for site-specific or Project-specific effects. All proposed Project construction would be located adjacent to the existing SCRWA wastewater treatment facility within the existing footprint of the SCRWA WWTP. The proposed Project's contribution to cumulative impacts for all the resource categories discussed herein would not be cumulatively considerable. Therefore, there would be no impact.

c) Would the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Findings: Less than Significant Impact

The proposed Project would not substantially affect any sensitive receptors, or other people who could be harmed by the proposed Project's construction. All the identified construction-related impacts (e.g., construction noise and short-term emissions of GHGs) were determined to be less than significant with mitigation, less than significant, or to have no impact. Therefore, the proposed Project's environmental effects would be less than significant.

4.0 REPORT PREPARATION

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APPENDICES

South County Regional Wastewater Authority Wastewater Treatment Plant Facility Expansion Project

Appendix A MITIGATION, MONITORING, AND REPORTING PROGRAM

South County Regional Wastewater Authority Wastewater Treatment Plant Facility Expansion Project

Mitigation Monitoring and Reporting Program

August 2020

Prepared for:

South County Regional Water Authority

Prepared by:

Stantec Consulting Services, Inc.

Table of Contents

ABBREVIATIONS I

1.0 PROCEDURES FOR MONITORING AND REPORTING 1

2.0 CEQA MITIGATION MEASURES 2

3.0 REFERENCES 9

LIST OF TABLES

Table 2-1 South County Regional Wastewtaer Authority Wastewtater Treamtnet Plant Facility Expansion Project Mitigation Measures 3

Abbreviations

BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
CDFW	California Department of Fish and Wildfire
CNPS	California Native Plant Society
EIR	Environmental Impact Report
ISMND	Initial Study Mitigated Negative Declaration
MMRP	Mitigation Monitoring and Reporting Program
SCRWA	South County Regional Wastewater Authority
USFWS	United States Fish and Wildfire Service
WEAP	Worker Environmental Awareness Program

1.0 PROCEDURES FOR MONITORING AND REPORTING

The South County Regional Wastewater Authority (SCRWA) will be responsible for mitigation measure implementation oversight and compliance documentation. Under the oversight of SCRWA staff, mitigation actions required prior to and during construction will be performed by SCRWA's Consultants, the Construction Contractors, and/or SCRWA staff.

Monitoring and reporting procedures will conform to the following steps prior to and during proposed Project construction and operations:

Step 1 Action: This step will be executed by SCRWA and may be designated by the SCRWA Project Manager to a Consultant and/or Contractor. All actions taken as part of this Mitigation Monitoring and Reporting Program (MMRP) will be documented monthly and reported quarterly to SCRWA, as described in Steps 2 and 3 below. The designee responsible for implementation of mitigation measures will:

- Review mitigation status reports and any other information generated during construction;
- Ensure that the mitigation measures in this MMRP are undertaken, either by Staff, Contractors, or Consultants; and
- Verify monthly that mitigation actions are properly undertaken.

Step 2 Monitoring: This step will be executed by the Monitor. The Monitor will be designated by the SCRWA Project Manager and may be SCRWA staff or a consultant to SCRWA. The Monitor will investigate noncompliance allegations and identify how SCRWA Staff, or its designees should correct implementation of the measure. If a measure is under control of the Contractor, the Monitor will inform the Contractor of the Monitor's determination and request improved implementation.

The Monitor will have the following responsibilities:

- Be knowledgeable in the mitigation that is to be monitored; and
- Verify implementation of mitigation by:
    - Verifying in the field that required implementation has been properly executed during and after construction; and
    - Contacting the Project Manager and requesting that the situation be remedied if mitigation is not being implemented or executed properly.

Step 3 Reporting: This step will be executed by the Monitor. The Monitor will have the following responsibilities:

- Compile all mitigation status reports into a Report of Compliance. Recommendations may include updating the frequency of monitoring, changing the type of monitoring, and suggesting better ways to implement mitigation;
- Assist the SCRWA Project Manager reviewing Contractor's implementation of mitigation requirements, detailing corrective action and time of completion to resolve any issues that are raised; and
- Keep all completed report and statements on file at the SCRWA office.

2.0 CEQA MITIGATION MEASURES

Table 2-1 below describes the mitigation measures included in the proposed Project. For each mitigation measure the required action, responsible party, implementation timing, and reporting requirements are described.

Table 2-1 Summary of the South County Regional Wastewater Authority Wastewater Treatment Plant Facility Expansion Project Mitigation Measures

Mitigation Measure	Responsible Party	Monitoring Timing	Monitoring and Reporting Program	Standards for Success
Section 3.3 Air Quality and Greenhouse Gases				
Mitigation Measure AIR-1: Basic Construction Mitigation Measures and Best Management Practices The following Basic Construction Measures from the Bay Area Air Quality Management District (BAAQMD) 2017 CEQA Guidelines (or most recent BAAQMD CEQA Guidelines) shall be implemented throughout construction of the proposed Project: a) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered. c) 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. d) All vehicle speeds on unpaved roads shall be limited to 15 mile per hour. e) 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. f) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.	SCRWA and contractor.	The Basic Construction Measures and BMPs shall be implemented throughout construction activities.	The contractor shall prepare and monthly report documenting compliance with the BAAQMD's Basic Construction Measures, including any corrective actions taken, dust complaints filed, how the complaints were resolved, and documentation of hours of construction activities. The monthly report shall be submitted to SCRWA and be kept on file and made available upon request.	Compliance with all BAAQMD CEQA Air Quality Guidelines screening criteria.

g) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. h) 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 BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. In addition to the above measures, the following Gilroy General Plan Draft Environmental Impact Report (EIR) Best Management Practices (BMPs) shall be implemented throughout construction activities: • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more); • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.); • Install sandbags or other erosion control measures to prevent silt runoff to public roadways; and • Replant vegetation in disturbed areas as quickly as possible.				
Section 3.4 Biological Resources				
Mitigation Measure BIO-1 Pre-Construction Surveys A qualified botanist or biologist shall conduct special-status botanical surveys prior to construction activities in the proposed Project area. Surveys shall follow protocols designated by the United States Fish and Wildfire Service (USFWS) (USFWS 1996), California Department of Fish and Wildlife (CDFW) (CDFW 2018) and California Native Plant Society (CNPS) (CNPS 1991) and	SCRWA and contractor.	Pre-construction botanical surveys for special-status species shall be conducted by a qualified botanist or biologist between April and June (i.e., ideally during the mid-bloom period in May), or as otherwise	The survey shall be conducted by a qualified botanist or biologist and a brief Botanical Survey Results Report shall be completed and kept on-file with SCRWA. If special-status species are encountered, the Pre-Construction Botanical Survey Report shall be submitted to the appropriate regulatory	The presence or absence of special-status plant species shall be documented and, if observed, shall be handled and mitigated according to the performance standards outlined above and developed

shall occur during the appropriate floristic bloom periods for the saline clover and any other special-status species identified as having a potential to occur in the proposed Project area (Appendix C of the Initial Study/Mitigated Negative Declaration [ISMND]). The majority of special-status species with a potential to occur in the proposed Project area have an overlapping bloom period such that if surveys are conducted between April and June (i.e., ideally mid-bloom period in May), target special-status species are most likely to be identifiable. If special-status plants are not detected during pre-construction botanical surveys, no further mitigation is required. However, if special-status plant species are identified within the proposed Project are, their locations shall be mapped, and SCRWA shall require the implementation of the following measures: 1. If feasible, construction activities shall avoid special-status plants by installing an exclusion area with fencing and signage located at least 10 feet from special-status plant populations. 2. If avoidance is not feasible, SCRWA shall consult with the appropriate regulatory agency (i.e., USFWS for Federally listed species and CDFW for State- and CNPS- listed species) to identify appropriate procedures and measures capable of reducing impacts to a less than significant level. Recommended measures to mitigate impacts to special-status species may include those found in the Policy on Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants (CNPS 1991). Other measures may include compensation for any impacts to special-status plants via replacement (e.g., seed collection and replanting or transplanting of plants) or substitute resources (e.g., mitigation fees) as defined by regulatory agencies. SCRWA shall implement measures		deemed appropriate by a qualified botanist.	agencies (i.e., CDFW and/or USFWS).	with the appropriate regulatory agencies.

recommended by the appropriate regulatory agencies.				
Mitigation Measure BIO-2: Pre-Construction Worker Environmental Awareness Program (WEAP) Training The purpose of a WEAP training is to educate personnel (i.e., construction workers) about the existing on-site and surrounding sensitive biological resources and the measures required to protect these resources. The program will identify the special-status species and sensitive habitats that could potentially occur within the proposed Project area and identify the proposed Project features and BMPs incorporated to prevent impacts to those species. The WEAP training will be conducted by a qualified biologist and presented to the construction team and workers prior to construction and shall include information on the sensitive biological resources that could potentially occur within the proposed Project area and areas immediately adjacent including: • How to identify the special-status species found and/or that have the potential to occur in the proposed Project area and the avoidance measures and BMPs incorporated to prevent impacts to those species. • If special-status species are encountered in the work area, construction shall cease, and SCRWA and a qualified environmental representative shall be notified for guidance on appropriate measures to be implemented before any construction activities are resumed. Depending on the Federal or State listing, the observed species, and its persistence in the area, SCRWA shall consult with the USFWS and/or CDFW for guidance. • Remove litter and other debris daily that might attract animals to enter the proposed Project area and store in enclosed containers.	SCRWA and contractor.	The WEAP training shall be conducted by a qualified biologist prior to construction of the proposed Project, and new workers will be trained before initiating on-site work. Avoidance or buffer zones will be marked before construction begins.	The training shall be conducted by a qualified biologist and documented (by sign-in sheet or other method) for the dates the training occurred, and the staff trained. Retention of and Environmental Awareness Training reference materials shall also be kept on the construction site and within SCRWA's files.	Construction personnel are trained in the key characteristics for identifying and avoiding impacts to special-status species and sensitive habitats.

Printed handouts and other materials, if deemed appropriate, will be distributed and used for future reference by the construction team. Following the initial training, the contractor construction foreman, or predetermined alternate contractor designee, will be responsible for making sure that other workers on the proposed Project receive WEAP training as they come onto the proposed Project area. A roster of WEAP-trained construction workers will be maintained with SCRWA and made available for review by regulatory agencies if needed.				
Mitigation Measure BIO-3: Avoid Disturbance to Nesting Raptors and Other Nesting Migratory Birds To the extent feasible, vegetation removal activities shall be conducted during the non-nesting season (September 1 to February 15). If construction, such as tree removal, grading, excavation, etc., that have the potential to disturb nesting birds occur during the nesting season (February 15 to August 31), a qualified biologist shall conduct a pre-construction nesting birds survey prior to vegetation removal or ground disturbing activities in a given area with the following criteria: • Surveys shall be conducted within the proposed Project area and all potential nesting habitat for waterfowl and passerine species within 250 feet of this area and raptor species within 500 feet of the area. • The surveys should be conducted within one week before initiation of construction activities at any time between February 15 and August 31. If no active nests are detected, then no additional mitigation is required. • If surveys indicate the presence of nesting birds, the biologist shall establish an appropriate exclusion zone around the nest in which no work would be allowed until the young have successfully fledged or the nest has been abandoned. The size of the	SCRWA and contractor.	One nesting survey shall be conducted by a qualified biologist within one week prior to construction, should the proposed Project be initiated between February 15 and August 31.	The survey shall be conducted by a qualified biologist and a brief survey report shall be documented and kept on file with SCRWA.	Special-status species and nesting birds including those covered under the Migratory Bird Treaty Act and Fish and Game Code shall not be disturbed during proposed Project construction activities; exclusion buffers will be installed and monitored.

exclusion zone shall be determined by a qualified biologist and shall depend on the status of the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, other topographical or artificial barriers, and the sensitivity of the nesting bird to the disturbance. In general, exclusion zones of up to 250 feet for raptors and 50 feet for waterfowl and passerines are sufficient to prevent substantial disturbance to nesting birds. However, these buffers may be increased or decreased at the discretion of the biologist, as appropriate. Active nest sites shall be monitored periodically throughout the nesting season to identify any sign of disturbance. • If nesting birds are documented to have established themselves in a given location within the proposed Project area during pre-existing construction activities, then it shall be assumed that the nesting birds are habituated to the construction activities. Under this scenario, the active nest shall be monitored by a qualified biologist periodically until the young have successfully fledged, or the nest has been abandoned, as described above. • If active nests are identified on or immediately adjacent to the proposed Project area, then all non-essential construction activities (e.g., equipment storage and meetings) should be avoided in the immediate vicinity of the nest site, but the remainder of construction activities may proceed.				

3.0 REFERENCES

CDFW. 2018. California Department of Fish and Wildlife. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959. Accessed February 2020.

CNPS. 1991. California Native Plant Society. Policy on Mitigation Guidelines Regarding Impacts to Rare, Threatened, and Endangered Plants. California Native Plant Society Rare Plant Scientific Advisory Committee (February 1991, revised April 1998).

USFWS. 1996. U.S. Fish and Wildlife Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/Listed_plant_survey_guidelines.pdf. Accessed February 2020.

Appendix B AIR QUALITY AND GREENHOUSE GAS ASSUMPTIONS

Construction Emissions

Schedule	Construction Year	Start Date	End Date	# of Workdays
Construction Year 1	2021	1/1/2021	12/31/2021	261
Construction Year 2	2022	1/1/2022	12/31/2022	260
Construction Year 3	2023	1/1/2023	12/31/2023	260

Costruction Emissions

Year	ROG	NOx	Exhaust PM10	Exhaust PM2.5	Total CO2	CH4	N2O	CO2e
	tons/year				MT/year			
2021	0.0837	0.9954	0.03	0.0276	204.64	0.04	0.00	205.63
2022	1.8495	2.3873	0.0337	0.0319	618.64	0.05	0.00	620.00
2023	0.1371	2.0972	0.0309	0.0292	652.75	0.06	0.00	654.13
							Total	1479.8
							Lifetime of Project	30.000
							30-Year Amortization	**49.325**

Average Daily Construction Emissions

Year	ROG	NOx	Exhaust PM10	Exhaust PM2.5
	lb/day			
2021	0.64	7.63	0.23	0.21
2022	14.23	18.36	0.26	0.25
2023	1.05	16.13	0.24	0.22
BAAQMD Thresholds	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

Operational Emissions

Category	ROG	NOx	PM10 Total	PM2.5 Total	Total CO2	CH4	N2O	CO2e
	tons/year				MT/year			
Area	1.447	0.000	0.0000	0.0000	0.0	0.0	0.0	0.0
Energy	0.000	0.000	0.0000	0.0000	252.2	0.0	0.0	255.2
Mobile	0.000	0.000	0.0000	0.0000	0.0	0.0	0.0	0.0
Waste	0.000	0.000	0.0000	0.0000	0.0	0.0	0.0	0.0
Water	0.000	0.000	0.0000	0.0000	0.0	0.0	0.0	0.0
Delivery Trucks	0.000	0.004	0.0005	0.0002	1.7	0.0	0.0	1.8
Total	**1.45**	**0.004**	**0.0005**	**0.0002**	**253.9**	**0.0**	**0.0**	**257.0**
BAAQMD Thresholds	10	10	15	10				
Exceeds Threshold?	**No**	**No**	**No**	**No**				

Average Daily Operations Emissions Days per year 365

Year	ROG	NOx	PM10 Total	PM2.5 Total
	lb/day			
Project Total	7.93	0.02	0.003	0.001
BAAQMD Thresholds	54	54	82	54
Exceeds Threshold?	**No**	**No**	**No**	**No**

GHG Emissions

Source Cateogry	MTCO2e/year	For Report Table
Area	0.01	<1
Energy (electricity only)	255.23	255
Mobile	0.00	0
Waste	0.00	0
Water	0.00	0
Delivery Trucks	1.78	2
Construction	49.33	49
Project Total	**306**	**306**
BAAQMD Threshold	924	924
Exceeds Threshold?	**No**	**No**

GHG Threshold Interpolation

Year	MTCO2e/year
2030	660
2020	1100
2024	**924**

Notes:
1. Project will be maintained by existing staff, no new employee trips required.
2. The Project would not consume natural gas or water, and would not generate waste.

Delivery Truck Emissions (HHDT)

Truck Delivery	Frequency	# of Delivery Trucks per year[1]	# of Truck Trips per year	Trip Length (miles)
Sodium hypochlorite	Every 3 to 4 weeks	18	36	20
Citric acid	Every 5 to 6 weeks	11	22	20

Emission Factors

RUNNING Emission Factors (g/mi)

ROG	NOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
2.56E-02	2.68E+00	3.96E-01	2.48E-02	4.21E-01	1.09E-01	2.38E-02	1.32E-01	1.41E+03	4.76E-02	2.23E-01
2.56E-02	2.68E+00	3.96E-01	2.48E-02	4.21E-01	1.09E-01	2.38E-02	1.32E-01	1.41E+03	4.76E-02	2.23E-01

NON-RUNNING Emission Factor (g/trip)

ROG	NOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
3.69E-04	2.35E+00	0.00E+00	3.43E-07	3.43E-07	0.00E+00	3.16E-07	3.16E-07	3.47E-02	2.11E-07	3.37E-06
3.69E-04	2.35E+00	0.00E+00	3.43E-07	3.43E-07	0.00E+00	3.16E-07	3.16E-07	3.47E-02	2.11E-07	3.37E-06

IDLING Emission Factors (g/trip)

ROG	NOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
4.27E-01	5.38E+00	0.00E+00	2.62E-03	2.62E-03	0.00E+00	2.51E-03	2.51E-03	1.05E+03	2.42E-02	1.65E-01
4.27E-01	5.38E+00	0.00E+00	2.62E-03	2.62E-03	0.00E+00	2.51E-03	2.51E-03	1.05E+03	2.42E-02	1.65E-01

Notes:
1. # of deliveries based on infomration in Project Description
2. Global Warming Potentials based on IPCC Fourth Assessment consistent with https://ww2.arb.ca.gov/sites/default/files/2018-06/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf

					Global Warming Potential[2]		
					CO2	CH4	N2O
				Emissions	1	25	298

Delivery Truck Emissions (HHDT)					RUNNING Emissions (tons/year)								RUNNING Emissions (MT/year)			
Truck Delivery	Frequency	# of Delivery Trucks per year[1]	# of Truck Trips per year	Trip Length (miles)	ROG	NOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2e
Sodium hypochlorite	Every 3 to 4 weeks	18	36	20	2.03E-05	2.13E-03	3.14E-04	1.97E-05	3.34E-04	8.62E-05	1.89E-05	1.05E-04	1.01E+00	3.43E-05	1.61E-04	1.06E+00
Citric acid	Every 5 to 6 weeks	11	22	20	1.24E-05	1.30E-03	1.92E-04	1.20E-05	2.04E-04	5.27E-05	1.15E-05	6.42E-05	6.20E-01	2.10E-05	9.83E-05	6.50E-01
					NON-RUNNING Emissions (tons/year)								NON-RUNNING Emissions (MT/year)			
					ROG	NOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2e
					1.46E-08	9.31E-05	0.00E+00	1.36E-11	1.36E-11	0.00E+00	1.25E-11	1.25E-11	1.25E-06	7.60E-12	1.21E-10	1.28E-06
					8.95E-09	5.69E-05	0.00E+00	8.32E-12	8.32E-12	0.00E+00	7.65E-12	7.65E-12	7.63E-07	4.65E-12	7.41E-11	7.85E-07
					IDLING Emissions (tons/year)								NON-RUNNING Emissions (MT/year)			
					ROG	NOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2e
					1.70E-05	2.13E-04	0.00E+00	1.04E-07	1.04E-07	0.00E+00	9.96E-08	9.96E-08	3.76E-02	8.70E-07	5.94E-06	3.94E-02
					1.04E-05	1.30E-04	0.00E+00	6.36E-08	6.36E-08	0.00E+00	6.09E-08	6.09E-08	2.30E-02	5.32E-07	3.63E-06	2.41E-02
					6.01E-05	**3.92E-03**	**5.07E-04**	**3.19E-05**	**5.39E-04**	**1.39E-04**	**3.05E-05**	**1.69E-04**	**1.70E+00**	**5.66E-05**	**2.69E-04**	**1.78E+00**

Notes:
1. # of deliveries based on infomration in Project Description
2. Global Warming Potentials based on IPCC Fourth Assessment consistent with https://ww2.arb.ca.gov/sites/default/files/2018-06/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf

SCRWA Plant Expansion - Bay Area AQMD Air District, Annual

SCRWA Plant Expansion

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	326.70	1000sqft	7.50	326,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	206	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 Intensity factor based on PG&E's 2019 Sustainability Report

Land Use - Project footprint is approximately 7.5 acres

Vehicle Trips - Existing staff would maintain and operate Project components, no new employee trips.

Energy Use - Project would only consume electricity

Water And Wastewater - The Project components would not consume potable water.

Solid Waste - Project would not generate solid waste

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	500.00
tblConstructionPhase	NumDays	230.00	500.00
tblConstructionPhase	NumDays	230.00	500.00
tblConstructionPhase	NumDays	230.00	500.00
tblConstructionPhase	NumDays	20.00	120.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	10.00	20.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24NG	19.71	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	2.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	206

tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	LandfillNoGasCapture	6.00	0.00
tblSolidWaste	SolidWasteGenerationRate	405.11	0.00
tblTripsAndVMT	HaulingTripNumber	26.00	24.00
tblTripsAndVMT	HaulingTripNumber	0.00	200.00
tblTripsAndVMT	HaulingTripNumber	0.00	16.00
tblTripsAndVMT	HaulingTripNumber	0.00	992.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,040.00
tblTripsAndVMT	VendorTripNumber	54.00	35.70
tblTripsAndVMT	VendorTripNumber	54.00	35.70
tblTripsAndVMT	VendorTripNumber	54.00	35.70
tblTripsAndVMT	VendorTripNumber	54.00	35.70
tblTripsAndVMT	WorkerTripNumber	137.00	8.00
tblTripsAndVMT	WorkerTripNumber	137.00	18.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	2.00
tblTripsAndVMT	WorkerTripNumber	5.00	6.00
tblTripsAndVMT	WorkerTripNumber	137.00	30.00
tblTripsAndVMT	WorkerTripNumber	137.00	4.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	75,549,375.00	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					
2021	0.0837	0.9954	0.5710	2.2300e-003	0.1206	0.0300	0.1506	0.0565	0.0276	0.0841	0.0000	204.6400	204.6400	0.0395	0.0000	205.6285
2022	1.8495	2.3873	1.2324	6.6100e-003	0.1714	0.0337	0.2051	0.0482	0.0319	0.0801	0.0000	618.6419	618.6419	0.0543	0.0000	620.0000
2023	0.1371	2.0972	1.2603	6.9700e-003	0.1834	0.0309	0.2143	0.0516	0.0292	0.0808	0.0000	652.7533	652.7533	0.0552	0.0000	654.1337
Maximum	**1.8495**	**2.3873**	**1.2603**	**6.9700e-003**	**0.1834**	**0.0337**	**0.2143**	**0.0565**	**0.0319**	**0.0841**	**0.0000**	**652.7533**	**652.7533**	**0.0552**	**0.0000**	**654.1337**

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					
2021	0.0837	0.9954	0.5710	2.2300e-003	0.1206	0.0300	0.1506	0.0565	0.0276	0.0841	0.0000	204.6399	204.6399	0.0395	0.0000	205.6284
2022	1.8495	2.3873	1.2324	6.6100e-003	0.1714	0.0337	0.2051	0.0482	0.0319	0.0801	0.0000	618.6417	618.6417	0.0543	0.0000	619.9999
2023	0.1371	2.0971	1.2603	6.9700e-003	0.1834	0.0309	0.2143	0.0516	0.0292	0.0808	0.0000	652.7531	652.7531	0.0552	0.0000	654.1335
Maximum	**1.8495**	**2.3873**	**1.2603**	**6.9700e-003**	**0.1834**	**0.0337**	**0.2143**	**0.0565**	**0.0319**	**0.0841**	**0.0000**	**652.7531**	**652.7531**	**0.0552**	**0.0000**	**654.1335**

	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.1379	0.1379
2	4-1-2021	6-30-2021	0.2110	0.2110
3	7-1-2021	9-30-2021	0.2823	0.2823
4	10-1-2021	12-31-2021	0.4388	0.4388
5	1-1-2022	3-31-2022	2.2280	2.2280
6	4-1-2022	6-30-2022	0.6800	0.6800
7	7-1-2022	9-30-2022	0.6875	0.6875
8	10-1-2022	12-31-2022	0.6929	0.6929
9	1-1-2023	3-31-2023	0.5527	0.5527
10	4-1-2023	6-30-2023	0.5555	0.5555
11	7-1-2023	9-30-2023	0.5616	0.5616
		Highest	2.2280	2.2280

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	1.4466	3.0000e-005	3.0000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8400e-003	5.8400e-003	2.0000e-005	0.0000	6.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	252.1518	252.1518	0.0355	7.3400e-003	255.2279
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4466**	**3.0000e-005**	**3.0000e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**252.1577**	**252.1577**	**0.0355**	**7.3400e-003**	**255.2341**

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	1.4466	3.0000e-005	3.0000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8400e-003	5.8400e-003	2.0000e-005	0.0000	6.2200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	252.1518	252.1518	0.0355	7.3400e-003	255.2279
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4466**	**3.0000e-005**	**3.0000e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**252.1577**	**252.1577**	**0.0355**	**7.3400e-003**	**255.2341**

	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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Demo	Demolition	1/1/2021	1/28/2021	5	20	
2	Surface Restoration	Site Preparation	1/1/2021	1/14/2021	5	10	
3	Storm Drain/Yard Piping	Trenching	2/1/2021	4/25/2021	5	60	
4	Site Work/ Earthwork	Grading	4/26/2021	10/9/2021	5	120	
5	Preload	Site Preparation	10/10/2021	12/31/2021	5	60	
6	Shoring & Bracing	Site Preparation	12/4/2021	12/31/2021	5	20	
7	Architectural	Architectural Coating	1/1/2022	1/29/2022	5	20	
8	Structural	Building Construction	1/30/2022	12/31/2023	5	500	
9	Mechanical	Building Construction	1/30/2022	12/31/2023	5	500	
10	HVAC	Building Construction	1/30/2022	12/31/2023	5	500	
11	Electrical	Building Construction	1/30/2022	12/31/2023	5	500	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 490,050; Non-Residential Outdoor: 163,350; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Surface Restoration	Tractors/Loaders/Backhoes	1	5.00	97	0.37
Surface Restoration	Rubber Tired Dozers	1	5.00	247	0.40
Surface Restoration	Off-Highway Trucks	1	5.00	402	0.38
Site Demo	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Site Demo	Concrete/Industrial Saws	1	1.00	81	0.73
Site Demo	Excavators	1	2.00	158	0.38
Site Demo	Rubber Tired Loaders	1	2.00	203	0.36
Storm Drain/Yard Piping	Excavators	1	1.00	158	0.38
Storm Drain/Yard Piping	Rubber Tired Loaders	1	1.00	203	0.36
Site Work/ Earthwork	Rubber Tired Dozers	1	1.00	247	0.40
Site Work/ Earthwork	Excavators	1	1.00	158	0.38
Site Work/ Earthwork	Off-Highway Trucks	1	5.00	402	0.38
Site Work/ Earthwork	Rubber Tired Loaders	1	1.00	203	0.36
Site Work/ Earthwork	Rollers	1	1.00	80	0.38
Preload	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Preload	Rubber Tired Dozers	1	1.00	247	0.40
Preload	Excavators	1	5.00	158	0.38
Preload	Off-Highway Trucks	1	1.00	402	0.38
Preload	Rubber Tired Loaders	1	5.00	203	0.36
Architectural	Cement and Mortar Mixers	1	5.00	9	0.56
Structural	Generator Sets	1	4.00	84	0.74
Structural	Cranes	1	1.00	231	0.29
Structural	Cement and Mortar Mixers	1	1.00	9	0.56
Structural	Other Material Handling Equipment	1	2.00	168	0.40
Mechanical	Cranes	1	1.00	231	0.29
Mechanical	Excavators	1	1.00	158	0.38
Mechanical	Rubber Tired Loaders	1	1.00	203	0.36
HVAC	Cranes	1	1.00	231	0.29

Electrical	Tractors/Loaders/Backhoes	1	1.00	97	0.37
Electrical	Plate Compactors	1	1.00	8	0.43
Electrical	Skid Steer Loaders	1	1.00	65	0.37
Electrical	Off-Highway Trucks	1	2.00	402	0.38
Electrical	Plate Compactors	1	1.00	8	0.43
Shoring & Bracing	Cranes	1	5.00	231	0.29
Shoring & Bracing	Excavators	1	5.00	158	0.38

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
Surface Restoration	3	8.00	0.00	200.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Demo	4	10.00	0.00	24.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Storm Drain/Yard Piping	2	10.00	0.00	16.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Work/ Earthwork	5	16.00	0.00	992.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Preload	5	2.00	0.00	1,040.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural	1	27.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Structural	4	30.00	35.70	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Mechanical	3	4.00	35.70	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
HVAC	1	8.00	35.70	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Electrical	5	18.00	35.70	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Shoring & Bracing	2	6.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Demo - 2021

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					2.8500e-003	0.0000	2.8500e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1500e-003	0.0212	0.0196	4.0000e-005		9.4000e-004	9.4000e-004		8.8000e-004	8.8000e-004	0.0000	3.5203	3.5203	9.6000e-004	0.0000	3.5443
Total	**2.1500e-003**	**0.0212**	**0.0196**	**4.0000e-005**	**2.8500e-003**	**9.4000e-004**	**3.7900e-003**	**4.3000e-004**	**8.8000e-004**	**1.3100e-003**	**0.0000**	**3.5203**	**3.5203**	**9.6000e-004**	**0.0000**	**3.5443**

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	9.0000e-005	3.2400e-003	6.9000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.9079	0.9079	5.0000e-005	0.0000	0.9090
Vendor	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
Worker	3.1000e-004	2.1000e-004	2.2400e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6680	0.6680	1.0000e-005	0.0000	0.6684
Total	**4.0000e-004**	**3.4500e-003**	**2.9300e-003**	**2.0000e-005**	**9.9000e-004**	**2.0000e-005**	**1.0100e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.5758**	**1.5758**	**6.0000e-005**	**0.0000**	**1.5774**

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					2.8500e-003	0.0000	2.8500e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1500e-003	0.0212	0.0196	4.0000e-005		9.4000e-004	9.4000e-004		8.8000e-004	8.8000e-004	0.0000	3.5203	3.5203	9.6000e-004	0.0000	3.5443
Total	**2.1500e-003**	**0.0212**	**0.0196**	**4.0000e-005**	**2.8500e-003**	**9.4000e-004**	**3.7900e-003**	**4.3000e-004**	**8.8000e-004**	**1.3100e-003**	**0.0000**	**3.5203**	**3.5203**	**9.6000e-004**	**0.0000**	**3.5443**

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	9.0000e-005	3.2400e-003	6.9000e-004	1.0000e-005	2.0000e-004	1.0000e-005	2.1000e-004	6.0000e-005	1.0000e-005	7.0000e-005	0.0000	0.9079	0.9079	5.0000e-005	0.0000	0.9090
Vendor	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
Worker	3.1000e-004	2.1000e-004	2.2400e-003	1.0000e-005	7.9000e-004	1.0000e-005	8.0000e-004	2.1000e-004	0.0000	2.1000e-004	0.0000	0.6680	0.6680	1.0000e-005	0.0000	0.6684
Total	**4.0000e-004**	**3.4500e-003**	**2.9300e-003**	**2.0000e-005**	**9.9000e-004**	**2.0000e-005**	**1.0100e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**1.5758**	**1.5758**	**6.0000e-005**	**0.0000**	**1.5774**

3.3 Surface Restoration - 2021

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					0.0188	0.0000	0.0188	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7500e-003	0.0567	0.0309	8.0000e-005		2.6200e-003	2.6200e-003		2.4100e-003	2.4100e-003	0.0000	6.8231	6.8231	2.2100e-003	0.0000	6.8783
Total	**5.7500e-003**	**0.0567**	**0.0309**	**8.0000e-005**	**0.0188**	**2.6200e-003**	**0.0214**	**0.0103**	**2.4100e-003**	**0.0128**	**0.0000**	**6.8231**	**6.8231**	**2.2100e-003**	**0.0000**	**6.8783**

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	7.9000e-004	0.0270	5.7500e-003	8.0000e-005	1.6900e-003	8.0000e-005	1.7700e-003	4.6000e-004	8.0000e-005	5.4000e-004	0.0000	7.5654	7.5654	3.9000e-004	0.0000	7.5751
Vendor	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
Worker	1.2000e-004	8.0000e-005	9.0000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2672	0.2672	1.0000e-005	0.0000	0.2674
Total	**9.1000e-004**	**0.0271**	**6.6500e-003**	**8.0000e-005**	**2.0100e-003**	**8.0000e-005**	**2.0900e-003**	**5.4000e-004**	**8.0000e-005**	**6.3000e-004**	**0.0000**	**7.8326**	**7.8326**	**4.0000e-004**	**0.0000**	**7.8424**

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					0.0188	0.0000	0.0188	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7500e-003	0.0567	0.0309	8.0000e-005		2.6200e-003	2.6200e-003		2.4100e-003	2.4100e-003	0.0000	6.8231	6.8231	2.2100e-003	0.0000	6.8783
Total	**5.7500e-003**	**0.0567**	**0.0309**	**8.0000e-005**	**0.0188**	**2.6200e-003**	**0.0214**	**0.0103**	**2.4100e-003**	**0.0128**	**0.0000**	**6.8231**	**6.8231**	**2.2100e-003**	**0.0000**	**6.8783**

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	7.9000e-004	0.0270	5.7500e-003	8.0000e-005	1.6900e-003	8.0000e-005	1.7700e-003	4.6000e-004	8.0000e-005	5.4000e-004	0.0000	7.5654	7.5654	3.9000e-004	0.0000	7.5751
Vendor	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
Worker	1.2000e-004	8.0000e-005	9.0000e-004	0.0000	3.2000e-004	0.0000	3.2000e-004	8.0000e-005	0.0000	9.0000e-005	0.0000	0.2672	0.2672	1.0000e-005	0.0000	0.2674
Total	**9.1000e-004**	**0.0271**	**6.6500e-003**	**8.0000e-005**	**2.0100e-003**	**8.0000e-005**	**2.0900e-003**	**5.4000e-004**	**8.0000e-005**	**6.3000e-004**	**0.0000**	**7.8326**	**7.8326**	**4.0000e-004**	**0.0000**	**7.8424**

3.4 Storm Drain/Yard Piping - 2021

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	2.1500e-003	0.0226	0.0183	4.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	3.7606	3.7606	1.2200e-003	0.0000	3.7910
Total	**2.1500e-003**	**0.0226**	**0.0183**	**4.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.0000e-004**	**8.0000e-004**	**0.0000**	**3.7606**	**3.7606**	**1.2200e-003**	**0.0000**	**3.7910**

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	6.0000e-005	2.1600e-003	4.6000e-004	1.0000e-005	1.4000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.6052	0.6052	3.0000e-005	0.0000	0.6060
Vendor	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
Worker	9.2000e-004	6.4000e-004	6.7300e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0040	2.0040	4.0000e-005	0.0000	2.0051
Total	**9.8000e-004**	**2.8000e-003**	**7.1900e-003**	**3.0000e-005**	**2.5100e-003**	**3.0000e-005**	**2.5300e-003**	**6.7000e-004**	**2.0000e-005**	**6.8000e-004**	**0.0000**	**2.6092**	**2.6092**	**7.0000e-005**	**0.0000**	**2.6111**

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	2.1500e-003	0.0226	0.0183	4.0000e-005		8.7000e-004	8.7000e-004		8.0000e-004	8.0000e-004	0.0000	3.7606	3.7606	1.2200e-003	0.0000	3.7910
Total	**2.1500e-003**	**0.0226**	**0.0183**	**4.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.0000e-004**	**8.0000e-004**	**0.0000**	**3.7606**	**3.7606**	**1.2200e-003**	**0.0000**	**3.7910**

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	6.0000e-005	2.1600e-003	4.6000e-004	1.0000e-005	1.4000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.6052	0.6052	3.0000e-005	0.0000	0.6060
Vendor	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
Worker	9.2000e-004	6.4000e-004	6.7300e-003	2.0000e-005	2.3700e-003	2.0000e-005	2.3900e-003	6.3000e-004	1.0000e-005	6.4000e-004	0.0000	2.0040	2.0040	4.0000e-005	0.0000	2.0051
Total	**9.8000e-004**	**2.8000e-003**	**7.1900e-003**	**3.0000e-005**	**2.5100e-003**	**3.0000e-005**	**2.5300e-003**	**6.7000e-004**	**2.0000e-005**	**6.8000e-004**	**0.0000**	**2.6092**	**2.6092**	**7.0000e-005**	**0.0000**	**2.6111**

3.5 Site Work/ Earthwork - 2021

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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0363	0.3392	0.2161	6.6000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	58.3738	58.3738	0.0189	0.0000	58.8457
Total	**0.0363**	**0.3392**	**0.2161**	**6.6000e-004**	**0.0452**	**0.0139**	**0.0590**	**0.0248**	**0.0128**	**0.0376**	**0.0000**	**58.3738**	**58.3738**	**0.0189**	**0.0000**	**58.8457**

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	3.9100e-003	0.1339	0.0285	3.9000e-004	8.3800e-003	4.1000e-004	8.7900e-003	2.3000e-003	4.0000e-004	2.7000e-003	0.0000	37.5245	37.5245	1.9100e-003	0.0000	37.5724
Vendor	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
Worker	2.9500e-003	2.0300e-003	0.0215	7.0000e-005	7.5900e-003	5.0000e-005	7.6400e-003	2.0200e-003	5.0000e-005	2.0600e-003	0.0000	6.4127	6.4127	1.4000e-004	0.0000	6.4163
Total	**6.8600e-003**	**0.1359**	**0.0501**	**4.6000e-004**	**0.0160**	**4.6000e-004**	**0.0164**	**4.3200e-003**	**4.5000e-004**	**4.7600e-003**	**0.0000**	**43.9372**	**43.9372**	**2.0500e-003**	**0.0000**	**43.9887**

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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0363	0.3392	0.2161	6.6000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	58.3737	58.3737	0.0189	0.0000	58.8457
Total	**0.0363**	**0.3392**	**0.2161**	**6.6000e-004**	**0.0452**	**0.0139**	**0.0590**	**0.0248**	**0.0128**	**0.0376**	**0.0000**	**58.3737**	**58.3737**	**0.0189**	**0.0000**	**58.8457**

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	3.9100e-003	0.1339	0.0285	3.9000e-004	8.3800e-003	4.1000e-004	8.7900e-003	2.3000e-003	4.0000e-004	2.7000e-003	0.0000	37.5245	37.5245	1.9100e-003	0.0000	37.5724
Vendor	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
Worker	2.9500e-003	2.0300e-003	0.0215	7.0000e-005	7.5900e-003	5.0000e-005	7.6400e-003	2.0200e-003	5.0000e-005	2.0600e-003	0.0000	6.4127	6.4127	1.4000e-004	0.0000	6.4163
Total	**6.8600e-003**	**0.1359**	**0.0501**	**4.6000e-004**	**0.0160**	**4.6000e-004**	**0.0164**	**4.3200e-003**	**4.5000e-004**	**4.7600e-003**	**0.0000**	**43.9372**	**43.9372**	**2.0500e-003**	**0.0000**	**43.9887**

3.6 Preload - 2021

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					0.0226	0.0000	0.0226	0.0124	0.0000	0.0124	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.2021	0.1539	3.4000e-004		8.7700e-003	8.7700e-003		8.0700e-003	8.0700e-003	0.0000	30.0615	30.0615	9.7200e-003	0.0000	30.3046
Total	**0.0197**	**0.2021**	**0.1539**	**3.4000e-004**	**0.0226**	**8.7700e-003**	**0.0314**	**0.0124**	**8.0700e-003**	**0.0205**	**0.0000**	**30.0615**	**30.0615**	**9.7200e-003**	**0.0000**	**30.3046**

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	4.1000e-003	0.1403	0.0299	4.1000e-004	8.7800e-003	4.3000e-004	9.2200e-003	2.4200e-003	4.2000e-004	2.8300e-003	0.0000	39.3402	39.3402	2.0100e-003	0.0000	39.3904
Vendor	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
Worker	1.8000e-004	1.3000e-004	1.3500e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4008	0.4008	1.0000e-005	0.0000	0.4010
Total	**4.2800e-003**	**0.1405**	**0.0313**	**4.1000e-004**	**9.2500e-003**	**4.3000e-004**	**9.7000e-003**	**2.5500e-003**	**4.2000e-004**	**2.9600e-003**	**0.0000**	**39.7410**	**39.7410**	**2.0200e-003**	**0.0000**	**39.7915**

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					0.0226	0.0000	0.0226	0.0124	0.0000	0.0124	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.2021	0.1539	3.4000e-004		8.7700e-003	8.7700e-003		8.0700e-003	8.0700e-003	0.0000	30.0615	30.0615	9.7200e-003	0.0000	30.3045
Total	**0.0197**	**0.2021**	**0.1539**	**3.4000e-004**	**0.0226**	**8.7700e-003**	**0.0314**	**0.0124**	**8.0700e-003**	**0.0205**	**0.0000**	**30.0615**	**30.0615**	**9.7200e-003**	**0.0000**	**30.3045**

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	4.1000e-003	0.1403	0.0299	4.1000e-004	8.7800e-003	4.3000e-004	9.2200e-003	2.4200e-003	4.2000e-004	2.8300e-003	0.0000	39.3402	39.3402	2.0100e-003	0.0000	39.3904
Vendor	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
Worker	1.8000e-004	1.3000e-004	1.3500e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4008	0.4008	1.0000e-005	0.0000	0.4010
Total	**4.2800e-003**	**0.1405**	**0.0313**	**4.1000e-004**	**9.2500e-003**	**4.3000e-004**	**9.7000e-003**	**2.5500e-003**	**4.2000e-004**	**2.9600e-003**	**0.0000**	**39.7410**	**39.7410**	**2.0200e-003**	**0.0000**	**39.7915**

3.7 Shoring & Bracing - 2021

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0100e-003	0.0438	0.0328	7.0000e-005		1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	6.0040	6.0040	1.9400e-003	0.0000	6.0526
Total	**4.0100e-003**	**0.0438**	**0.0328**	**7.0000e-005**	**0.0000**	**1.8800e-003**	**1.8800e-003**	**0.0000**	**1.7300e-003**	**1.7300e-003**	**0.0000**	**6.0040**	**6.0040**	**1.9400e-003**	**0.0000**	**6.0526**

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	0.0000	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
Worker	1.8000e-004	1.3000e-004	1.3500e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4008	0.4008	1.0000e-005	0.0000	0.4010
Total	**1.8000e-004**	**1.3000e-004**	**1.3500e-003**	**0.0000**	**4.7000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4008**	**0.4008**	**1.0000e-005**	**0.0000**	**0.4010**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0100e-003	0.0438	0.0328	7.0000e-005		1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	6.0040	6.0040	1.9400e-003	0.0000	6.0526
Total	**4.0100e-003**	**0.0438**	**0.0328**	**7.0000e-005**	**0.0000**	**1.8800e-003**	**1.8800e-003**	**0.0000**	**1.7300e-003**	**1.7300e-003**	**0.0000**	**6.0040**	**6.0040**	**1.9400e-003**	**0.0000**	**6.0526**

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	0.0000	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
Worker	1.8000e-004	1.3000e-004	1.3500e-003	0.0000	4.7000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4008	0.4008	1.0000e-005	0.0000	0.4010
Total	**1.8000e-004**	**1.3000e-004**	**1.3500e-003**	**0.0000**	**4.7000e-004**	**0.0000**	**4.8000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.4008**	**0.4008**	**1.0000e-005**	**0.0000**	**0.4010**

3.8 Architectural - 2022

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	1.7035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	2.3000e-003	1.9300e-003	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.2864	0.2864	3.0000e-005	0.0000	0.2872
Total	**1.7039**	**2.3000e-003**	**1.9300e-003**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.2864**	**0.2864**	**3.0000e-005**	**0.0000**	**0.2872**

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	0.0000	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
Worker	7.7000e-004	5.1000e-004	5.5700e-003	2.0000e-005	2.1300e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.7375	1.7375	4.0000e-005	0.0000	1.7384
Total	**7.7000e-004**	**5.1000e-004**	**5.5700e-003**	**2.0000e-005**	**2.1300e-003**	**1.0000e-005**	**2.1500e-003**	**5.7000e-004**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**1.7375**	**1.7375**	**4.0000e-005**	**0.0000**	**1.7384**

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	1.7035					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	2.3000e-003	1.9300e-003	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	0.2864	0.2864	3.0000e-005	0.0000	0.2872
Total	**1.7039**	**2.3000e-003**	**1.9300e-003**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.2864**	**0.2864**	**3.0000e-005**	**0.0000**	**0.2872**

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	0.0000	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
Worker	7.7000e-004	5.1000e-004	5.5700e-003	2.0000e-005	2.1300e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.7375	1.7375	4.0000e-005	0.0000	1.7384
Total	**7.7000e-004**	**5.1000e-004**	**5.5700e-003**	**2.0000e-005**	**2.1300e-003**	**1.0000e-005**	**2.1500e-003**	**5.7000e-004**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**1.7375**	**1.7375**	**4.0000e-005**	**0.0000**	**1.7384**

3.9 Structural - 2022

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	0.0343	0.3113	0.3665	6.7000e-004		0.0153	0.0153		0.0148	0.0148	0.0000	57.4362	57.4362	9.0700e-003	0.0000	57.6629
Total	**0.0343**	**0.3113**	**0.3665**	**6.7000e-004**		**0.0153**	**0.0153**		**0.0148**	**0.0148**	**0.0000**	**57.4362**	**57.4362**	**9.0700e-003**	**0.0000**	**57.6629**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	0.0103	6.8300e-003	0.0742	2.6000e-004	0.0285	1.8000e-004	0.0286	7.5700e-003	1.7000e-004	7.7400e-003	0.0000	23.1660	23.1660	4.8000e-004	0.0000	23.1781
Total	**0.0230**	**0.4306**	**0.1792**	**1.4000e-003**	**0.0565**	**1.0200e-003**	**0.0576**	**0.0157**	**9.8000e-004**	**0.0167**	**0.0000**	**133.1716**	**133.1716**	**5.7000e-003**	**0.0000**	**133.3142**

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	0.0343	0.3113	0.3665	6.7000e-004		0.0153	0.0153		0.0148	0.0148	0.0000	57.4361	57.4361	9.0700e-003	0.0000	57.6628
Total	**0.0343**	**0.3113**	**0.3665**	**6.7000e-004**		**0.0153**	**0.0153**		**0.0148**	**0.0148**	**0.0000**	**57.4361**	**57.4361**	**9.0700e-003**	**0.0000**	**57.6628**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	0.0103	6.8300e-003	0.0742	2.6000e-004	0.0285	1.8000e-004	0.0286	7.5700e-003	1.7000e-004	7.7400e-003	0.0000	23.1660	23.1660	4.8000e-004	0.0000	23.1781
Total	**0.0230**	**0.4306**	**0.1792**	**1.4000e-003**	**0.0565**	**1.0200e-003**	**0.0576**	**0.0157**	**9.8000e-004**	**0.0167**	**0.0000**	**133.1716**	**133.1716**	**5.7000e-003**	**0.0000**	**133.3142**

3.9 Structural - 2023

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	0.0349	0.3126	0.3955	7.2000e-004		0.0149	0.0149		0.0144	0.0144	0.0000	62.2224	62.2224	9.6900e-003	0.0000	62.4648
Total	**0.0349**	**0.3126**	**0.3955**	**7.2000e-004**		**0.0149**	**0.0149**		**0.0144**	**0.0144**	**0.0000**	**62.2224**	**62.2224**	**9.6900e-003**	**0.0000**	**62.4648**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	0.0104	6.6600e-003	0.0739	2.7000e-004	0.0308	1.9000e-004	0.0310	8.2000e-003	1.8000e-004	8.3800e-003	0.0000	24.1354	24.1354	4.7000e-004	0.0000	24.1471
Total	**0.0207**	**0.3606**	**0.1758**	**1.4700e-003**	**0.0613**	**6.0000e-004**	**0.0619**	**0.0170**	**5.7000e-004**	**0.0176**	**0.0000**	**139.9682**	**139.9682**	**5.2900e-003**	**0.0000**	**140.1004**

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	0.0349	0.3126	0.3955	7.2000e-004		0.0149	0.0149		0.0144	0.0144	0.0000	62.2223	62.2223	9.6900e-003	0.0000	62.4647
Total	**0.0349**	**0.3126**	**0.3955**	**7.2000e-004**		**0.0149**	**0.0149**		**0.0144**	**0.0144**	**0.0000**	**62.2223**	**62.2223**	**9.6900e-003**	**0.0000**	**62.4647**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	0.0104	6.6600e-003	0.0739	2.7000e-004	0.0308	1.9000e-004	0.0310	8.2000e-003	1.8000e-004	8.3800e-003	0.0000	24.1354	24.1354	4.7000e-004	0.0000	24.1471
Total	**0.0207**	**0.3606**	**0.1758**	**1.4700e-003**	**0.0613**	**6.0000e-004**	**0.0619**	**0.0170**	**5.7000e-004**	**0.0176**	**0.0000**	**139.9682**	**139.9682**	**5.2900e-003**	**0.0000**	**140.1004**

3.10 Mechanical - 2022

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	0.0130	0.1348	0.1002	2.6000e-004		5.4200e-003	5.4200e-003		4.9800e-003	4.9800e-003	0.0000	22.6503	22.6503	7.3300e-003	0.0000	22.8334
Total	**0.0130**	**0.1348**	**0.1002**	**2.6000e-004**		**5.4200e-003**	**5.4200e-003**		**4.9800e-003**	**4.9800e-003**	**0.0000**	**22.6503**	**22.6503**	**7.3300e-003**	**0.0000**	**22.8334**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	1.3700e-003	9.1000e-004	9.8900e-003	3.0000e-005	3.7900e-003	2.0000e-005	3.8200e-003	1.0100e-003	2.0000e-005	1.0300e-003	0.0000	3.0888	3.0888	6.0000e-005	0.0000	3.0904
Total	**0.0141**	**0.4247**	**0.1149**	**1.1700e-003**	**0.0319**	**8.6000e-004**	**0.0328**	**9.1400e-003**	**8.3000e-004**	**9.9600e-003**	**0.0000**	**113.0944**	**113.0944**	**5.2800e-003**	**0.0000**	**113.2265**

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	0.0130	0.1348	0.1002	2.6000e-004		5.4200e-003	5.4200e-003		4.9800e-003	4.9800e-003	0.0000	22.6502	22.6502	7.3300e-003	0.0000	22.8334
Total	**0.0130**	**0.1348**	**0.1002**	**2.6000e-004**		**5.4200e-003**	**5.4200e-003**		**4.9800e-003**	**4.9800e-003**	**0.0000**	**22.6502**	**22.6502**	**7.3300e-003**	**0.0000**	**22.8334**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	1.3700e-003	9.1000e-004	9.8900e-003	3.0000e-005	3.7900e-003	2.0000e-005	3.8200e-003	1.0100e-003	2.0000e-005	1.0300e-003	0.0000	3.0888	3.0888	6.0000e-005	0.0000	3.0904
Total	**0.0141**	**0.4247**	**0.1149**	**1.1700e-003**	**0.0319**	**8.6000e-004**	**0.0328**	**9.1400e-003**	**8.3000e-004**	**9.9600e-003**	**0.0000**	**113.0944**	**113.0944**	**5.2800e-003**	**0.0000**	**113.2265**

3.10 Mechanical - 2023

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	0.0132	0.1303	0.1073	2.8000e-004		5.2700e-003	5.2700e-003		4.8400e-003	4.8400e-003	0.0000	24.5374	24.5374	7.9400e-003	0.0000	24.7358
Total	**0.0132**	**0.1303**	**0.1073**	**2.8000e-004**		**5.2700e-003**	**5.2700e-003**		**4.8400e-003**	**4.8400e-003**	**0.0000**	**24.5374**	**24.5374**	**7.9400e-003**	**0.0000**	**24.7358**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	1.3900e-003	8.9000e-004	9.8600e-003	4.0000e-005	4.1100e-003	3.0000e-005	4.1300e-003	1.0900e-003	2.0000e-005	1.1200e-003	0.0000	3.2181	3.2181	6.0000e-005	0.0000	3.2196
Total	**0.0117**	**0.3548**	**0.1117**	**1.2400e-003**	**0.0345**	**4.4000e-004**	**0.0350**	**9.8900e-003**	**4.1000e-004**	**0.0103**	**0.0000**	**119.0509**	**119.0509**	**4.8800e-003**	**0.0000**	**119.1729**

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	0.0132	0.1303	0.1073	2.8000e-004		5.2700e-003	5.2700e-003		4.8400e-003	4.8400e-003	0.0000	24.5374	24.5374	7.9400e-003	0.0000	24.7358
Total	**0.0132**	**0.1303**	**0.1073**	**2.8000e-004**		**5.2700e-003**	**5.2700e-003**		**4.8400e-003**	**4.8400e-003**	**0.0000**	**24.5374**	**24.5374**	**7.9400e-003**	**0.0000**	**24.7358**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	1.3900e-003	8.9000e-004	9.8600e-003	4.0000e-005	4.1100e-003	3.0000e-005	4.1300e-003	1.0900e-003	2.0000e-005	1.1200e-003	0.0000	3.2181	3.2181	6.0000e-005	0.0000	3.2196
Total	**0.0117**	**0.3548**	**0.1117**	**1.2400e-003**	**0.0345**	**4.4000e-004**	**0.0350**	**9.8900e-003**	**4.1000e-004**	**0.0103**	**0.0000**	**119.0509**	**119.0509**	**4.8800e-003**	**0.0000**	**119.1729**

3.11 HVAC - 2022

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	5.5900e-003	0.0628	0.0284	9.0000e-005		2.6100e-003	2.6100e-003		2.4000e-003	2.4000e-003	0.0000	7.6044	7.6044	2.4600e-003	0.0000	7.6659
Total	**5.5900e-003**	**0.0628**	**0.0284**	**9.0000e-005**		**2.6100e-003**	**2.6100e-003**		**2.4000e-003**	**2.4000e-003**	**0.0000**	**7.6044**	**7.6044**	**2.4600e-003**	**0.0000**	**7.6659**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	2.7500e-003	1.8200e-003	0.0198	7.0000e-005	7.5900e-003	5.0000e-005	7.6300e-003	2.0200e-003	4.0000e-005	2.0600e-003	0.0000	6.1776	6.1776	1.3000e-004	0.0000	6.1808
Total	**0.0154**	**0.4256**	**0.1248**	**1.2100e-003**	**0.0357**	**8.9000e-004**	**0.0366**	**0.0102**	**8.5000e-004**	**0.0110**	**0.0000**	**116.1832**	**116.1832**	**5.3500e-003**	**0.0000**	**116.3169**

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	5.5900e-003	0.0628	0.0284	9.0000e-005		2.6100e-003	2.6100e-003		2.4000e-003	2.4000e-003	0.0000	7.6044	7.6044	2.4600e-003	0.0000	7.6659
Total	**5.5900e-003**	**0.0628**	**0.0284**	**9.0000e-005**		**2.6100e-003**	**2.6100e-003**		**2.4000e-003**	**2.4000e-003**	**0.0000**	**7.6044**	**7.6044**	**2.4600e-003**	**0.0000**	**7.6659**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	2.7500e-003	1.8200e-003	0.0198	7.0000e-005	7.5900e-003	5.0000e-005	7.6300e-003	2.0200e-003	4.0000e-005	2.0600e-003	0.0000	6.1776	6.1776	1.3000e-004	0.0000	6.1808
Total	**0.0154**	**0.4256**	**0.1248**	**1.2100e-003**	**0.0357**	**8.9000e-004**	**0.0366**	**0.0102**	**8.5000e-004**	**0.0110**	**0.0000**	**116.1832**	**116.1832**	**5.3500e-003**	**0.0000**	**116.3169**

3.11 HVAC - 2023

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	5.7100e-003	0.0620	0.0298	9.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	8.2380	8.2380	2.6600e-003	0.0000	8.3046
Total	**5.7100e-003**	**0.0620**	**0.0298**	**9.0000e-005**		**2.5900e-003**	**2.5900e-003**		**2.3800e-003**	**2.3800e-003**	**0.0000**	**8.2380**	**8.2380**	**2.6600e-003**	**0.0000**	**8.3046**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	2.7800e-003	1.7800e-003	0.0197	7.0000e-005	8.2200e-003	5.0000e-005	8.2700e-003	2.1900e-003	5.0000e-005	2.2300e-003	0.0000	6.4361	6.4361	1.3000e-004	0.0000	6.4392
Total	**0.0131**	**0.3557**	**0.1216**	**1.2700e-003**	**0.0387**	**4.6000e-004**	**0.0391**	**0.0110**	**4.4000e-004**	**0.0114**	**0.0000**	**122.2689**	**122.2689**	**4.9500e-003**	**0.0000**	**122.3925**

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	5.7100e-003	0.0620	0.0298	9.0000e-005		2.5900e-003	2.5900e-003		2.3800e-003	2.3800e-003	0.0000	8.2380	8.2380	2.6600e-003	0.0000	8.3046
Total	**5.7100e-003**	**0.0620**	**0.0298**	**9.0000e-005**		**2.5900e-003**	**2.5900e-003**		**2.3800e-003**	**2.3800e-003**	**0.0000**	**8.2380**	**8.2380**	**2.6600e-003**	**0.0000**	**8.3046**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	2.7800e-003	1.7800e-003	0.0197	7.0000e-005	8.2200e-003	5.0000e-005	8.2700e-003	2.1900e-003	5.0000e-005	2.2300e-003	0.0000	6.4361	6.4361	1.3000e-004	0.0000	6.4392
Total	**0.0131**	**0.3557**	**0.1216**	**1.2700e-003**	**0.0387**	**4.6000e-004**	**0.0391**	**0.0110**	**4.4000e-004**	**0.0114**	**0.0000**	**122.2689**	**122.2689**	**4.9500e-003**	**0.0000**	**122.3925**

3.12 Electrical - 2022

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	0.0206	0.1670	0.1615	4.9000e-004		6.5400e-003	6.5400e-003		6.0400e-003	6.0400e-003	0.0000	42.5727	42.5727	0.0136	0.0000	42.9118
Total	**0.0206**	**0.1670**	**0.1615**	**4.9000e-004**		**6.5400e-003**	**6.5400e-003**		**6.0400e-003**	**6.0400e-003**	**0.0000**	**42.5727**	**42.5727**	**0.0136**	**0.0000**	**42.9118**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	6.1800e-003	4.1000e-003	0.0445	1.5000e-004	0.0171	1.1000e-004	0.0172	4.5400e-003	1.0000e-004	4.6400e-003	0.0000	13.8996	13.8996	2.9000e-004	0.0000	13.9069
Total	**0.0189**	**0.4278**	**0.1495**	**1.2900e-003**	**0.0452**	**9.5000e-004**	**0.0461**	**0.0127**	**9.1000e-004**	**0.0136**	**0.0000**	**123.9052**	**123.9052**	**5.5100e-003**	**0.0000**	**124.0429**

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	0.0206	0.1670	0.1615	4.9000e-004		6.5400e-003	6.5400e-003		6.0400e-003	6.0400e-003	0.0000	42.5727	42.5727	0.0136	0.0000	42.9117
Total	**0.0206**	**0.1670**	**0.1615**	**4.9000e-004**		**6.5400e-003**	**6.5400e-003**		**6.0400e-003**	**6.0400e-003**	**0.0000**	**42.5727**	**42.5727**	**0.0136**	**0.0000**	**42.9117**

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	0.0127	0.4237	0.1050	1.1400e-003	0.0281	8.4000e-004	0.0289	8.1300e-003	8.1000e-004	8.9300e-003	0.0000	110.0056	110.0056	5.2200e-003	0.0000	110.1361
Worker	6.1800e-003	4.1000e-003	0.0445	1.5000e-004	0.0171	1.1000e-004	0.0172	4.5400e-003	1.0000e-004	4.6400e-003	0.0000	13.8996	13.8996	2.9000e-004	0.0000	13.9069
Total	**0.0189**	**0.4278**	**0.1495**	**1.2900e-003**	**0.0452**	**9.5000e-004**	**0.0461**	**0.0127**	**9.1000e-004**	**0.0136**	**0.0000**	**123.9052**	**123.9052**	**5.5100e-003**	**0.0000**	**124.0429**

3.12 Electrical - 2023

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	0.0212	0.1631	0.1725	5.3000e-004		6.2200e-003	6.2200e-003		5.7500e-003	5.7500e-003	0.0000	46.1535	46.1535	0.0147	0.0000	46.5211
Total	**0.0212**	**0.1631**	**0.1725**	**5.3000e-004**		**6.2200e-003**	**6.2200e-003**		**5.7500e-003**	**5.7500e-003**	**0.0000**	**46.1535**	**46.1535**	**0.0147**	**0.0000**	**46.5211**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	6.2600e-003	3.9900e-003	0.0444	1.6000e-004	0.0185	1.2000e-004	0.0186	4.9200e-003	1.1000e-004	5.0300e-003	0.0000	14.4812	14.4812	2.8000e-004	0.0000	14.4883
Total	**0.0166**	**0.3579**	**0.1462**	**1.3600e-003**	**0.0489**	**5.3000e-004**	**0.0495**	**0.0137**	**5.0000e-004**	**0.0142**	**0.0000**	**130.3141**	**130.3141**	**5.1000e-003**	**0.0000**	**130.4416**

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	0.0212	0.1631	0.1725	5.3000e-004		6.2200e-003	6.2200e-003		5.7500e-003	5.7500e-003	0.0000	46.1534	46.1534	0.0147	0.0000	46.5210
Total	**0.0212**	**0.1631**	**0.1725**	**5.3000e-004**		**6.2200e-003**	**6.2200e-003**		**5.7500e-003**	**5.7500e-003**	**0.0000**	**46.1534**	**46.1534**	**0.0147**	**0.0000**	**46.5210**

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	0.0103	0.3539	0.1018	1.2000e-003	0.0304	4.1000e-004	0.0308	8.8000e-003	3.9000e-004	9.1900e-003	0.0000	115.8328	115.8328	4.8200e-003	0.0000	115.9533
Worker	6.2600e-003	3.9900e-003	0.0444	1.6000e-004	0.0185	1.2000e-004	0.0186	4.9200e-003	1.1000e-004	5.0300e-003	0.0000	14.4812	14.4812	2.8000e-004	0.0000	14.4883
Total	**0.0166**	**0.3579**	**0.1462**	**1.3600e-003**	**0.0489**	**5.3000e-004**	**0.0495**	**0.0137**	**5.0000e-004**	**0.0142**	**0.0000**	**130.3141**	**130.3141**	**5.1000e-003**	**0.0000**	**130.4416**

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		
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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.580272	0.038274	0.193741	0.109917	0.015100	0.005324	0.018491	0.026678	0.002649	0.002134	0.005793	0.000896	0.000732

5.0 Energy Detail

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	252.1518	252.1518	0.0355	7.3400e-003	255.2279
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	252.1518	252.1518	0.0355	7.3400e-003	255.2279
NaturalGas 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
NaturalGas 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

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					
General Light Industry	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
Total		**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**

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					
General Light Industry	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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.69854e+006	252.1518	0.0355	7.3400e-003	255.2279
Total		**252.1518**	**0.0355**	**7.3400e-003**	**255.2279**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.69854e+006	252.1518	0.0355	7.3400e-003	255.2279
Total		**252.1518**	**0.0355**	**7.3400e-003**	**255.2279**

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	1.4466	3.0000e-005	3.0000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8400e-003	5.8400e-003	2.0000e-005	0.0000	6.2200e-003
Unmitigated	1.4466	3.0000e-005	3.0000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8400e-003	5.8400e-003	2.0000e-005	0.0000	6.2200e-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	0.1704					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2759					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8400e-003	5.8400e-003	2.0000e-005	0.0000	6.2200e-003
Total	**1.4466**	**3.0000e-005**	**3.0000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.8400e-003**	**5.8400e-003**	**2.0000e-005**	**0.0000**	**6.2200e-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	0.1704					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2759					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.8000e-004	3.0000e-005	3.0000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.8400e-003	5.8400e-003	2.0000e-005	0.0000	6.2200e-003
Total	**1.4466**	**3.0000e-005**	**3.0000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.8400e-003**	**5.8400e-003**	**2.0000e-005**	**0.0000**	**6.2200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C BIOLOGICAL RESOURCES

1.0 BIOLOGICAL RESOURCES

1.1 BIOLOGICAL COMMUNITIES

To classify the vegetation communities in the proposed Project area, Stantec used the CDFW and the CNPS standard classification system for floristically describing vegetation communities statewide; further translating to the National Vegetation Classification (NVC). The CDFW and CNPS system has been compiled in A Manual for California Vegetation (MCV), 2nd Edition (Sawyer et al. 2009), and has been accepted and adopted by state and federal agencies. The MCV defines vegetation communities by dominant and/or co-dominant species present as: 1A) alliance- a broad unit of vegetation with discernible and related characteristics; 1B) provisional alliance- a temporary vegetation community and/or candidate alliance; and/or 2) association- a basic secondary unit of classification, not as broad as an alliance, with uniform composition and conditions. The MCV classifications replace lists of vegetation types developed for the CNDDB. Furthermore, the MCV classifications relates to wildlife habitats by identifying unique characteristics; thus, distinguishing locales for threatened and endangered wildlife species. Biological vegetation communities, and associated hydrologic features, are discussed.

1.1.1 Disturbed Lands/Ruderal and Non-Native Annual Grassland Herbaceous Alliance

The reconnaissance-level survey revealed primarily disturbed/ruderal and non-native annual grassland vegetation communities within the proposed Project area. Disturbed lands/ruderal land cover types typically include disturbed lands, industrial and commercial areas, vacant lots, and remnant native habitats within the proposed Project area. This landcover type is not classified as a biological vegetation community; however, it is present throughout the proposed Project area within the existing WWTP.

Native grasslands within the proposed Project area have been degraded due to encroachment from non-native species and development, thus decreasing biodiversity and habitat suitability. Non-native annual grasslands are present to the south of the existing WWTP as well as to the north within the area designated for staging.

Observed species during baseline biological surveys include bristly ox tongue (*Helminthotheca echioides*), spiny cocklebur (*Xanthium spinosum*), yarrow (*Achillea millefolium*), milk thistle (*Silybum marianum),* coyote brush (*Baccharis pilularis*), Gooding's black willow (*Salix gooddingii*), and cattail (*Typha* sp.) and bulrush (*Schoenoplectus* sp.) within the detention basins. Ornamental planted species were also observed within the existing WWTP boundary including river redgum (*Eucalyptus camaldulensis*), fruit tree species (*Prunus* sp.), and pine species (*Pinus* sp.).

1.2 HYDROLOGIC FEATURES

Man-made hydrologic features such as the stormwater detention basin in the southern region of the proposed Project area are present, but natural features and hydrophytic vegetation associated with these features were not observed within the proposed Project area. Hydrologic features observed adjacent to the proposed Project area during reconnaissance-level biological surveys primarily included existing wastewater treatment and storage ponds, and other various man-made canals.

1.3 WILDLIFE HABITAT

High value wildlife habitats such as riparian and wetland habitats have the potential to support a variety wildlife including birds, mammals, reptiles, amphibians, and invertebrates alike. Wildlife species have been known to use these habitats during all stages of their life cycles including breeding, feeding, nesting, and/or migration. The biological vegetation communities and habitats present within the proposed Project area (actual footprint) such as previously disturbed and non-native annual grassland provide may be considered lower quality and likely provide minimal suitable habitat for both special status vegetation and wildlife species, and therefore it is not expected the proposed Project will have a significant impact on wildlife habitat within the proposed Project area.

1.3.1 Wildlife Migratory Corridors

Wildlife movement corridors have been recognized by federal agencies and the State as important habitats worthy of conservation. Wildlife movement corridors provide seasonal migration between winter and summer habitats and provide non-migrant wildlife movement within their home range food, cover, and reproduction. While data on the locations and value of wildlife movement corridors for specific species specific to the proposed Project region is lacking, the existing wastewater treatment and storage ponds do provide suitable habitat for wildlife species such as a variety of migratory bird species. However, these existing ponds are outside the Project area are not expected to be impacted by the proposed Project activities. In addition, most of the proposed Project area including the existing WWTP, is fenced and inaccessible to other migrating wildlife.

1.4 SPECIAL STATUS SPECIES

1.4.1 Study Methods

To determine whether the proposed Project would have a substantial adverse effect on any species, a desktop search and analysis and reconnaissance-level field survey were conducted. The desktop analysis was conducted prior to the reconnaissance-level biological field survey and included the proposed Project area and buffer using the following resources:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) records search of special status species and habitat observations in the proposed Project area and within a three-mile buffer (CDFW 2019);
- California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants of California for Santa Clara County between 30 and 70 meters (98−230 feet) in elevation for Mt. Madonna, Gilroy, Gilroy Hot Springs, Watsonville East, Chittenden, San Felipe, Prunedale, San Juan Bautista, and Hollister United States Geological Survey (USGS) 7.5-minute Quadrangles (Quads) (CNPS 2019a);
- United States Fish and Wildlife Service (USFWS) list of federal endangered, threatened, and candidate species in the proposed Project area and in the three miles surrounding the proposed Project area (USFWS 2019a);
- USFWS Critical Habitat data for federally threatened and endangered species (USFWS 2019b);
- Santa Clara Valley Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) (Santa Clara Valley Habitat Agency 2012);
- Calflora online database was used as a secondary tool for the purpose of assessing rare plant species that have the potential to occur within the region of the proposed Project area (Calflora 2019);

- CDFW California Wildlife Habitat Relationships (CWHR) System: Life History and Range (CDFW 2013);
- Soil data, including hydric soil assessments for wetland habitat, was assessed and mapped using the United States Department of Agriculture (USDA) Web Soil Survey (USDA 2019); and
- The National Wetland Inventory (NWI) Wetlands Mapper was used to identify potential wetlands, potential Waters of the United States (WOTUS), and associated habitats, that may occur within the Project area (USFWS 2019c).

Endangered, threatened, rare, and/or special status species that were identified during the desktop analysis of the proposed Project are compiled in Table 1 below. For the purpose of this IS/MND, special status species are defined by the following parameters:

- Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) (50 CFR 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register for proposed species);
- Species that are listed or proposed for listing by California as threatened or endangered under the California Endangered Species Act (CESA) (14 CCR 670.5);
- Plants listed as rare under the California Native Plant Protection Act of 1977 (California Fish and Game Code (FGC) 1900 et seq.);
- Plants considered by the CNPS to be Rank 1- a) “plants presumed extirpated in California and either rare or extinct elsewhere, or b) “rare, threatened, or endangered in California and elsewhere”;
- Plants considered by CNPS to be a Rank 2- a) Plants presumed extirpated in California, but common elsewhere, or b) “rare, threatened, or endangered in California and common elsewhere”;
- Plants considered by CNPS to be a Rank 3- “plants about which more information is needed” and cannot be yet be excluded from review;
- Plants considered by CNPS to be a Rank 4- “plants with limited distribution”;
- Plant and wildlife species that meet the definitions of “rare” or “endangered” under California Environmental Quality Act (CEQA) Guidelines Section 15380;
- Wildlife species designated by CDFW as Species of Special Concern (SSC); and
- Plant and wildlife species that are designated as “special” or “those of greatest conservation need” by CDFW through the CNDDB.

1.4.2 Study Results

Based on the results of the background research described within the Study Methods above, 43 special status plant and 23 wildlife species, not including nesting migratory birds and raptors, were defined as potentially occurring within the proposed Project region (e.g., in USGS 7.5-minute Quads for Mt. Madonna, Gilroy, Gilroy Hot Springs, Watsonville East, Chittenden, San Felipe, Prunedale, San Juan Bautista, and Hollister). This includes special status plant and wildlife species that are known to occur within three miles of the proposed Project area or have the potential to occur based on background research data from the CDFW CNDDB, CNPS online inventory, Calflora, USFWS list of Federal Endangered and Threatened Species, Santa Clara Valley HCP/NCCP (Table 1).

Conclusions in Table 1 regarding the habitat suitability and the potential for species occurrence were based on the background research, database searches, and local analysis habitat suitability during field surveys. For each special

status species known to occur in the proposed Project region, the “potential for occurrence” at the proposed Project area has been evaluated and is defined as follows:

- **Very Low to Nil:** The proposed Project area and/or immediate area do not support suitable habitat for a particular species. The proposed Project is outside the species known range.
- **Low:** The proposed Project area and/or immediate area provide limited habitat for a particular species.
- **Moderate:** The proposed Project area and/or immediate area provide suitable habitat for a particular species.
- **High:** The proposed Project area and/or immediate area provide ideal habitat conditions for a particular species, known populations occur in the immediate area or within the potential area of impact; and/or species was observed on site during biological surveys for the proposed Project.

Species with a moderate or high potential to occur within the proposed Project area are discussed and further analyzed for potential impacts within Section 3.4 of this IS/MND. Species identified in the database search but determined to have a very low to nil or low potential to occur within the proposed Project area are included in Table 1 below and do not warrant further evaluation. However, those species that have a very low to nil or low potential to occur within the proposed Project area but are considered high profile (e.g., California tiger salamander, California red-legged frog, and San Joaquin kit fox) are also discussed in Section 3.4 of this IS/MND.

Table 1. Special Status Plant and Wildlife Species and Their Potential to Occur in the Proposed Project Area, Santa Clara County, California.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
Plants								
alkali milk-vetch *Astragalus tener var. tener*	–	S1	1B.2	0−195 feet (0−60 meters)	Playas; valley and foothill grassland (adobe clay); vernal pools; alkaline soils	Mar−Jun	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Anderson's manzanita *Arctostaphylos andersonii*	–	S2	1B.2	195−2,495 feet (60−760 meters)	Broadleaf upland forest; chaparral; North Coast coniferous forest; openings; edges	Nov−May	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
arcuate bush-mallow *Malacothamnus arcuatus*	–	S2	1B.2	45−1,165 feet (15−355 meters)	Chaparral; cismontane woodland	Apr−Sept	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
big−scale balsamroot *Balsamorhiza macrolepis*	–	S2	1B.2	145−5,100 feet (45−1,555 meters)	Chaparral; valley and foothill grassland; cismontane woodland; serpentinite	Mar−Jun	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
California alkali grass *Puccinellia simplex*	–	S2	1B.2	5−3,050 feet (2−930 meters)	Chenopod scrub; meadows and seeps; valley and foothill grassland; vernal pools; alkaline, vernally mesic; sinks, flats, and lake margins	Mar−May	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
coast iris *Iris longipetala*	–	S3	4.2	0−1,970 feet (0−600 meters)	Coastal prairie; lower montane coniferous forest, meadows and seeps; mesic	Mar−May	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	–	S1S2	1B.1	0−755 feet (0−230 meters)	Valley and foothill grassland; alkaline	May−Nov	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
coyote ceanthous *Ceanothus ferrisiae*	FE	S1	1B.1	395–1,510 feet (120–460 meters)	Serpentinite; chaparral; coastal scrub; valley and foothill grassland	Jan–May	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Eastwood's goldenbush *Ericameria fasciculata*	–	S2	1B.1	95–900 feet (30–275 meters)	Closed-cone coniferous forest; chaparral (maritime); coastal dunes; coastal scrub; openings; sandy soils	Jul–Oct	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
fragrant fritillary *Fritillaria liliacea*	–	S2	1B.2	5–1,345 feet (3–410 meters)	Cismontane woodland; coastal prairie; coastal scrub; valley and foothill grassland; often serpentinite	Feb–Apr	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
hairless popcornflower *Plagiobothrys glaber*	–	SH	1A	45–590 feet (15–180 meters)	Meadows and seeps (alkaline); marshes and swamps (coastal salt)	Mar–May	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Hall's bush–mallow *Malacothamnus hallii*	–	S2	1B.2	30–2,495 feet (10–760 meters)	Chaparral; coastal scrub	Apr–Oct	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Hooker's manzanita *Arctostaphylos hookeri ssp. hookeri*	–	S2	1B.2	195–1,760 feet (60–536 meters)	Closed–cone coniferous forest; chaparral; cismontane woodland; coastal scrub; sandy soils	Jan–Jun	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Hoover's button–celery *Eryngium aristulatum var. hooveri*	–	S1	1B.1	5–150 feet (3–45 meters)	Vernal pools; alkaline flats	Jun–Aug	No	**Low.** Limited suitable habitat within the proposed Project area. There is a known occurrence approximately three miles southeast of the proposed Project area, though the occurrence is based on data from 1917-1933. No vernal pools or alkaline flats occur within the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
Howell's onion *Allium howellii var. howellii*	–	S3	4.3	160−7,220 feet (50−2,200 meters)	Valley and foothill grassland; clay or serpentinite	Mar−Apr	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Kellogg's horkelia *Horkelia cuneata var. sericea*	–	S1?	1B.1	30−655 feet (10−200 meters)	Closed−cone coniferous forest; chaparral (maritime); coastal dunes; coastal scrub; openings; sandy or gravelly soils	Apr−Sept	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Legenere *Legenere limosa*	–	S2	1B.1	0−2,885 feet (0−880 meters)	Vernal pools; wetlands; riparian; valley grassland	Apr−Jun	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Lewis' clarkia *Clarkia lewisii*	–	S4	4.3	95−3,920 feet (30−1,195 meters)	Broadleaf upland forest; closed−cone coniferous forest; chaparral; cismontane woodland; coastal scrub	May−Jul	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Loma Prieta hoita *Hoita strobilina*	–	S2	1B.1	95−2,820 feet (30−860 meters)	Chaparral; cismontane woodland; riparian woodland; usually serpentinite, mesic soils	May−Oct	No	**Low.** Limited suitable habitat within the proposed Project area. There is a known occurrence approximately three miles northwest of the proposed Project area. However, the occurrence is based on data from 1910-1922. The proposed Project area lacks serpentine and mesic soils and forest/chaparral communities.
Marsh Sandwort *Arenaria paludicola*	E	E, S1	1B.1	5−560 feet (3−170 meters)	Marshes and swamps (freshwater brackish); openings; sandy soils	May−Aug	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Metcalf Canyon jewelflower *Streptanthus albidus ssp. albidus*	E	S1	1B.1	145−2,625 feet (45−800 meters)	Valley and foothill grassland; serpentinite	Apr−Jul	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
Michael's rein orchid *Piperia michaelii*	–	S3	4.2	5−3,000 feet (3−915 meters)	Coastal bluff scrub; closed−cone coniferous forest; chaparral; cismontane woodland; coastal scrub; lower montane coniferous forest	Apr−Aug	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Monterey ceanothus *Ceanothus rigidus*	–	S4	4.2	5−1,805 feet (3−550 meters)	Closed−cone coniferous forest; chaparral; coastal scrub; sandy soils	Feb−Jun	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Monterey spineflower *Chorizanthe pungens var. pungens*	T	S2	1B.2	5−1,475 feet (3−450 meters	Chaparral (maritime); cismontane woodland; coastal dunes; coastal scrub; valley and foothill grassland; sandy soils	Apr−Aug	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
most beautiful jewel flower *Streptanthus albidus ssp. peramoenus*	–	S2	1B.2	310–3,280 feet (95−1000 meters)	Chaparral; cismontane woodland; Valley and foothill grassland; serpentinite	Mar−Oct	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Mount Hamilton thistle *Cirsium fontinale var. campylon*	–	S2	1B.2	330–2,920 feet (100−890 meters)	Serpentinite seeps; chaparral; cismontane woodland; Valley and foothill grassland	Feb−Oct	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Pajaro manzanita *Arctostaphylos pajaroensis*	–	S1	1B.1	95−2,495 feet (30−760 meters)	Chaparral; sandy soils	Dec−Mar	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
pine rose *Rosa pinetorum*	–	S2	1B.2	5−3,100 feet (2−945 meters)	Closed−cone coniferous forest; cismontane woodland	May−Jul	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
pink creamsacs *Castilleja rubicundula var. rubicundula*	–	S2	1B.2	65–2,985 feet (20–910 meters)	Chaparral (openings); cismontane woodland; meadows and seeps; valley and foothill grassland; serpentinite	Apr–Jun	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
prostrate vernal pool navarretia *Navarretia prostrata*	–	S2	1B.1	5–3,970 feet (3–1,210 meters)	Coastal scrub; meadows and seeps; valley and foothill grassland (alkaline); vernal pools; mesic soils	Apr–Jul	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
robust spineflower *Chorizanthe robusta var. robusta*	E	S1	1B.1	5–985 feet (3–300 meters)	Chaparral (maritime); cismontane woodland (openings); coastal dunes; coastal scrub; sandy or gravelly soils	Apr–Sept	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
saline clover *Trifolium hydrophilum*	–	S2	1B.2	0–985 feet (0–300 meters)	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools	Apr–Jun	No	**Moderate.** Suitable habitat within the proposed Project area. There is a known occurrence from 1995 approximately 2.5 miles southeast of the proposed Project area.
San Francisco popcornflower *Plagiobothrys diffusus*	–	E, S1	1B.1	195–1,180 feet (60–360 meters)	Coastal prairie; valley and foothill grassland	Mar–Jun	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
San Joaquin spearscale *Extriplex joaquinana*	–	S2	1B.2	0–2,740 feet (0–835 meters)	Chenopod scrub; meadows and seeps; playas; valley and foothill grassland; alkaline	Apr–Oct	No	**Low.** Limited suitable habitat within the proposed Project area. There are known occurrences from 1896 approximately 1.5 miles south and 2.5 miles northwest of the proposed Project area. However, no new known occurrences are within the proposed Project area and the development over the past century has significantly altered the habitat in the area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
Santa Clara Valley dudleya *Dudleya abramsii ssp. setchellii*	E	S2	1B.1	195−1,495 feet (50−455 meters)	Cismontane woodland; valley and foothill grassland; serpentinite, rocky soils	Apr−Oct	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Santa Cruz tarplant *Holocarpha macradenia*	T	E, S1	1B.1	30−720 feet (10−220 meters)	Coastal prairie; coastal scrub; valley and foothill grassland; often clay, sandy soils	Jun−Oct	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
seaside bird's−beak *Cordylanthus rigidus ssp. littoralis*	–	E, S2	1B.1	0−1,690 feet (0−515 feet)	Closed-cone coniferous forest; chaparral (maritime); cismontane woodland; coastal dunes; coastal scrub; often disturbed sites; sandy soils	Apr−Oct	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
small−leaved lomatium *Lomatium parvifolium*	–	S4	4.2	65−2,295 feet (20−700 meters)	Closed-cone coniferous forest; chaparral; coastal scrub; riparian woodland; serpentinite	Jan−Jun	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
smooth lessingia *Lessingia micradenia var. glabrata*	–	S2	1B.2	390–1,380 feet (120−420 meters)	Serpentine soils, often roadsides. Chaparral; cismontane woodland; and Valley and foothill grassland	Apr−Jun	No	**Low.** Limited suitable habitat within the proposed Project area. There is a known occurrence approximately 2.5 miles northwest of the proposed Project area from 1996. The proposed Project area lacks serpentine soils and chaparral communities.
Tiburon Indian paintbrush *Castilleja affinis ssp. neglecta*	E	T, S1S2	1B.2	195–1.315 feet (60−400 meters)	Valley and foothill grassland; serpentinite	Apr−Jun	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
two−fork clover *Trifolium amoenum*	E	S1	1B.1	15−1,360 feet (5−415 meters)	Coastal bluff scrub; valley and foothill grassland; serpentinite	Apr−Jun	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
vernal barley *Hordeum intercedens*	–	S3, S4	3.2	15−3,280 feet (5−1,000 meters)	Coastal dunes; coastal scrub; valley and foothill grassland; saline flats and depressions; vernal pools	Mar−Jun	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
woolly−headed lessingia *Lessingia hololeuca*	–	S2S3	3	45−1,000 feet (15−305 meters)	Broadleaf upland forest; coastal scrub; lower montane coniferous forest; valley and foothill grassland; clay, serpentinite	Jun−Oct	No	**Low.** Limited suitable habitat within the proposed Project area. There is a known occurrence from 1946 approximately 3 miles northwest of the proposed Project area.
Yadon's rein orchid *Piperia yadonii*	E	S1	1B.1	30−2,475 feet (10−755 meters)	Coastal bluff scrub; closed−cone coniferous forest; chaparral (maritime); sandy soils	Feb−Aug	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Invertebrates								
Bay checkerspot Butterfly *Euphydryas editha bayensis*	T	S1	N/A	The vicinity of San Francisco Bay.	Coastal dunes; valley and foothill grassland; ultramafic and serpentine soils. *Plantago erecta* is the primary host plant; *Orthocarpus densiflorus* and *Castilleja exserta* spp. *exerta* are secondary host plants.	Feb−May (adults) winter (larvae and pupae)	No	**Very low to nil.** Limited to no suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
vernal pool fairy shrimp *Branchinecta lynchi*	T	S3	N/A	Scattered throughout Central Valley, Coast Range, and Southern California.	Vernal pools.	Dec−May	No	**Very low to nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Fish								

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
Delta smelt *Hypomesus transpacificus*	T	E, S1	N/A	From Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, Yolo Counties.	Estuaries, river channels, tidally influenced backwaters. Shallow, fresh or slightly brackish water upstream of mixing zone (spawning).	Jan−Jun (spawning)	No	**Nil.** No suitable habitat within the proposed Project area. The Project area is out of the species range, and there are no known occurrences within three miles of the proposed Project area.
Reptiles and Amphibians								
Blunt−nosed leopard lizard *Gambelia silus*	E	E, FP	N/A	San Joaquin Valley and adjacent foothills, Carrizo Plain, and Cuyama Valley.	Inhabits sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief.	Spring−Fall	No	**Nil.** No suitable habitat within the proposed Project area. The Project area is out of the species range, and there are no known occurrences within three miles of the proposed Project area.
California red−legged frog *Rana draytonii*	T	SSC, S2S3	N/A	Coastal Range of California, foothill range of Sierra Nevada mountains.	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Jan−Sept	No	**Low.** Limited suitable habitat within the proposed Project area. There are three known occurrences from 1997 of CRLF in ponds approximately three miles southwest of the proposed Project area, as well as one known occurrence from 2017 within the same foothills.
California tiger salamander *Ambystoma californiense*	T	T, WL, S2S3	N/A	Central Valley and additional isolated populations in Yolo to Sacramento and Sonoma to Santa Barbara Counties. 9−3,500 feet (3−1,055 meters).	Upland grassland, oak savanna, edges of mixed woodland and coniferous forest with vernal pools and ephemeral or perennial ponds for breeding.	Sept−Mar (adults) Mar−May (larvae)	No	**Low.** Limited suitable habitat within the proposed Project area. There are known occurrences confirmed in 1993−2017 within one to three miles of the proposed Project area. Final critical habitat for CTS is located approximately 2.5 miles east of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
foothill yellow-legged frog – West/Central Coast Clade *Rana boylii*	–	E	N/A	Found from near sea levels to 6,365 feet (1,940 meters) in California, mostly distributed throughout the foothill portions of most drainages from the Oregon border to the San Gabriel River.	Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats.	Year-round	No	**Nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
San Francisco gartersnake *Thamnophis sirtalis tetrataenia*	E	E, FP	N/A	Current unknown; Historically, San Francisco County line south along base of the Santa Cruz Mountains, and along the coast south to Año Nuevo Point, San Mateo County, and Waddell Creek, Santa Cruz County.	Densely vegetated freshwater ponds (permanent, temporary, seasonal) near open areas to bask, feed, and find cover in rodent burrows.	Inland: year-round; coastal: fall−spring	No	**Very low to nil.** Limited to no suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
Santa Cruz long−toed salamander *Ambystoma macrodactylum croceum*	E	E, FP, S1S2	N/A	Santa Cruz and Monterey counties, near sea level.	Freshwater marshes, marshes and swamps, wetlands, and wet meadows with shallow water and hydrophytic vegetation, as well as nearby mammal burrows.	September−March (adults) April−June (larvae)	No	**Very low to nil.** Limited to no suitable habitat within the proposed Project area. The Project area is out of the species range, and there are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
western pond turtle *Actinemys marmorata*	–	SSC, S3	N/A	West of the Sierra and Cascade Mountains and desert regions. 0−4,690 feet (0−1,430 meters)	Slow moving streams, marshes, wetlands, and ponds, at least 1.6 feet deep with overhanging vegetation and rock outcrops and associated upland habitat (grassy open fields) up to 0.3 miles (0.5 km) from water.	Year-round, Breeding (Mar−Aug)	No	**Low.** Limited suitable habitat within the proposed Project area. There is a known occurrence from 2000 in an artificial pond approximately three miles south of the proposed Project area.
Birds								
bald eagle *Haliaeetus leucocephalus*	D	E, FP, S3	N/A	Breeds in northern California, Sierra Nevada mountains and foothills, central coast range, inland southern California, and Santa Catalina Island. Winters throughout California except in arid southeastern areas.	Foraging areas include rivers, reservoirs, lakes, estuaries, and coastal marine ecosystems. Nests in large, old−growth, or dominant trees near foraging habitat.	Year-round	No	**Very low to nil.** Limited to no suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
burrowing owl *Athene cunicularia*	–	SCC, S3	N/A	Year−round in southeastern California and the Central Valley. Arid coastal and foothill areas in winter and northeastern California in the summer.	Open, dry annual or perennial grasslands, deserts, and scrublands with by low−growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Year-round	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
California condor *Gymnogyps californianus*	E	E, FP, S1	N/A	Southern California north of the Los Angeles basin, central California coast, Grand Canyon in Arizona, and mountains of Baja California.	Coastal scrub and woodland, oak woodland, valley and foothill grassland. Nests in cavities in rocky outcrops, cliffs, or redwood snags.	Year-round	No	**Very low to nil.** Limited to no suitable habitat within the proposed Project area. The Project area is out of the species range, and there are no known occurrences within three miles of the proposed Project area.
golden eagle *Aquila chrysaetos*	–	FP, WL, S3	N/A	Throughout California, except center of Central Valley. 0−11,500 feet (0−3,833 meters)	Rolling foothills, mountain areas, sage−juniper flats, and desert. Nests in cliff−walled canyons and large trees in open areas.	Year-round	No	**Low.** Limited suitable foraging habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
least Bell's vireo *Vireo bellii pusillus*	E	E, SSC, S2	N/A	Summer resident of Southern California, below 2000 ft.	Riparian forest, scrub, and woodland, near water or dry rivers. Nests in openings in willow, coyotebrush, and mesquite.	April−July	No	**Low.** Limited suitable habitat within the proposed Project area. The Project area is out of the species range; however, there is a known occurrence from 2001 of the species in the riparian area along Llagas Creek, within approximately one mile to the east of the proposed Project area.
long−billed curlew *Numenius americanus*	–	WL, S2	N/A	Northeastern California, Central and Imperial Valleys, California coastline.	Estuaries, upland grasslands, wet meadows, croplands and pastures.	Winter	No	**Low.** Limited suitable habitat within the proposed Project area. The Project area is on the edge of the species known range, and there are no known occurrences within three miles of the proposed Project area.
marbled murrelet *Brachyramphus marmoratus*	T	E	N/A	The Pacific Coast of North America.	Nests in moist coastal coniferous forests, usually within a few miles of the ocean mainly in old-growth forests. Feed offshore.	Year-round	No	**Nil.** No suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
northern harrier *Circus hudsonius*	–	SSC	N/A	Throughout North America.	Variety of habitats; often found foraging in wetlands and grasslands with low, thick vegetation. Breed in marshes, meadows and/or dry upland habitats.	Year-round	Yes	**High.** Suitable habitat within the proposed Project area and species observed foraging within the proposed Project area.
southwestern willow flycatcher *Empidonax traillii extimus*	–	E, S1S2	N/A	United States, through Mexico south into the northern region of South America	Nests in riparian areas, often marsh areas with shrubs and standing or running water	Breeding	No	**Very low to nil.** Limited to no suitable habitat within the proposed Project area. The Project area is out of the species range and there are no known occurrences within three miles of the proposed Project area.
tricolored blackbird *Agelaius tricolor*	–	T, SSC, S1S2	N/A	Highly colonial species, most numerous in Central Valley and Coastal Range.	Freshwater marshes, swamps, wetlands. Requires nearby open water.	Year-round	No	**Low.** Limited suitable habitat within the proposed Project area. There are no known occurrences within three miles of the proposed Project area.
nesting raptors and other migratory birds	MBTA	FGC	N/A	Migrants and resident species	Tree, shrub, ground, and riparian vegetation (nesting).	Breeding (Feb 15–Aug 31)	No	**Moderate:** Suitable habitat within the proposed Project area.
Mammals								
hoary bat *Lasiurus cinereus*	–	S4	N/A	Throughout California. 0−13,200 feet (0–4,125 meters)	Dense foliage, medium to large trees; open habitats or habitat mosaics with access to trees for cover.	Year-round; depends on location and temperature	No	**Low.** Limited suitable habitat within the proposed Project area. There are two known occurrences from 1937−1938 of the species, approximately three miles to the northwest and northeast of the proposed Project area.

Common Name *Scientific Name*	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Obs within Project Area	Potential for Occurrence Within the Project Area
	Fed	State	CNPS					
pallid bat *Antrozous pallidus*	–	SSC, S3	N/A	Shasta to Kern Counties to northern Mendocino County. Not in the high Sierra Nevada. Below 6,562 feet (2,000 meters).	Grasslands, shrublands, woodlands, and mixed conifer forests. Water and suitable roosting habitat must be close by. Roosts in cliff fissures, abandoned buildings, and under bridges.	Year-round in most of its range	No	**Low.** Limited suitable habitat within the proposed Project area. There is a known occurrence from 1938 of the species, approximately three miles to the northwest of the proposed Project area.
San Joaquin kit fox *Vulpes macrotis mutica*	E	T, S2	N/A	San Joaquin Valley floor and surrounding foothills of the coastal ranges, Sierra Nevada, and Tehachapi mountains.	Inhabits annual grasslands or grassy open stages with scattered shrubby vegetation.	Year-round	No	**Low.** Limited suitable habitat within the proposed Project area. The Project area is out of the species range and there are no known occurrences within three miles of the proposed Project area.

Federal (Fed)- U.S. Fish and Wildlife Service (USFWS)
E = Listed as endangered under FESA
T = Listed as threatened under FESA
MBTA = Migratory Bird Treaty Act
– = No listing.

State- California Department Fish and Wildlife (CDFW)
E = Listed as endangered under CESA
T = Listed as threatened under CESA
CT = Candidate to be listed as threatened under CESA
S1 = Critically Imperiled
S2 = Imperiled
S3 = Vulnerable
S4 = Apparently secure
FGC = California Fish and Game Code
SSC = Species of Special Concern
WL = Watch List
– = No listing.

California Native Plant Society (CNPS)
1A = Presumed extirpated in California and either rare or extinct elsewhere
1B = Rare, threatened, or endangered in California and elsewhere
3 = More information is needed; Review List
4 = Limited distribution; Watch List
0.1−Seriously threatened in California
0.2−Moderately threatened in California
0.3−Not very threatened in California

References: Black et al. 2005, Calflora 2019, CDFW 2013, CDFW 2019a and 2019b, CNPS 2019a and 2019b, Cornell 2019, Fuller and Neilson 2020, Gogol−Prokurat 2016a, 2016b, 2016c, and 2019, Hickman 2017, Santa Clara Valley Habitat Agency 2012, Santos 2015, Shuford et al. 2008, USEPA 2010a and 2010b, USFWS 2005, USFWS 2018, USFWS 2019a, 2019b, and 2019c, USFWS and CDFW 2012.

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