INITIAL STUDY/PROPOSED MITIGATED NEGATIVE DECLARATION

REGIONAL SAN BIOGENERATION FACILITY PROJECT

Prepared for

Sacramento Regional County
Sanitation District

May 2021

PROPOSED MITIGATED NEGATIVE DECLARATION

Project: Regional San BioGeneration Facility Project

Lead Agency: Sacramento Regional County Sanitation District

PROJECT DESCRIPTION

Sacramento Regional County Sanitation District (Regional San) is proposing to construct and operate the Regional San BioGeneration Facility Project (proposed project) within the existing SRWTP site. The proposed project would beneficially use biogas produced by the SRWTP's anaerobic digesters to generate heat and power. The site is bordered by Digesters Way/Oregon Trail to the south and Septage Way to the north. The staging area would be immediately east of the project site.

Regional San has been in partnership with Sacramento Municipal Utility District (SMUD) through the Central Valley Financing Authority for nearly 30 years. Under this partnership, Regional San currently delivers renewable biogas generated by the SRWTP wastewater treatment process to SMUD in exchange for reliable utility and backup power, steam for digester heating, and revenue according to the terms of the existing Commodity Agreement. With the Commodity Agreement expiring in 2025, Regional San is pursuing the proposed project as an alternative use for its biogas.

The proposed project would include construction and operation of a new biogeneration engine system to use biogas on site to produce electricity and heat for the SRWTP. The proposed project would include up to six internal combustion engine generators, engine exhaust treatment (oxidation catalyst and selective catalytic reduction), a biogas conditioning system (as part of the gas management system), a hot water boiler (standby), and a new building. The proposed project would be designed and constructed via a fixed-price design-build method of project delivery. Regional San's goal in using this method is to provide a shorter elapsed time from project initiation to project operation; provide overall cost savings; provide a more efficient construction process; and promote higher quality and more innovative design solutions.

The project would disturb up to 5.6 acres during construction and staging. Construction of the project would last between 18 and 24 months and is anticipated to begin in spring of 2022. The project is expected to become operational in spring 2024. Operation of the project would not change the operating hours at the existing SRWTP. Operation of the project would require up to 10 additional full-time employees to operate and maintain the new facilities.

FINDINGS

An Initial Study has been prepared to assess the project's potential effects on the environment and the significance of those effects. Based on the Initial Study, it has been determined that the project would not have any significant effects on the environment once mitigation measures are implemented. As a result, a Mitigated Negative Declaration (MND) is being considered for adoption by Regional San for the proposed project. This conclusion is supported by the following findings:

1. The project would have no impact related to agriculture and forest resources, greenhouse gas emissions, mineral resources, population and housing, public services, and recreation.
2. The project would have a less-than-significant impact on aesthetics, air quality, energy, hydrology and water quality, land use and planning, noise, and utilities and service systems.
3. Mitigation measures incorporated into the project will clearly reduce potentially significant impacts to less-than-significant levels related to biological resources, cultural resources, geology and soils, hazards and hazardous materials, transportation, tribal cultural resources, and wildfire.

Following are the mitigation measures that have been committed to and shall be implemented by Regional San or its contractor to avoid or minimize environmental impacts. Implementation of these mitigation measures will reduce the potentially significant environmental impacts of the project to a less-than-significant level. Implementation of these mitigation measures shall be subject to monitoring in accordance with a Mitigation Monitoring and Reporting Program adopted along with this Proposed MND. See Chapter 3, "Environmental Checklist," of the IS for the full mitigation measure text.

Biological Resources

- Mitigation Measure 3.4-1: Avoid Disturbance to Swainson's Hawk and Other Raptor Nests
- Mitigation Measure 3.4-2: Avoid Disturbance of Burrowing Owl Nests
- Mitigation Measure 3.4-3: Avoid Disturbance to Tricolored Blackbird, or Other Special-Status Birds

Cultural Resources

- Mitigation Measure 3.5-1: Unanticipated Discoveries of Archaeological Resources

Geology and Soils

- Mitigation Measure 3.7-1: Conduct Paleontological Worker Awareness Training Prior to Ground-Disturbing Activities

Hazards and Hazardous Materials

- Mitigation Measure 3.9-1: Discovery of Unknown Contaminated Soils During Construction
- Mitigation Measure 3.9-2: Traffic Management Plan

Transportation

- Mitigation Measure 3.9-2: Traffic Management Plan

Tribal Cultural Resources

- Mitigation Measure 3.18-1: Develop and implement a Worker Environmental Awareness Program.
- Mitigation Measure 3.18-2: Unanticipated Discoveries of Potential Tribal Cultural Resources

Wildfire

- Mitigation Measure 3.9-2: Traffic Management Plan

I hereby approve this project:

_____

Christoph Dobson/Director of Policy and Planning
Sacramento Regional County Sanitation District
(to be signed upon approval of the project after the public review period is complete)

INITIAL STUDY/PROPOSED MITIGATED NEGATIVE DECLARATION

Regional San BioGeneration Facility Project

Prepared for:

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LIST OF ABBREVIATIONS

ADWF	average dry weather flow
AMM	Avoidance and Minimization Measures
ANSI	American National Standards Institute
BACT	Best Available Control Technology
BMP	Best Management Practices
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCGT	combined cycle gas turbine
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CHP Calculator	Combined Heat and Power Energy and Emissions Savings Calculator
CHP	combined heat and power
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNG	compressed natural gas
CO	carbon monoxide
CO_2	carbon dioxide
Cogen	cogeneration
CPP	Cosumnes Power Plant
CVFA	Central Valley Financing Authority
dB	decibels
dbh	diameter at breast height
diesel PM	Particulate matter emitted from diesel construction equipment
DOC	California Department of Conservation
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report

EPA	U.S. Environmental Protection Agency
FHSZ	fire hazard severity zone
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
HMP	hazardous materials plan
I-5	Interstate 5
in/sec	inches per second
IPaC	Information for Planning and Consultation
IS	initial study
IS/Proposed MND	Initial Study/Proposed Mitigated Negative Declaration
lb/day	pounds per day
LDL	Larson Davis Laboratories
L_{dn}	Day-Night Noise Level
L_{eq}	Equivalent Continuous Sound Level
L_{max}	Maximum Noise Level
L_{min}	Minimum Noise Level
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MW	megawatts
MWh	megawatt hours
NAAQS	national ambient air quality standards
NCIC	North Central Information Center
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
PM_{10}	respirable particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter
ppm	parts per million
PPV	peak particle velocity
project	Regional San BioGeneration Facility Project
Regional San	Sacramento Regional County Sanitation District
RFP	Request for Proposal
RFQ	Request for Qualifications
RMS	root-mean-square

ROG	reactive organic gases
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
SAFCA	Sacramento Area Flood Control Agency
SB	Senate Bill
SLCP	short-lived climate pollutant
SLF	Sacred Lands File
SLM	sound level meter
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SPL	sound pressure level
SR	State Route
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	South Sacramento Habitat Conservation Plan
SVAB	Sacramento Valley Air Basin
SWPPP	stormwater pollution prevention plan
TAC	toxic air contaminants
T-BACT	Toxic Best Available Control Technology
TMP	traffic management plan
UAIC	United Auburn Indian Community
UCMP	University of California Berkeley Museum of Paleontology
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VdB	decibel notation

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1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study/Proposed Mitigated Negative Declaration (IS/Proposed MND) has been prepared by the Sacramento Regional County Sanitation District (Regional San) to evaluate potential environmental effects resulting from Regional San's BioGeneration Facility Project (project). Chapter 2 "Project Description," presents the detailed project information.

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.). An initial study is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines Section 15063[a]), and thus to determine the appropriate environmental document. In accordance with State CEQA Guidelines Section 15070, a "public agency shall prepare…a proposed negative declaration or mitigated negative declaration…when: (a) The Initial Study shows that there is no substantial evidence…that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level." In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the project would not have a significant effect on the environment and, therefore, does not require the preparation of an Environmental Impact Report (EIR). By contrast, an EIR is required when the project may have a significant environmental impact that cannot clearly be reduced to a less-than-significant effect by adoption of mitigation or by revisions in the project design.

1.2 PURPOSE OF THIS DOCUMENT

As described in the environmental checklist (Chapter 3), the project would not result in any unmitigated significant environmental impacts. Therefore, an IS/Proposed MND is the appropriate document for compliance with the requirements of CEQA. This IS/Proposed MND conforms to these requirements and to the content requirements of State CEQA Guidelines Section 15071.

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the project. Regional San is the CEQA lead agency because they are responsible for constructing and operating the BioGeneration Facility Project. The purpose of this document is to present to decision-makers and the public information about the environmental consequences of implementing the project. This disclosure document is being made available to the public for review and comment at: https://www.regionalsan.com/biogas-recycling. This IS/Proposed MND will be available for a 30-day public review period from May 5, 2021 to June 3, 2021.

Comments should be addressed to:

Steve Nebozuk, Senior Civil Engineer
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

E-mail comments may be addressed to: nebozuks@sacsewer.com

If you have questions regarding the IS/Proposed MND, please call Steve Nebozuk at: (916) 876-6118. If you wish to send written comments (including via e-mail), they must be postmarked by June 3, 2021.

After comments are received from the public and reviewing agencies, Regional San may (1) adopt the MND and approve the project; (2) undertake additional environmental studies; or (3) abandon the project. If the project is approved and funded, Regional San may proceed with the project.

1.3 SUMMARY OF FINDINGS

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the project.

Based on the issues evaluated in that chapter, it was determined that the project would have either no impact or a less-than-significant impact related to most of the issue areas identified in the Environmental Checklist, included as Appendix G of the State CEQA Guidelines. These include the following issue areas:

- Aesthetics
- Air Quality
- Agriculture and Forest Resources
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Public Services
- Population and Housing
- Recreation
- Utilities and Service Systems

Potentially significant impacts were identified for biological resources, cultural resources, geology and soils, hazards and hazardous materials, transportation, tribal cultural resources, and wildfire; however, mitigation measures included in the IS/Proposed MND would reduce all impacts to a less-than-significant level.

1.4 DOCUMENT ORGANIZATION

This IS/Proposed MND is organized as follows:

Chapter 1: Introduction. This chapter provides an introduction to the environmental review process. It describes the purpose and organization of this document as well as presents a summary of findings.

Chapter 2: Project Description. This chapter describes the purpose of and need for the proposed project, identifies project objectives, and provides a detailed description of the project.

Chapter 3: Environmental Checklist. This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if project actions would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. If any impacts were determined to be potentially significant, an EIR would be required. For this project, however, none of the impacts were determined to be significant after implementation of mitigation measures.

Chapter 4: References. This chapter lists the references used in preparation of this IS/Proposed MND.

Chapter 5: List of Preparers. This chapter identifies report preparers.

2 PROJECT DESCRIPTION

2.1 INTRODUCTION

Regional San is proposing to construct and operate a biogas cogeneration facility (proposed project) within the existing Sacramento Regional Wastewater Treatment Plant (SRWTP) site. The proposed project would beneficially use biogas produced by the SRWTP's anaerobic digesters to generate heat and power.

2.2 PROJECT BACKGROUND

Regional San owns and operates a regional wastewater conveyance system and the SRWTP, and provides wastewater conveyance and treatment services to residential, industrial, and commercial customers throughout unincorporated Sacramento County; the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, Sacramento, and West Sacramento; and the communities of Courtland and Walnut Grove (Figure 2-1). The wastewater treatment process generates a variety of solids including primary sludge, grit, screenings (i.e., large debris), return activated sludge, and waste activated sludge. Regional San feeds blended primary sludge and thickened waste activated sludge to six primary anaerobic digesters and two blending digesters. Anaerobic digestion produces biogas, which is a methane-rich, renewable byproduct of the solids digestion process that can be used as a renewable fuel.

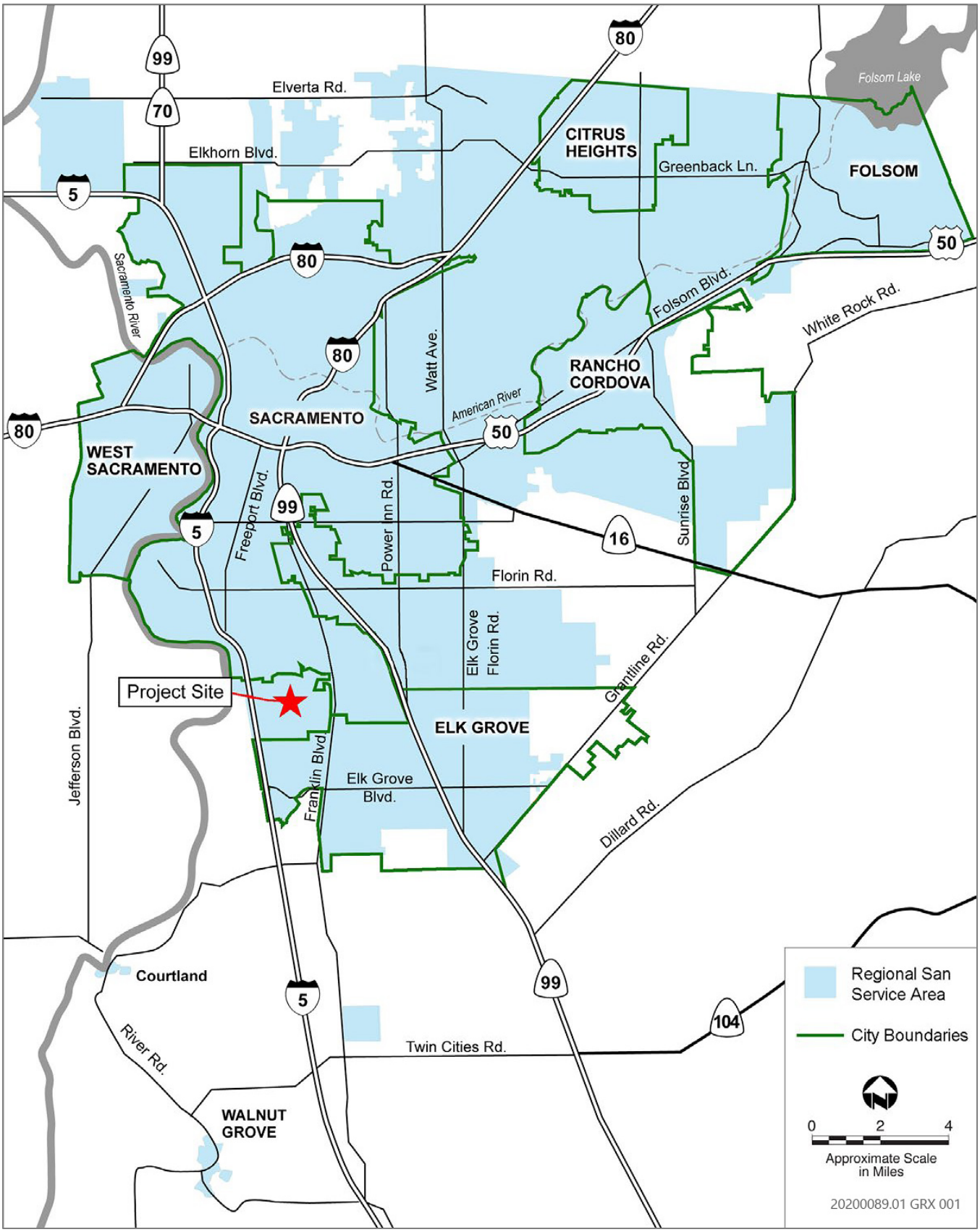
Regional San has been in partnership with Sacramento Municipal Utility District (SMUD) through the Central Valley Financing Authority (CVFA) for nearly 30 years. Under this partnership, Regional San delivers renewable biogas generated by the SRWTP wastewater treatment process to SMUD in exchange for reliable utility and backup power, steam for digester heating, and revenue according to the terms of the existing Commodity Agreement. The original driver for the agreement was the co-location of SMUD's Carson Cogeneration (Cogen) Plant on the SRWTP site, where biogas helped fuel the Cogen plant, and steam from the Cogen plant could be returned for digester heating. (More detail is provided below.) With the Commodity Agreement expiring in 2025, Regional San is pursuing the proposed project described below as an alternative use for its biogas.

2.3 PROJECT LOCATION

The SRWTP is located at 8521 Laguna Station Road in Elk Grove and is surrounded by approximately 2,150 acres of open space owned by Regional San and known as the Bufferlands (Figure 2-1). The entire SRWTP site and Bufferlands are located north of Laguna Boulevard and lie predominantly within the unincorporated area of Sacramento County, between Franklin Boulevard and I-5. The project site would be located within the SRWTP site in a previously disturbed area north of the existing digesters. The site is bordered by Digesters Way/Oregon Trail to the south and Septage Way to the north. The staging area would be immediately east of the project site (Figure 2-2).

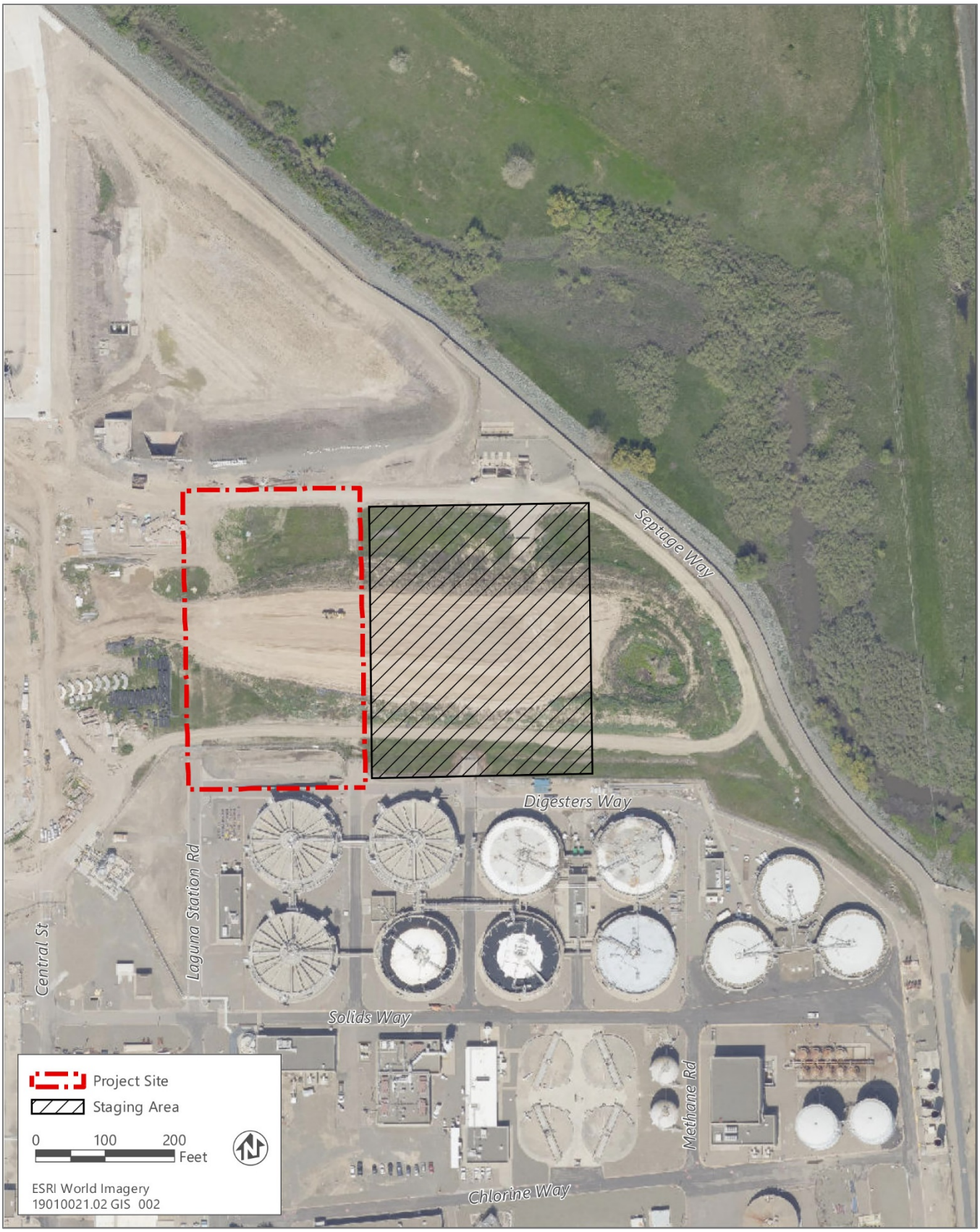
2.4 EXISTING FACILITIES

Wastewater is collected from customers' homes and businesses via sewer collection pipes operated by one of four local sewer agencies. These pipes connect to a network of 169 miles of interceptor pipelines, which convey the wastewater to the SRWTP. The SRWTP currently provides secondary treatment of wastewater through operation of a combined system consisting of bar screens, grit tanks, primary tanks, carbonaceous oxidation tanks using high purity oxygen, secondary sedimentation tanks, disinfection using sodium hypochlorite, and de-chlorination using sodium bisulfite. The SRWTP is permitted to discharge an average dry weather flow of 181 million gallons per day (mgd) to the Sacramento River. Actual discharges vary seasonally and range from 120 to 400 mgd, with higher wet weather flows occurring in rainy periods (RMC 2015). The SRWTP is undergoing a major upgrade to its treatment processes and will produce tertiary treated wastewater when completed by 2023. The current average biogas production rate is approximately 1,800 standard cubic feet per minute (Regional San 2020).



Source: adapted by Ascent Environmental in 2020

Figure 2-1 Service Areas



Source: adapted by Ascent Environmental in 2020

Figure 2-2 Project Site and Staging Area

In addition to the facilities associated with the wastewater treatment process at the SRWTP, auxiliary systems are also in place and include: the Carson Cogen Plant, Biogas Enhancement Facility, odor control systems, corrective action program, water reclamation facility, fire protection system, and electricity and energy. Regional San's biogas is currently conveyed and treated in the existing Gas Management System. A Gas Management System Improvements project is currently under construction and will improve the reliability and control of the existing flares and waste gas burners. The existing Gas Management System compressors do not have sufficient capacity to deliver full biogas production to SMUD. A single compressor cannot deliver the required flow, and two compressors operating in parallel do not have sufficient capacity without causing a surge. As a result, a portion of the biogas is currently flared.

Treated biogas resulting from digestion of solids at the SRWTP is captured and diverted to the Carson Cogen Plant or is injected into a SMUD-owned, natural gas utility pipeline that delivers the combined gas to the Cosumnes Power Plant (CPP) located at Rancho Seco, approximately 20 miles southeast of the SRWTP. Since 1995, the Cogen Plant has used SRWTP biogas in a duct burner that, along with natural gas turbines, generates electricity. Waste heat from the gas turbine creates steam for use in a steam turbine to generate electricity. Together, two generators generate up to 100 megawatts (MW) of power for local residential and industrial use. Power from the Cogen Plant is typically delivered to the local power grid, but it can also be sent directly to the SRWTP. In addition, the Cogen Plant serves as an emergency backup power supply system to keep the SRWTP in operation if the local power grid were to fail.

Beginning in fall 2012, instead of using biogas only at the Carson Cogen Plant, SMUD began to compress the biogas for use at CPP. The CPP uses the combination of natural gas and SRWTP biogas as fuel for turbines and produces up to 600 MW of power. Presently, the SRWTP biogas can be used at either the Carson Cogen Plant or the CPP.

Regional San also operates a 40,000-gallon-per-day fats, oil, and grease receiving and handling Biogas Enhancement Facility. The organic waste received at this facility is screened and pumped to the digesters where it is co-digested with other wastewater solids. The additional biogas generation is used by SMUD to generate renewable energy at the CPP or the Carson Cogen Plant. In addition, the facility provides a new local disposal location option for commercial haulers of fats, oil, and grease.

In addition to the Carson Cogen Plant, electrical power to the SRWTP is supplied by the SMUD electrical grid. SMUD operates the nearby Pocket and Elk Grove electrical substations, complexes of transformers, and switches located to the north and south, respectively. These two major substations are supplied with 230,000 volts (230 kilovolts) from the larger electrical grid and, along with the Carson Cogen Plant, supply electricity to the SRWTP. On average, the SRWTP's average electricity demand is 12 MW; however, the plant demand will increase to more than 30 MW by 2025 due to treatment process enhancements.

2.5 PROJECT OBJECTIVES

The goal of the proposed project is to design and construct a biogas cogeneration facility before the Commodity Agreement expiration in October 2025 that meets the following objectives:

- make the best use of biogas (highest economic and environmental value);
- minimize operations and maintenance costs;
- integrate into the existing SRWTP facilities; and
- protect the environment through responsible stewardship of natural resources.

2.6 DESIGN-BUILD METHOD

The proposed project would be designed and constructed via a fixed-price design-build method of project delivery. Regional San's goal in using this method is to provide a shorter elapsed time from project initiation to project operation; provide overall cost savings; provide a more efficient construction process; and promote higher quality and more innovative design solutions. With the design-build method, performance criteria are established for the facility's design characteristics, such as:

- minimum efficiency, uptime and kilowatt-hour generation performance requirements;
- maximum height and square footage; and
- minimum parameters to meet maintenance and functionality requirements.

Many of the project characteristics provided in the following project description would be included in the performance criteria. Based on the performance criteria defined for the project, Regional San would issue a Request for Qualifications (RFQ) and begin a competitive selection process for design-build teams. Regional San would review submittals from prospective teams and shortlist teams to proceed to the Request for Proposal (RFP) phase.

Regional San would issue an RFP to the short-listed design-build teams and accept detailed proposals from each. The proposals would be reviewed and scored based on best value; project features, functions, and life-cycle costs; team experience; and past performance. Selection of the winning team would be based on its response to the RFP and compliance with the performance criteria. The winning proposal would become the defining contractual document that identifies project quality, scope, cost, and schedule. Final project design and construction would be completed by the selected team. It is anticipated that the design-build team selection process would be complete by 2021.

The analysis in this initial study (IS) is based on the performance criteria for the proposed project. This is the typical stage at which CEQA review is conducted in a design-build process, in part, so that the future RFP can include any impact avoidance and mitigation measures that arise out of the CEQA review process. This approach places the CEQA process before completion of a final project design. However, the performance criteria are sufficient to support this IS impact analysis. Where the performance criteria provide a maximum limit to a project characteristic, such as the building not exceeding 36 feet in height, this IS assumes the project meets that maximum limit. If, ultimately, the selected design-build team can achieve all necessary criteria with a shorter building, the IS will still be sufficient to support implementation of that design. If the performance criteria identify a range for a particular project characteristic, the IS impact analysis will generally consider the higher value in the range. Again, if the ultimate project design meets the lower portion of the range, the IS would be sufficient to support implementation of that design. As the selected design-build team completes the project design, Regional San will need to consider whether any project elements differ sufficiently from the project scenario analyzed in the IS to warrant additional CEQA review. If additional CEQA review is required, all elements of the review, including public notices and public involvement, would be implemented consistent with applicable elements of the CEQA Statute and Guidelines.

2.7 PROJECT FACILITIES

The proposed project would include construction and operation of a new cogeneration engine system to use biogas onsite to produce electricity and heat for the SRWTP. The biogas cogeneration system would have several major interfaces with existing SRWTP systems including the following:

- gas management system,
- digester heating system,
- electrical power distribution system,
- plant computer control system, and
- site utilities.

The proposed project would include the following components:

- up to six internal combustion engine generators,
- engine exhaust treatment (oxidation catalyst and selective catalytic reduction),
- a biogas conditioning system (as part of the gas management system),
- hot water boiler (standby), and
- a new building.

Implementation of the project would also result in the curtailment of multiple stationary sources operated by Regional San under existing conditions, including digester gas flaring by SRWTP's enclosed flares (ground flares) and waste gas burners, as well as three boilers used to generate steam. The project would eliminate surplus flaring related to maintenance and unforeseeable overpressure events because this project would allow Regional San to operate its own digester gas conditioning system and schedule and stagger maintenance of the Combined Heat and Power (CHP) engines such that downtime would be minimized. Also, once the project is operational, the three boilers currently operated by Regional San, would no longer be required and would be decommissioned, thereby no longer generating emissions.

Furthermore, implementation of the project would result in a reduction in emissions from SMUD-operated facilities. First, there would be a reduction in fuel burning at SMUD's Carson Cogen Plant because the project would no longer require steam produced at the Carson Cogen Plant. Second, there would be an incremental decrease in demand for electricity from SMUD's regional power plants due to the onsite generation of electricity at Regional San's new CHP plant, resulting in emission reductions. In addition, it is assumed that the heat recovery steam generator of the Carson Cogen Plant's combined cycle gas turbine, or auxiliary boiler, which currently supply steam to the SRWTP, would cease to operate with the project.

2.7.1 Combustion Engine Generators

The proposed combustion engine generators would produce between 10 and 15 MW of power, which would offset utility power purchases. In addition, one engine would serve as a standby. The project would include between four and six engine generators depending on the engine size selected. However, regardless of the number of engines selected, the combined power generation would not exceed 15 MW. Options for number of engines and engine sizes are shown in Table 2-1.

Table 2-1 Combustion Engine Generator Options

Engine Size	Number of Units (including 1 Standby)	Firm Capacity	Total Capacity
2 MW	5 + 1	10 MW	12 MW
3 MW	4 + 1	12 MW	15 MW
3.5 MW	3 + 1	10.5 MW	14 MW

The new engines would be required to meet the best-available control technology (BACT) for all criteria pollutants, as required by the Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule 201, Section 301. BACT is generally determined at the time the permit application is deemed complete and the SMAQMD does not accept permit applications for projects until after they complete the CEQA review process. While SMAQMD's BACT determination for the project's engines cannot be stated with certainty at the time of writing this CEQA document, discussion of the likely BACT requirements is presented in Section 3.3, "Air Quality."

Annual electricity generated by the engines is estimated to be between 74,460 megawatt hours (MWh) and 105,000 MWh per year.

The engine system would cogenerate power and heat. Heat recovered from engine exhaust and jacket water (water that flows through the engine to keep it from overheating) would be used for process and space heating at the SRWTP. The cogeneration system would have sufficient capacity to meet the SRWTP's average heat demand of 20 million British Thermal Units per hour.

2.7.2 Engine Exhaust Treatment

Exhaust from the engines would be treated by oxidation catalyst and selective catalytic reduction to reduce carbon monoxide and NO_x, respectively. The selective catalytic reduction would use urea injection.

2.7.3 Biogas Conditioning System

The biogas conditioning system would be part of the larger gas management system and would remove hydrogen sulfide, siloxanes, and water from the biogas using a media that would be disposed of at an approved landfill. This system would consist of the following individual components:

- hydrogen sulfide removal vessels (granular iron oxide or iron sponge),
- optional ammonia removal vessels if deemed necessary,
- cooling heat exchangers,
- blowers,
- glycol chillers and pumps,
- siloxane removal vessels, and
- particle filters.

2.7.4 Hot Water Boiler

One hot water boiler would be installed as part of the project to produce hot water needed to operate the digesters at optimal temperature. The boiler would be located within the new building or adjacent to the building under a canopy. The boiler would serve as a back-up heat source to the cogeneration engines.

2.7.5 Engine and Boiler Building

The project would include one new building constructed within the project site immediately north of the existing digesters. The building would house the engines, electrical equipment, a control room, and a restroom. The building would be a maximum of 36 feet tall and is expected to be approximately 15,000 square feet.

2.8 PROJECT CONSTRUCTION

Construction of the project would last between 18 and 24 months and is anticipated to begin in spring of 2022. Typical construction activities would include earthwork such as grading, excavation, trenching, backfilling, hauling, and compaction. Additionally, underground piping and utilities would be constructed. Paving, lighting, drainage, and reinforced structures including the new building would be constructed. Delivery of construction materials and supplies to the site would be required. In total, up to 5.6 acres would be disturbed by project construction and staging. A small amount of fill may need to be removed from the project site and would be disposed of within the SWRTP site at a location already used for operations and not containing any biological resources habitat. Construction equipment would include excavators, dozers, compactors, graders, and backhoes.

Typical work hours would be Monday through Friday from 7:00 a.m. to 7:00 p.m. (construction noise is exempt from noise ordinances between 6:00 a.m. and 8:00 p.m. on weekdays within Sacramento County). No nighttime work is anticipated. Equipment, material, and vehicle staging would be accommodated at the SRWTP immediately east of the project site (Figure 2-2).

Ingress and egress for construction traffic would be via Laguna Boulevard to Dwight Road. Then to Central Street, which connects to Septage Way.

During construction, the construction contractor would be required to implement SMAQMD Basic Construction Emission Control Practices for controlling fugitive PM_{10} and $PM_{2.5}$ dust emissions and limiting exhaust emissions from construction equipment. These measures would include the following:

- Water all exposed surfaces at least two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Limit vehicle speed on unpaved roads to 15 miles per hour.
- All roadways, driveways, sidewalks, and parking lots to be paved will be completed as soon as possible. In addition, building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing idling time to 5 minutes (required by California Code of Regulations Title 13, Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. Equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated.

2.9 OPERATIONS

The project is expected to become operational in spring 2024. Operation of the project would not change the operating hours at the existing SRWTP. Currently, the plant operates continuously 24 hours per day, every day. Routine maintenance would occur for all new facilities, and would generally include preventative maintenance, daily, weekly, monthly, quarterly, and annual inspections and adjustments. Maintenance would occur periodically or annually depending on the specific facility and would be similar to existing maintenance. Operation of the project would require up to 10 additional full-time employees to operate and maintain the new facilities. Operation of the project would result in a small increase in long-term vehicle trips associated with the 10 new employees and increased maintenance activity. Operations-related vehicle trips would use the same access route as identified above for construction (Franklin Boulevard to Sims Road to Laguna Station Road to Septage Way). Operation of the project is also expected to result in a small increase in water demand.

2.10 REQUIRED ACTIONS

The project would require an Authority to Construct (for devices that emit air pollutants) permit and permit to operate from SMAQMD.

It is expected that the project would not require a National Pollutant Discharge Elimination System construction stormwater permit (Notice of Intent to proceed under General Construction Permit) for disturbance of more than 1 acre administered by the State Water Resources Control Board because the project is within SRWTP's ring levee and existing process area. Stormwater Pollution Prevention would be subject to a Water Pollution Control Plan and runoff would be contained within the SRWTP.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1.	Project Title:	Regional San BioGeneration Facility Project
2.	Lead Agency Name and Address:	Sacramento Regional County Sanitation District, 10060 Goethe Road, Sacramento, CA 95827
3.	Contact Person and Phone Number:	Steve Nebozuk, (916) 876-6118
4.	Project Location:	Sacramento Regional Wastewater Treatment Plant, 8521 Laguna Station Road, Elk Grove, CA 95758
6.	General Plan Designation:	See Section 3.11, "Land Use and Planning" below.
7.	Zoning:	See Section 3.11, "Land Use and Planning" below.

8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

   See Chapter 2, "Project Description"

9.	Surrounding Land Uses and Setting: (Briefly describe the project's surroundings)	Land uses in the project vicinity include the Sacramento Regional Wastewater Treatment Plant facilities and the Bufferlands.
10.	Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)	Sacramento Metropolitan Air Quality Management District

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

    See Section 3.18, "Tribal Cultural Resources," below.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology / Soils	☐ Greenhouse Gas Emissions	☐ Hazards / Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance
	☐ None	☒ None with Mitigation Incorporated

DETERMINATION (To be completed by the Lead Agency)

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** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

DocuSigned by:
Christoph Dobson
ABE187D2508B41C...

5/4/2021

Signature Date

Christoph Dobson

Representative Name

Director of Policy and Planning

Title

Sacramento Regional County Sanitation District

Agency

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) 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 Environmental Setting

The project site and staging area are vacant land located within the core facility area that is occupied by the existing SRWTP facilities and surrounded by the Bufferlands (Figures 3.1-1 and 3.1-2). The topography within the project site and surrounding Bufferlands is generally flat with the only topographic variation created by levees and dirt mounds in spoils areas. The Bufferlands forms an open space buffer that is between 1,200 feet and 1 mile wide surrounding the existing SRWTP. The Bufferlands are characterized by grasslands interspersed with creeks, vernal pools, and seasonal wetlands. As part of Regional San's Trail of Trees Project, more than 6,500 trees have been planted along the west side of Franklin Boulevard to screen views of the SRWTP from residential areas located on the east side of Franklin Boulevard.

The east side of the core facility area has the largest concentration of existing structures, with the less developed western half of the core facility area having scattered structures, roads, emergency storage basins, and solids storage basins. Structures on the site have an industrial appearance and consist of tanks of various sizes, concrete-construction and metal-construction buildings, conveyance pipes, below-ground and above ground tanks, pumps, and paved expanses. The majority of the core facility area is not landscaped, and vegetation consists of annual grasses and ruderal vegetation. The existing structures of the SRWTP are primarily visible from Franklin Boulevard to the east and Dwight Road to the southeast of the SRWTP.

There are no scenic vistas that provide views of the SRWTP site. The Sacramento River is located approximately 2 miles west of the project site, west of the Stone Lakes NWR and Interstate 5 (I-5). The nearest Officially Designated State Scenic Highway to the project site is State Route (SR) 160 (Caltrans 2019) from the Contra Costa County line to the southern city limit of the City of Sacramento. SR 160 runs parallel to the east side of the Sacramento River and is located 2 miles west of the project site. The Circulation Element designates all freeways within Sacramento County as scenic corridors. Scenic corridors extend 660 feet on each side of the right-of-way. These scenic corridors apply to I-5 in the vicinity of the project site; however, I-5 is 1.6 miles west of the project site.

Source: Ascent Environmental in 2020

Views from Project Site Looking South toward Digesters

Source: Ascent Environmental in 2020

Views Looking West at the Project Site and SRWTP Facilities in the Background

Figure 3.1-1 Representative Photographs

Source: Ascent Environmental in 2020

Views of Project Site Looking South from Septage Way

Figure 3.1-2 Representative Photograph

Views of the project site and staging area are of a previously disturbed area with ruderal grasses. Five cottonwood trees are located east of the proposed staging area. Neither the project site nor staging area are visible from any public viewpoints or surrounding roadways. In addition, the project site and staging area do not contain any scenic vistas.

The existing SRWTP has lighting for security and work area safety. The surrounding Bufferlands is unlit and the lighting on the SRWTP facilities is at a distance from residential areas. Under existing conditions, SRWTP lighting is visible from residential areas to the east and south of the plant, but is screened by landscaping along the roadways, and by vegetation growing in the Bufferlands, east and south of the SRWTP. The railroad berm that runs along the east side of the SRWTP partially blocks views of some of the lighting from Dwight Road. While direct views of the SRWTP lights are blocked by fencing along the west side of storage basins on the west side of the SRWTP, minor skyglow effects from the SRWTP can be seen from I-5 to the west.

3.1.2 Discussion

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

No impact. The project site and staging area are currently vacant and located within the SRWTP site. The project would change views of the site from vacant land to a biogeneration facility. However, the project site and staging area are not visible from any public viewpoints and there are no scenic vistas in the project vicinity or with views of the project site. Because the project would not be visible from a scenic vista and the changes in views would be consistent with surrounding development, the project would have **no impact** 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?

No impact. The nearest Officially Designated State Scenic Highway is SR 160, located approximately 2 miles west of the project site. I-5 is designated by Sacramento County as a scenic corridor and is located approximately 1.6 miles west of the project site. However, the project site and staging area are not located within the viewshed of SR 160 or I-5. Because there are no designated state scenic highways with views of the project site and the project would not require tree removal, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The project would have **no impact** on a state scenic highway.

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

Less-than-significant impact. The project site and staging area would be within the core facility area of the SRWTP. The east side of the core facility area has the largest concentration of existing structures, with the less developed western half of the core facility area having scattered structures, roads, emergency storage basins, and solids storage basins. During project construction, views in the area would be modified as a result of the temporary presence of construction and equipment and activities. However, the appearance of construction equipment and activities would be temporary, consistent with the developed nature surrounding the project site, and would only be visible to Regional San employees. Once construction activities are complete, views of the project site would change from vacant land to development associated with the new biogeneration facility.

Views of the new facility would primarily include a new building that would house the new biogeneration system. None of the project facilities would be visible to motorists, pedestrians, and bicyclists from public viewpoints. The new buildings would be consistent with the existing buildings on-site and the existing SRWTP facilities. Construction of the project would be consistent with the surrounding visual character of existing SRWTP facilities and would not change views from any public viewpoints. This impact would be **less than significant**.

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

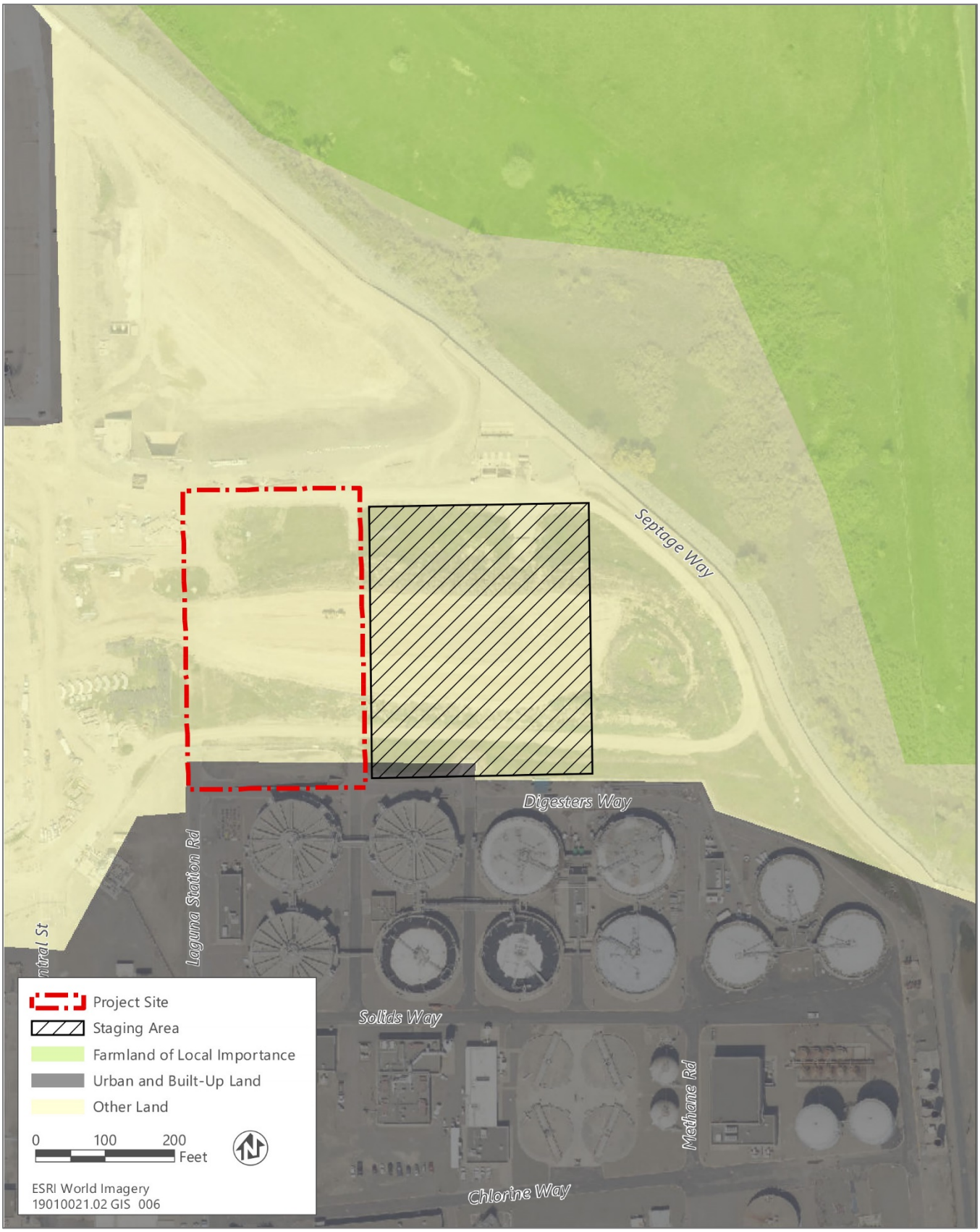
Less-than-significant impact. Construction-related activities would occur during daylight hours from 7:00 a.m. through 7:00 p.m. and would not require nighttime lighting. Construction equipment is unlikely to have reflective surfaces and would not be a substantial source of glare in the area. The project would mainly be constructed of metal and concrete and would not be constructed with materials that would create substantial glare. The project site and staging area are located in an industrial setting. The existing SRWTP has lighting for security and work area safety. The project would result in a minor sources of new exterior security lighting on the building, which would be consistent with lighting from surrounding SRWTP facilities. The project would not result in a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Therefore, the project would have a **less-than-significant** impact related to light and glare.

3.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
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 Environmental Setting

Farmlands are mapped by the State of California Department of Conservation (DOC) under the Farmland Mapping and Monitoring Program (FMMP). Under the FMMP, land is delineated into the following eight categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, Other Land, and Water. The project site and staging area are defined as Other Land and Urban and Built-Up Land by the DOC and therefore are not designated as Important Farmland (Figure 3.2-1). The area northeast of the project site is designated as Farmland of Local Importance and the area to the south is Urban and Built-Up Land. The project site and staging area are within the SRWTP site in a previously disturbed area north of the digesters. Surrounding land uses include SRWTP facilities, previously disturbed areas within the SRWTP property, and the Bufferlands. Although the area northeast of the project site is designated as Farmland of Local Importance, there has not been active agriculture in the project vicinity for more than 10 years.



Source: Data downloaded from FMMP in 2020 and adapted by Ascent Environmental in 2020

Figure 3.2-1 Important Farmland

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of preserving agriculture and restricting unnecessary conversion to urban uses. Under the contract, landowners received reduced property tax assessments based on the property's value for farming and open space as opposed to full market value. Based on Sacramento County's database on Williamson Act lands, the project site and surrounding lands are not under Williamson Act contract (Sacramento County 2020a).

In addition, there are no timberlands or forest land in the project vicinity, and the area is not zoned for forest land or forestry resources.

3.2.2 Discussion

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?

No impact. The project site and staging area are not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance according to the FMMP. Land northeast of the project site is designated as Farmland of Local Importance; however, this land is within the SRWTP property and is not in agricultural production. In addition, this land would not be affected by the project. Implementation of the project would not convert farmland to non-agricultural uses. There would be **no impact**.

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

No impact. The project site and surrounding lands are not subject to Williamson Act contract. Therefore, implementation of the project would not conflict with existing zoning for agricultural use or a Williamson Act contract. **No impact** would occur.

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))?

No impact. The existing zoning within the project vicinity is not for forest land, timberland, or Timberland Production. The project would include construction of a biogeneration facility on disturbed land within the SRWTP site and would not cause rezoning of forest land. There would be **no impact**.

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

No impact. The project facilities would be located within the project site; therefore, the trees located east of the staging area would remain in place. In addition, the site does not contain any riparian or oak woodland forest and is not considered forest land. Therefore, the project would not convert forest land to non-forest uses. There would be **no impact**.

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

No impact. No forest or agricultural resources are located within or adjacent to the project site. As discussed above in items a) through d), the project would not involve changes in the existing environment which, because of their location or nature, could result in conversion of forest land or agricultural land. Therefore, **no impact** would occur.

3.3 AIR QUALITY

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

3.3.1 Environmental Setting

The U.S. Environmental Protection Agency (EPA) has established national ambient air quality standards (NAAQS) for six criteria air pollutants that are known to be harmful to human health and the environment: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (which is categorized into respirable particulate matter with an aerodynamic diameter less than or equal to 10 microns [PM_{10}] and fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter [$PM_{2.5}$]), nitrogen dioxide, and sulfur dioxide. The State of California has established the California ambient air quality standards (CAAQS) for these six pollutants, as well as for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. NAAQS and CAAQS are scientifically substantiated, numerical concentrations of criteria air pollutants established to protect the public from adverse health impacts caused by exposure to air pollution. A brief description of the criteria air pollutants and their effects on health is provided in Table 3.3-1.

The project site is within the SRWTP site, which is in unincorporated Sacramento County adjacent to Elk Grove and within the Sacramento Valley Air Basin (SVAB). The SVAB is bounded on the north by the North East Plateau Air Basin, on the south by the San Joaquin Valley Air Basin, on the east by the southern portion of the Cascade Range and the northern portion of the Sierra Nevada, and on the west by the Coast Ranges. Sacramento County is currently designated as nonattainment with respect to the NAAQS and CAAQS for ozone, the NAAQS for $PM_{2.5}$, and the CAAQS for PM_{10}. The region is designated as attainment or unclassified with respect to the NAAQS and CAAQS for all other pollutants (CARB 2019).

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the local agency responsible for air quality planning in Sacramento County. SMAQMD develops and implements an air quality plan for attaining the NAAQS and CAAQS that was last updated and approved by the SMAQMD Board and the California Air Resources Board (CARB) in 2017. There are currently no plans established for achieving the NAAQS for $PM_{2.5}$ or the CAAQS for PM_{10}. SMAQMD develops regulations and emission reduction programs to control emissions of criteria air pollutants,

ozone precursors (oxides of nitrogen [NO_X] and reactive organic gases [ROG]), toxic air contaminants (TACs), and odors within its jurisdiction.

Table 3.3-1 Criteria Air Pollutants

Pollutant	Sources	Effects
Ozone	Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG, also sometimes referred to as volatile organic compounds by some regulating agencies, and NO_X. The main sources of ROG and NO_X, often referred to as ozone precursors, are products of combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels.	Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.
Carbon monoxide	Carbon monoxide (CO) is usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicle engines; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration.	Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal.
Particulate matter	Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect.	Scientific studies have suggested links between fine particulate matter and numerous health problems, including asthma, bronchitis, and acute and chronic respiratory symptoms, such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air.
Nitrogen dioxide	Nitrogen dioxide (NO_2) is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2.	Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility.
Sulfur dioxide	Sulfur dioxide (SO_2) is a combustion product of sulfur or sulfur-containing fuels, such as coal and diesel.	SO_2 is also a precursor to the formation of particulate matter, atmospheric sulfate, and atmospheric sulfuric acid formation that could precipitate downwind as acid rain.
Lead	Leaded gasoline, lead-based paint, smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere, with lead levels in the air decreasing substantially since leaded gasoline was eliminated in the United States.	Lead has a range of adverse neurotoxic health effects.

Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; NO_X = nitrogen oxides; ROG = reactive organic gases; SO_2 = sulfur dioxide.
Source: EPA 2018

SMAQMD published the *Guide to Air Quality Assessment in Sacramento County,* which was last updated in April 2020 and provides guidance to lead agencies preparing air quality impact analyses in CEQA documents (SMAQMD 2020). This guide includes SMAQMD-recommended thresholds of significance for evaluation of air quality impacts of projects in Sacramento County, including significance criteria that are tied to achieving or maintaining the attainment of the NAAQS and CAAQS. For the purposes of this analysis, the following thresholds of significance, which are based on SMAQMD-recommended thresholds, are used to determine whether project-generated emissions would result in impacts to air quality that result in adverse effects to human health. These significance thresholds are also consistent with the checklist questions about air quality in Appendix G of the CEQA Guidelines.

Air quality impacts would be significant if the project would:

- result in construction-generated emissions of NO_X exceeding 85 pounds per day (lb/day), PM_{10} exceeding 80 lb/day or 14.6 tons/year, or $PM_{2.5}$ exceeding 82 lb/day or 15 tons/year;
- result in operational emissions of ROG exceeding 65 lb/day, NO_X exceeding 65 lb/day, PM_{10} exceeding 80 lb/day or 14.6 tons/year, or $PM_{2.5}$ exceeding 82 lb/day or 15 tons/year;

- emit levels of CO that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm during construction and operations;
- expose any off-site sensitive receptor to a substantial incremental increase in TAC emissions greater than 10 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; or
- create objectional odors affecting a substantial number of people.

In addition to these thresholds, all SMAQMD-recommended Best Management Practices (BMPs) and use of Best Available Control Technology (BACT) will be implemented to minimize emissions of PM_{10} and $PM_{2.5}$. Without the application of BMPs and BACT, the threshold for allowable PM_{10} and $PM_{2.5}$ emissions during construction and operations is zero pounds per day.

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants.

The SRWTP facility where the project site is located is in a rural area of Sacramento county. There are no residential land uses, schools, or other sensitive receptors adjacent to the project site. The nearest residential area lies east of Franklin Boulevard, which is approximately 4,740 feet away.

3.3.2 Discussion

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

Less-than-significant impact. The levels of criteria air pollutants and precursors emitted during project construction and project operations are discussed separately below.

Construction-Related Emissions of Criteria Air Pollutants and Precursors

As stated in Chapter 2, "Project Description," construction of the project is anticipated to begin in spring of 2022 and last between 18 and 24 months. Project construction would result in temporary emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the use of off-road equipment, haul trucks delivering equipment and materials, and worker commute trips. Fugitive PM_{10} and $PM_{2.5}$ dust emissions would be associated primarily with site preparation and earthwork and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and travel by off-road equipment and delivery trucks on unpaved surfaces. Exhaust from off-road equipment, haul trucks, and construction worker vehicles would also contain PM_{10} and $PM_{2.5}$. Emissions of ozone precursors, ROG and NO_X, would primarily be associated with construction equipment and on-road mobile exhaust. Construction and demolition activities associated with the project would likely require the use of equipment such as excavators, graders, dozers, backhoes, trenchers, forklifts, compactors, graders, welding machines, haul trucks, cement trucks, and paving equipment.

Emissions associated with construction were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CAPCOA 2016). Modeling was based on project-specific information, where available; assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. Worst-case maximum daily construction emissions were estimated based on anticipated construction activities that would occur simultaneously. Table 3.3-2 summarizes the modeled maximum daily emissions from construction and demolition activities. For detailed assumptions and modeling inputs, refer to Appendix A. Table 3.3-2 also shows the mass emission levels SMAQMD recommends for determining whether a project's construction-related emissions of criteria air pollutants and precursors would make a cumulatively considerable contribution to the nonattainment condition of a pollutant with respect to the NAAQS or CAAQS and, therefore, conflict with air quality planning in the SVAB (SMAQMD 2020).

Table 3.3-2 Summary of Criteria Air Pollutants and Precursors Emitted during Project Construction

	Maximum Daily Emissions (lb/day)			
	ROG	NO_X	PM_{10} (Exhaust/Fugitive)	$PM_{2.5}$ (Exhaust/Fugitive)
Construction-Related Emissions	7.9	33.1	1.6/18.2	1.5/10.0
SMAQMD Threshold of Significance	None	85	80	82

Notes: lb/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SMAQMD = Sacramento Metropolitan Air Quality Management District

See Appendix A for detailed modeling and calculations.

Source: Modeled by Ascent Environmental in 2021.

As shown in Table 3.3-2, project construction would not result in emissions of ROG or NO_X that exceed applicable mass emission thresholds. In addition, with incorporation of SMAQMD-recommended Basic Construction Emission Control Practices as part of the project as described in Chapter 2, "Project Description," emissions of PM_{10} and $PM_{2.5}$ associated with construction and demolition activities would not contribute localized concentrations of these pollutants that exceed applicable NAAQS and CAAQS. Therefore, construction-related emissions would not conflict with air quality planning efforts in the region, result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment with respect to the NAAQS or CAAQS, or expose sensitive receptors to substantial concentrations of criteria air pollutants.

Operational Emissions of Criteria Air Pollutants and Precursors

The project's operational emissions would include criteria air pollutants and precursors emitted by the new biogeneration facility that would use biogas from the digesters to generate electricity, and by the additional worker commute trips to and from the project site. The project would also result in the reduction in emissions from multiple existing stationary sources, some of which are operated by Regional San and some of which are operated by the Sacramento Municipal Utility District (SMUD). The change in emissions associated with each of these mechanisms is discussed in greater detail below and full calculations are provided in Appendix A.

Emissions of criteria air pollutants and precursors from the proposed biogeneration facility were estimated using the expected emission rates of the combined heat and power (CHP) engines. While the proposed combustion engine generators would produce between 10 and 15 megawatts (MW) of power, the calculations used in this analysis assume the maximum gross power output of 15.0 MW.

The emission rates for criteria air pollutants and precursors emitted by these engines would be dictated by the requirement to apply BACT pursuant to SMAQMD Rule 202—New Source Review, Section 302. BACT would be determined on the date that SMAQMD deems the application complete in accordance with a BACT determination process overseen by SMAQMD permitting staff. Because SMAQMD would not begin the permitting process, including BACT determination, until after the project undergoes the CEQA process, emission rates consistent with recent BACT determinations for similar biogas–fueled engines were applied. See Appendix A for details about the emission rates used for the purpose of this CEQA analysis and the recent, comparable BACT determination on which they were based. The actual BACT determination made by SMAQMD may be more stringent than the emission factors used to estimate emissions for this CEQA analysis; hence, the emissions estimates presented in this CEQA analysis are conservatively high.

In addition to the CHP engines, the project would also include installation of a standby boiler. The standby boiler would only be used when heat cannot be generated by the CHP engines, such as during a major maintenance event or due to an equipment breakdown. The standby boiler is necessary because the wastewater treatment process, including solids treatment and handling, is a continuous process that requires an uninterruptable source of heat. Because the boiler would only operate when the CHP engines are offline, there would be no concurrent operation or emissions. In all operating scenarios, emissions from the standby boiler would be less than the direct operation emissions from the new CHP generators shown in Table 3.2-3.

Implementation of the project would also result in the curtailment of multiple stationary sources operated by Regional San under existing conditions, including digester gas flaring by SRWTP's enclosed flares (ground flares) and

waste gas burners, as well as three boilers used to generate steam. SRWTP operating personnel estimate that 10 percent of the SRWTP's current digester gas production (approximately 94.6 of 946 million standard cubic feet per year) is disposed of onsite[1]. This estimate is based on data from SRWTP normal operating conditions and current system constraints including maintenance of SRWTP's digesters, Gas Management System, hydrogen sulfide scrubber system, or when source testing of the enclosed flares prevent Regional San from exporting digester gas to the Carson Cogeneration (Cogen) Plant for extended periods. (The Carson Cogen Plant is also called the Central Valley Financing Authority Cogeneration Plant, or CVFA Cogen 1.)

In addition, the existing Gas Management System compressors do not have sufficient capacity to deliver full biogas production to SMUD. A single compressor cannot deliver the required flow, and two compressors operating in parallel do not have sufficient capacity without causing a surge, which currently results in flaring. This estimate also accounts for SRWTP's standard operating procedure to prevent the release of unburned biogas from the Gas Management System during unforeseeable overpressure events, resulting in the need for additional temporary preventative flaring.

The project would therefore minimize surplus flaring in the above amount because it would allow Regional San to operate its own digester gas conditioning system and to schedule and stagger maintenance of the CHP engines such that downtime would be minimized. Furthermore, a new compressor system would supply biogas to the CHP engines and would eliminate the surge conditions that currently exist with the compressors that currently send biogas to the Carson Cogen Plant.

Also, once the project is operational, the three boilers currently operated by Regional San under SMAQMD permits, would no longer be required, and would be decommissioned, thereby no longer generating emissions.

Implementation of the project would also result in a reduction in emissions from SMUD-operated facilities. First, there would be a reduction in fuel burning at SMUD's Carson Cogen Plant because the project would no longer require steam produced at the Carson Cogen Plant. Second, there would be an incremental decrease in demand for electricity from SMUD's regional power plants due to the onsite generation of electricity at Regional San's new CHP plant, resulting in emission reductions.

Under existing conditions, the steam supplied to the SRWTP by the Carson Cogen Plant is produced by two methods—either by the heat recovery steam generator of the Carson Cogen Plant's combined cycle gas turbine (CCGT) or by an auxiliary boiler. Both units are fueled by natural gas; however, the CCGT can also burn SRWTP's digester gas in its duct burner when it is infeasible to inject it into a dedicated pipeline serving the Cosumnes Power Plant. For the purposes of this analysis, it is assumed that the heat recovery steam generator at the CCGT that currently supplies steam to the SRWTP would cease to operate. Applying this assumption to this analysis is conservative because, under existing conditions, the CCGT emits lower emissions than the auxiliary boiler.

Under existing conditions, the electricity supplied to the SRWTP is generated by SMUD's portfolio of power plants, including natural gas–fueled facilities and renewable generating units (e.g., solar, wind). The foreseeable effect of SRWTP generating 15 MW of onsite power, which is part of the proposed project, is that Regional San's demand for electricity from SMUD would decrease by the same amount, plus a small additional decrease due to avoidance of line losses associated with the distribution of electricity. Several reasonable assumptions are considered with respect to this reduction in electricity consumption.

- It is assumed that SMUD would not reduce the level of electricity generation by its renewable sources because, like other utilities, SMUD is working to increase the level of renewable electricity it generates to meet requirements under the State's Renewable Portfolio Standard Program. (For more details about this program, see Section 3.8, "Greenhouse Gas Emissions.")

[1] Based on 4/6/2021 email from Jeremey Boyce, P.E. that the 2-year average gas production (2017-2018) was approximately 946,000 ksf/year, and that approximately 10 percent of this total (or 94,600 ksf/year) was disposed in the waste gas burners and flares. Furthermore, 2017-2018 represents the most recent operating period representing "normal" operations due to the Gas Management System Upgrade Project, which resulted in more system shutdowns and higher disposal consumption rates in 2019 and 2020. A review of 2020 data indicates that following completion of the Gas Management System Upgrade Project, 10 percent of the gas production continues to be consumed by the onsite disposal systems.

- It is further assumed that the reduction in electricity generation would occur at SMUD's least economic generating plant, which is typically the oldest and least efficient natural gas–fueled power plant. Therefore, this analysis assumes that SMUD's reduction in electricity generation would also occur at its Carson Cogen Plant, and specifically the CCGT that would experience curtailed steam production.

EPA's Combined Heat and Power Energy and Emissions Savings Calculator (CHP Calculator) was used to estimate the indirect changes in emissions associated with an onsite CHP project (EPA 2020). The CHP Calculator is recommended by the California Air Pollution Control Officers Association (CAPCOA) (CAPCOA 2010:135). The CHP Calculator estimates the change in emissions of NOx, SO_2, and greenhouse gases when a separate heat and power system (SHP) is replaced by a CHP system. The CHP Calculator, however, does not estimate the change in emissions of ROG, PM_{10}, and $PM_{2.5}$. The change in emissions of these pollutants and precursors were estimated based on the level of displaced electricity generation and displaced combustion of natural gas fuel reported by the CHP Calculator, along with emission factor information in the air district permits for the affected sources.

Table 3.3-3 summarizes the net change in daily operational emissions that would result from implementation of the project, including changes from emissions sources that would be affected both directly and indirectly.

Table 3.3-3 Net Change in Operational Emissions

Emissions Source	ROG	NO_X	PM_{10}	$PM_{2.5}$
	Daily Emissions (lb/day)			
Worker Commute Trips	<0.1	0.1	<0.1	<0.1
New Combined Heat and Power Generators[1]	97.9	123.8	77.5	77.5
Reduced Flaring by Waste Gas Burners	-2.6	-6.8	-1.2	-1.2
Reduced Flaring by Ground Flares	-2.6	-5.1	-1.2	-1.2
Shutdown of Steam-Generating Boilers	-0.1	-1.2	-0.4	-0.4
Displaced Generation of Natural Gas–Based Electricity	-28.6	-42.8	-26.7	-26.7
Displaced Steam Generation[2]	-5.9	-8.9	-5.5	-5.5
Total Net Daily Emissions[3]	**58.3**	**59.1**	**42.6**	**42.6**
SMAQMD Daily Mass Emission Thresholds	**65**	**65**	**80**	**80**
	Annual Emissions (tons/year)			
Worker Commute Trips	<0.1	<0.1	0.1	<0.1
New Combined Heat and Power Generators[1]	17.9	22.6	14.1	14.1
Reduced Flaring by Waste Gas Burners	-0.5	-1.2	-0.2	-0.2
Reduced Flaring by Ground Flares	-0.5	-0.9	-0.2	-0.2
Shutdown of Steam-Generating Boilers	-<0.1	-0.2	-0.1	-0.1
Displaced Generation of Natural Gas–Based Electricity	-5.2	-7.8	-4.9	-4.9
Displaced Steam Generation[2]	-1.1	-1.6	-1.0	-1.0
Total Net Annual Emissions[3]	**10.6**	**10.8**	**7.7**	**7.7**
SMAQMD Annual Mass Emission Thresholds	**—**	**—**	**14.6**	**15**

Notes: lb/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; SMAQMD = Sacramento Metropolitan Air Quality Management District

[1] The new CHP generators would produce between 10 and 15 MW of electricity. These emission estimates reflect a number and type of engines that would generate 15 MW of electricity.

[2] The size of these emission reductions is conservatively low because it is assumed that the heat recovery steam generator at the CCGT that currently supplies steam to the SRWTP would cease to operate rather than the more emissions intensive auxiliary boiler.

[3] Totals may not sum due to rounding.

See Appendix A for detailed modeling and calculations.

Source: Calculations prepared by Brown & Caldwell, Trinity Consultants, and Ascent Environmental in 2021

As shown in Table 3.3-3, the net change in operational emissions of criteria air pollutants or precursors associated with the project would not exceed the daily or annual mass emission thresholds adopted by SMAQMD. It is estimated that the project would result in an operational increase in emissions of NO_X of 59.1 pounds per day (lb/day). This estimate is based on a number of conservative assumptions and is likely an overestimate of NO_x emissions. First, the estimate reflects the maximum size of the new cogeneration system, 15 MW, operating at full output. The actual total installed capacity may be between 12 and 15 MW, and likely a maximum of 14 MW. In any of these scenarios, the more likely operating output is equal to the firm capacity shown in Table 2-1, which ranges from 10 MW to 12 MW. Second, the estimate assumes that heat recovery steam generated at the Carson Cogen Plant's CCGT would cease to operate rather than the more emissions intensive auxiliary boiler. Finally, the reduction in onsite disposal emissions is based on current digester gas production levels. As digester gas production increases proportionally with regional growth, the quantity of digester gas disposed onsite would also likely increase. These future increases would be avoided with implementation of the project.

Summary

Neither project construction nor operation would result in a net increase in emissions of criteria air pollutants or precursors that exceed the daily or annual mass emission thresholds adopted by SMAQMD. Therefore, the project would not conflict with or obstruct implementation air quality planning efforts in the region and this impact would be **less than significant**.

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

Less-than-significant impact. As described in Section 3.3.1, "Environmental Setting," Sacramento County is designated as nonattainment with respect to the NAAQS for $PM_{2.5}$ and CAAQS for PM_{10}. As discussed under item a), construction of the project would result in temporary emissions of ozone precursors, as well as PM_{10} and $PM_{2.5}$. Ozone is the result of cumulative emissions from numerous sources that can be inside or outside the region. Ozone is formed by a photochemical reaction involving ROG, NO_X, and sunlight. As shown in Table 3.3-2, project construction would not result in emissions of ROG, NO_X, PM_{10}, or $PM_{2.5}$ emissions that exceed SMAQMD-established mass emission thresholds. As shown in Table 3.3-3, operation of the project would not result in a net increase in criteria air pollutants or precursors that would exceed SMAQMD-established mass emission thresholds. Therefore, construction- and operation-related emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment with respect to the NAAQS or CAAQS. This impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less-than-significant impact. TACs would be emitted during both project construction and operations. TACs are a defined set of airborne pollutants that may pose a present or potential hazard to human health. TACs may cause or contribute to an increase in mortality or in serious illness. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the NAAQS and CAAQS have been established. Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

The levels of TACs emitted during project construction and project operations are discussed separately below.

Construction-Related Emissions of Toxic Air Contaminants

Project construction would result in new emissions of criteria air pollutants and precursors, as described above, as well as TACs. Particulate matter emitted from diesel construction equipment (diesel PM) would be the primary TAC of concern associated with the project. As shown above in Table 3.3-2, construction-related activities would emit up to 1.7 lb/day of diesel PM. The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 30- or 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Additionally, construction would occur intermittently over a limited period of 18–24 months, a duration substantially shorter than the exposure period used for typical health risk calculations (i.e., 30 or 70 years), and not all phases of construction would involve heavy use of diesel PM–emitting equipment.

In addition, studies show that diesel PM is highly dispersive and that concentrations of diesel PM decline with distance from the source (e.g., 500 feet from a freeway, the concentration of diesel PM decreases by 70 percent) (Roorda-Knape et al. 1999; Zhu et al. 2002, as cited in CARB 2005:9). The nearest off-site sensitive receptors are the residences east of Franklin Boulevard, which is approximately 4,740 feet away.

For these reasons, it is expected that the cancer risk associated with diesel PM generated by construction-related activities would be less than 10 in one million at any nearby sensitive receptors. Furthermore, the project construction would not result in an increase in other, noncarcinogenic TACs that could expose nearby receptors to an acute or chronic Hazard Index greater than 1.0.

Operational Emissions of Toxic Air Contaminants

As explained in Chapter 2, "Project Description," the proposed project would be designed and constructed via a design-build method of project delivery and, with this method, the design would be required to meet specific performance criteria. Thus, the number and type of generators used to convert biogas to electricity is not known at the time of this analysis. As a stationary source of TAC emissions, the project would be subject to a detailed permitting process under SMAQMD Regulation 2, Permits (SMAQMD 2020:5-6). During the permitting process, which SMAQMD would not commence formally until after the project has undergone CEQA review, SMAQMD would assess the impact from the project's operational emissions of TACs based on its guidance, as well as any applicable guidance from the Office of Environmental Health Hazard Assessment and CARB. SMAQMD requires emission controls, similar to BACT, called Toxic Best Available Control Technology (T-BACT) for certain stationary sources of TACs. In addition to T-BACT requirements, permits for equipment that may emit TACs may also contain conditions required by the National Emission Standards for Hazardous Air Pollutants and Air Toxic Control Measures promulgated by the EPA and CARB, respectively. In short, SMAQMD's permitting process would ensure that the new stationary sources of TACs that would be part of the project, most notably the new biogeneration facility, would not receive the authority to construct or permit to operate if they would result in:

- A cancer risk greater than 10.0 in one million at any off-site receptor; and/or
- An off-site ground-level concentration of non-carcinogenic TACs generated from the project that would result in a Hazard Index greater than 1.0.

These permitting criteria are identical to the SMAQMD's thresholds of significance for TACs (SMAQMD 2020).

Summary

Because of the relatively short duration of TAC-generating construction activity and the distance to offsite sensitive receptors, the cancer risk associated with diesel PM generated by construction-related activities would be less than 10 in one million at any nearby sensitive receptors and project construction would not result in an increase in other noncarcinogenic TACs that could expose nearby receptors to an acute or chronic Hazard Index greater than 1.0. In

addition, SMAQMD's permitting process would ensure that the operation of new stationary sources of TACs as part of the project, would not receive the authority to construct or permit to operate if they would result in exceedance of these same criteria. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. Minor odors from the use of heavy equipment during construction would be temporary and intermittent and would dissipate rapidly from the source with increases in distance. It is not anticipated that these odors would be noticeable at the nearest residential receptors, which are located approximately 4,740 feet away. Operation of the project would not result in the generation of more biogas or the generation of any new odors. Therefore, project construction or operation would not result in exposure of a substantial number of people to objectionable odors, and this impact would be **less than significant**.

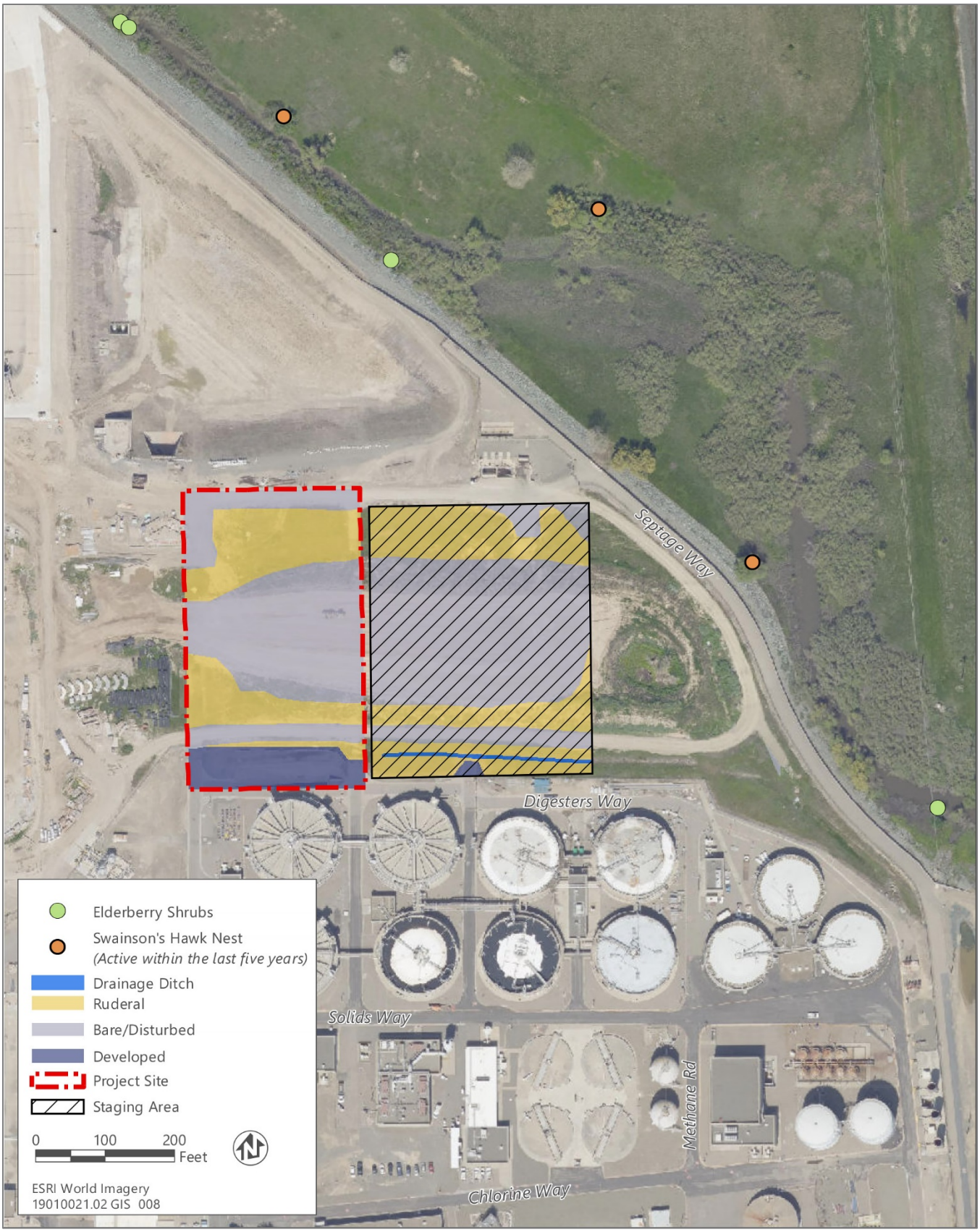
3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the 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, or regulations or by the California Department of Fish and Wildlife or the 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 Environmental Setting

The project site and staging area consist of disturbed, vacant land located within the existing SRWTP site. The project site and staging area have been partially graded and are currently used for staging and material storage for ongoing projects within the SRWTP site. Historically, the SRWTP was raised several feet by importing fill to the site. The topography within the project site and surrounding Bufferlands is generally flat with the only topographic variation created by levees, dirt mounds in spoils areas, and low spots not previously filled (see Figures 3.1-1 and 3.1-2 in Section 3.1, "Aesthetics," above).

The project site and staging area support four land cover types: drainage ditch, ruderal, bare/disturbed, and developed (Figure 3.4-1).



Source: adapted by Ascent Environmental in 2021

Figure 3.4-1 Vegetation Land Cover

LAND COVER

The land cover types were identified through review of Google Earth aerial imagery and verified during a reconnaissance survey conducted on September 23, 2020. The disturbed land cover type is associated with roads and graded portions of the SRWTP site. The developed land cover type includes areas that have impervious surfaces. Plants observed within the project site and staging area are consistent with disturbed and ruderal land cover types and include fireweed (*Epilobium brachycarpum*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), stinkwort (*Dittrichia graveolens*), wild radish (*Raphanus raphanistrum*), , blessed milk thistle (*Silybum marianum*), rabbit's foot grass (*Polypogon monspeliensis*), wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), brome (*Bromus* sp.), narrow-leaved plantain (*Plantago lanceolota*), common sunflower (*Helianthus annuus*), sweetclover (*Melilotus* sp.), curly dock (*Rumex crispus*), sweet fennel (*Foeniculum vulgare*). Five Fremont cottonwood (*Populus fremontii*) trees are located east of the staging area. The cottonwood trees are at the original ground level prior to filling of the area, which is 12 feet below the surrounding ground level. The trees crowns are approximately 7 to 10 feet above surrounding ground level.

There is a drainage ditch that collects runoff water from the area around the digesters and from the project site. This drainage ditch drains to the east into a culvert that directs the runoff to the headwaters of the treatment plant for treatment. Vegetation within the drainage ditch consists of wild oats, Italian thistle, yellow star thistle, stinkwort, rabbit's foot grass, and common sunflower. Elderberry shrubs are present within the Bufferlands northeast of the project site; however, no elderberry shrubs are located within the project site or staging area.

SPECIAL-STATUS SPECIES

Query results of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system, California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), California Native Plant Society's Inventory of Rare and Endangered Plants of California, and the South Sacramento Habitat Conservation Plan (SSHCP) covered species list indicate that 23 special-status plant species and 35 special-status wildlife species have been recorded within the U.S. Geological Survey topographic quadrangle containing the project site and the eight surrounding quadrangles. No occurrences of these species have been recorded within the project site or staging area (see Appendix B). Of these, 28 special-status wildlife species and all special-status plant species were eliminated from additional consideration based on ongoing soil disturbance, current known range of the species, or lack of habitat suitable for the species. Although elderberry shrubs are located within the surrounding Bufferlands, no elderberry shrubs are located within the project site or staging area. Similarly, although suitable aquatic habitat for giant garter snake (*Thamnophis gigas*) and western pond turtle (*Actinemys marmorata*) exists within 370 feet of the project site, the vertical 4- to 5-foot flood wall atop the compacted flood control levee is a physical barrier between the suitable habitat and project site. In addition, there is no suitable aquatic or upland habitat present within the project site. Therefore, valley elderberry longhorn beetle, giant garter snake, and western pond turtle are not expected to occur on-site and are not discussed further below. The remaining eight wildlife species are listed in Table 3.4-1 and described below.

Table 3.4-1 Sensitive Species that May Occur in the Project Site

Name	Federal Status[1]	State Status[1]	SSHCP	Habitat	Potential to Occur on the Project Site or Staging Area
Birds					
Cooper's hawk *Accipiter cooperi*	None	None	Covered	Woodland, primarily of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	**May occur:** Species is known to frequent the Bufferlands, riparian habitat along Laguna Creek north of the project site may provide suitable nesting habitat.
Tricolored blackbird *Agelaius tricolor*	None	ST, SSC	Covered	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**May occur:** Species is known to frequent the Bufferlands, riparian habitat along Laguna Creek north of the project site may provide suitable nesting habitat.
Burrowing owl *Athene cunicularia*	None	SSC	Covered	Coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean, desert scrub, Sonoran desert scrub, and valley and foothill grassland. Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**May occur:** Species known to nest in the Bufferlands. Vegetation height at project site may discourage use by owls as its too tall. Limited California ground squirrel burrows as site has been graded historically for staging and construction storage.
Swainson's hawk *Buteo swainsoni*	None	ST	Covered	Great Basin grassland, riparian forest, riparian woodland, valley, and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**May occur:** The trees east of the staging area do not provide suitable nesting habitat. Mature trees and annual grassland in the Bufferlands provide suitable nesting and foraging habitat. Nearest known nest location is 100 feet west of project site.
White-tailed kite *Elanus leucurus*	None	FP	Covered	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**May occur:** The trees within the project site do not provide suitable nesting habitat, mature trees and annual grassland in the surrounding area provide suitable nesting and foraging habitat.
Lesser sandhill crane *Antigone* [=*Grus*] *canadensis*	None	SSC	Not Covered	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands.	**May occur:** Winters in the area and is a regular winter visitor to the Bufferlands. Does not breed in California.

Name	Federal Status[1]	State Status[1]	SSHCP	Habitat	Potential to Occur on the Project Site or Staging Area
Greater sandhill crane *Grus canadensis tabida*	None	T, FP	Covered	Annual and perennial grassland habitats, moist croplands with rice or corn stubble, and open, emergent wetlands. Typically nests in mounds of wetland plants or hummocks in remote portions of extensive wetlands. Sometimes nests in grass-lined depressions on dry sites.	**May occur:** Regular, often daily, visitor to the Bufferlands from September through March. Known to breed only in Siskiyou, Modoc, and Lassen counties and in Sierra Valley, Plumas, and Sierra counties. Does not breed within the survey area.
Loggerhead shrike *Lanius ludovicianus*	None	SSC	Covered	A common resident and winter visitor in lowlands and foothills throughout California. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Occurs only rarely in heavily urbanized areas, but often found in open cropland. Sometimes uses edges of denser habitats.	**May occur:** May forage within the annual grassland for insects and small mice. The project site lacks suitable nesting habitat but riparian area north and west of project site provides suitable nesting and foraging habitat.

[1] Status definitions:

Federal:

FT Threatened (legally protected under ESA)

FE Endangered (legally protected under ESA)

FC Federal candidate (legally protected under ESA)

State:

SE Endangered (legally protected under CESA)

ST Threatened (legally protected under CESA)

FP Fully Protected (legally protected under California Fish and Game Code)

SSC Species of Special Concern (protected under CEQA, but not legally protected under CESA)

SSHCP

Covered: Covered under the SSHCP

Not Covered: Not a covered species under the SSHCP

[2] Potential for Occurrence:

May Occur – Suitable habitat is present within the project site and the nearest known occurrence is within 5 miles.

Source: CNDDB 2021

The project site and staging area provide low quality foraging habitat for raptors, particularly Swainson's hawk due to limited prey availability and ongoing disturbance, such as staging for ongoing projects, driving of commercial septic pump trucks, and disking for fire control. There are five cottonwood trees east of the proposed staging area, but no nest structures attributable to raptors were observed within the trees. The height of the trees, in relation to existing ground level, likely preclude raptors from nesting in the trees.

COMMON WILDLIFE SPECIES

There are many common wildlife species that use disturbed areas, such as the project site and staging area, for foraging, roosting, and/or nesting. These species include native animals that have adapted well to living close to humans, such as red-tailed hawk (*Buteo jamaicensis*), coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), western fence lizard (*Sceleroporus occidentalis*), and tree swallow (*Hirundo rustica*), as well as nonnative species, such as bullfrog (*Rana catesbiana*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*). Common native and nonnative wildlife species could use the project site and staging area for breeding and are likely to move through the area on a regular basis while foraging.

AQUATIC RESOURCES

The drainage ditch present at the south end of the staging area is part of the SRWTP operations. This drainage ditch collects runoff from the digesters area and staging area and conveys it to the headworks of the SRWTP. Features that are part of a treatment system are excluded from state and federal jurisdiction and, therefore, there are no state or federally protected wetlands or other waters within the project site or staging area.

PROTECTED TREES

The Sacramento County Tree Preservation Ordinance (Chapter 19.12 of the County Code) provides protections for native oak trees. Chapter 19.12 of the County Code states that "it shall be the policy of the County to preserve all trees possible through its development review process." It should be noted that to be considered a tree, as opposed to a seedling or sapling, the tree must have a diameter at breast height (dbh) of at least 6 inches or, if it has multiple trunks of less than 6 inches each, a combined dbh of 10 inches. Trees meeting this definition are protected under the County's Tree Ordinance, and no trenching, grading, or filling within the dripline, or destroying, killing, or removing any such tree is allowed without a tree permit from the Director of Public Works. The Sacramento County General Plan Conservation Element (Conservation Element) [Sacramento County 2011] policies CO-138 and CO-139 also provide protections for native trees:

- CO-138. Protect and preserve non-oak native trees along riparian areas if used by Swainson's hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.
- CO-139. Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with the established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.

3.4.2 Discussion

The SRWTP is within the urban development area boundary of the SSHCP and thus eligible for coverage. Project mitigation measures are consistent with the covered species take avoidance and minimization measures (AMMs) in the SSHCP. Regional San will implement these measures to avoid, minimize, and fully mitigate impacts to covered species and by doing so, impacts to other special-status species not covered by the SSHCP will also be avoided, minimized, and fully mitigated.

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

Less than significant with mitigation incorporated. Special-status plant and animal species not expected to occur, or with a low probability to occur (because of a lack of suitable habitat, or range restrictions) are not addressed further in this analysis. Additionally, wildlife species that could occur within the Bufferlands, project site, or staging area occasionally are not expected to be affected by construction and operation of the project. Although a comprehensive list of special-status species was considered and evaluated for potential effects, this impact analysis focuses on resources expected to be affected by project implementation. Because the project site and staging area do not provide habitat suitable for any special-status plant species, they are not discussed further.

Swainson's Hawk, White-Tailed Kite, Cooper's Hawk, Burrowing Owl and Other Raptors

Most of the project site and staging area have been graded and are devoid of vegetation. Ruderal vegetation on the margins of the graded area is tall and thick, limiting the foraging potential for raptors. Due to ongoing disturbance, lack of prey availability, and habitat conditions, this site is considered low quality foraging habitat for Swainson's hawk and other raptors. In addition, Regional San mitigated for the loss of Swainson's hawk foraging habitat within the

project site and staging area as part of the EchoWater Project (Regional San 2014). Therefore, the loss of up to 5.6 acres of barren and ruderal habitat would not have a substantial adverse effect on the foraging success of the local Swainson's hawk population or of other raptors. For this reason, potential impacts to Swainson's hawk foraging habitat would be less than significant. The project would not require any tree removal that could result in direct loss of nests. In addition, there is no suitable nesting habitat for raptors within the project site or staging area. Although there are five Freemont's cottonwoods east of the staging area, the base elevation of the trees is approximately 12 feet below current ground level due to historical fill of the SRWTP site. No raptor nest structures were observed within these cottonwoods.

However, there are three known Swainson's hawk nests that have been active at some point within the last 5 years within the project vicinity (Figure 3.4-1). The nearest nest, which was active in 2020, is in a willow tree 100 feet northeast of the project site. The nest is in a riparian area adjacent to Laguna Creek within the Bufferlands. The other two nests are located 430 feet and 560 feet, respectively, north of the project site. Construction activities associated with the proposed project during the breeding season (defined as March 1 - September 15 for Swainson's hawk) near active nest trees could disturb Swainson's hawks or other raptors if they are nesting nearby. Construction disturbance could result in nest abandonment, failure, and/or mortality of chicks or eggs. Other Swainson's hawk and raptor nests located near the project site could also be disturbed or fail as a result of project construction during the breeding season.

Although Swainson's hawk is the only state-listed raptor species expected to occur in the project vicinity, white-tailed kite, a fully protected species under the California Fish and Game Code, could also nest in the project vicinity. Additionally, all raptor species and their nests are protected under California Fish and Game Code. Other raptors known to nest in the project vicinity include red-shouldered hawk, American kestrel, red-tailed hawk, great horned owl, barn owl, and western burrowing owl. Western burrowing owl is designated by CDFW as a species of special concern. The nearest burrowing owl burrows are located in annual grassland approximately 700 feet southeast of the project site, on the east (opposite) side of Laguna Station Road and the UPRR berm. The burrowing owl population within the Bufferlands has been monitored for more than 20 years, and burrowing owls have not been documented or observed nesting within the project site or staging area. Although loggerhead shrike is not a raptor, the SSHCP includes them within their AMM for Covered Raptor Species. Swainson's hawk, white-tailed kite, northern harrier, burrowing owl, and loggerhead shrike are all covered species under the SSHCP. For consistency and to minimize repetition, they are evaluated together with raptors in this IS/MND; however, because the SSHCP AMMs for burrowing owl differ, a separate mitigation measure is included for burrowing owl. Loggerhead shrike, which is designated by CDFW as a species of special concern, is known to nest in the south portion of the main SRWTP facilities area along Bufferlands Road and could nest in other locations in the surrounding area. Construction of the proposed project could disturb nesting loggerhead shrike if they were to nest within the riparian area adjacent to the project site.

The potential loss of Swainson's hawk and other raptor nests due to disturbance from construction activities would be potentially significant.

Mitigation Measure 3.4-1: Avoid Disturbance to Swainson's Hawk and Other Raptor Nests

Regional San will implement the following measures that are consistent with the AMMs in the SSHCP:

- For construction activities that would occur within 0.25 mile of a known or likely Swainson's hawk nest site (identified based on previous years' use by Swainson's hawk), Regional San will initiate construction activities before the nest initiation phase (i.e., before March 1), if possible. Depending on the timing, regularity, and intensity of construction activity, construction in the area prior to nest initiation may discourage a Swainson's hawk pair from using that site and eliminate the need to implement further nest-protection measures, such as buffers and limited construction operating periods around active nests. Other measures to deter establishment of nests (e.g., reflective striping or decoys) may be used prior to the breeding season in areas planned for active construction. However, if breeding raptors establish an active nest site, as evidenced by nest building, egg laying, incubation, or other nesting behavior, near the construction area, they will not be harassed or deterred from continuing with their normal breeding activities.

- For project activities, that begin between March 1 and September 15, preconstruction surveys for Swainson's hawk and other nesting raptors will be conducted to identify active nests on and within 0.25 mile of the project site. Two surveys will be conducted before the beginning of any construction activities between March 1 and September 15. The first survey will be conducted within 30 days prior to ground disturbance activities, with a follow up surveys 3 days prior to the start of ground disturbance activities.
- If active Swainson's hawk, or other covered raptor species nest(s) are found within 0.25 mile of any project-related activity, Regional San will establish a 0.25-mile no-disturbance buffer around the active nest until the young have fledged.
- If active nests of other raptors (other than Swainson's hawk, or other covered raptor species) are found within 500 feet of any project-related activity, Regional San will establish a 500-foot no-disturbance buffer around the active nest until the young have fledged.
- If Swainson's hawk are nesting within 0.25 mile of any project-related activity, then a qualified biologist experienced with Swainson's hawk behavior will monitor the nest throughout the nesting season and to determine when the young have fledged. The qualified biologist can reduce the disturbance buffer as long as reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson's hawk and 500-feet for other raptors, but the size of the buffer may be adjusted if a qualified biologist and Regional San determine that such an adjustment would not be likely to adversely affect the nest. The qualified biologist will be on site daily while construction-related activities are taking place within the buffer. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the qualified biologist will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, and Regional San will meet to determine the best course of action to avoid nest abandonment or take of individuals and will consult CDFW, if necessary, to identify appropriate avoidance measures. The qualified biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into the active construction zone.
- A mandatory Worker Environmental Awareness Program will be conducted by a qualified biologist for all construction workers, including contractors, prior to the commencement of construction activities. The training will include how to identify special-status species and other species discussed in this section that might enter the construction site, relevant life history information and habitats, statutory requirements and the consequences of non-compliance, the boundaries of the construction area and permitted disturbance zones, litter control training and appropriate protocols if a special-status species is encountered. Supporting materials containing training information will be prepared and distributed by the qualified biologist. When necessary, training and supporting materials will also be provided in Spanish. Upon completion of training, construction personnel will sign a form stating that they attended the training and understand all of the AMMs.
- Orange construction fencing will be installed to ensure that ground disturbance does not extend beyond the allowed construction footprint (i.e., the limit of project construction plus equipment staging areas and access roads). This fencing will remain in place until project completion.
- Regional San or its contractor will water active construction areas regularly, including the staging area, if warranted, to avoid or minimize impacts from construction dust on adjacent vegetation and wildlife habitats. No surface water will be used from aquatic land covers; water will be obtained from a municipal source or existing groundwater well.

Significance after Mitigation

Implementing Mitigation Measure 3.4-1 would reduce project-related impacts to Swainson's hawk, white-tailed kite, Cooper's hawk, loggerhead shrike, and other nesting raptors to a **less-than-significant** level because it would avoid the potential disturbance or loss of active nests during project construction.

Mitigation Measure 3.4-2: Avoid Disturbance of Burrowing Owl Nests

Regional San will implement the following measures that are consistent with AMMs included in the SSHCP. Surveys for burrowing owl will be required for both the breeding and non-breeding season.

- A qualified biologist will survey available habitat within 250 feet of the project site and staging area and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, eggshell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the qualified biologist while walking transects throughout the entire project site and all accessible areas within a 250-foot radius from the project site. The centerline of these transects will be no more than 50 feet apart and will vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects will be closer together, and in open areas with little vegetation, they can be 50 feet apart. If suitable habitat is identified during the initial survey, and if the project does not fully avoid the habitat, pre-construction surveys will be required. Burrowing owl habitat is fully avoided if project-related activities do not impinge on a 250-foot buffer established by the qualified biologist around suitable burrows.
- Prior to any ground disturbance, a qualified biologist will conduct pre-construction surveys in all areas that were identified as suitable habitat if project activities are closer than the 250-foot buffer to suitable burrows. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls within the project site and staging area, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey will last a minimum of 3 hours. The survey will begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total) or begin 2 hours before sunset and continue until 1 hour after sunset. A minimum of two pre-construction surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their location will be mapped. Surveys will conclude no more than 2 calendar days prior to construction.

If burrowing owl or evidence of burrowing owl is observed on the project site or within 250 feet of the project site during pre-construction surveys, then the following will occur:

- **During Breeding Season:** If the qualified biologist finds evidence of burrowing owl within the project site or staging area during the breeding season (February 1 through August 31), all project-related activities will avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 250-foot buffer zone. Construction and other project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and Regional San develops an avoidance, minimization, and monitoring plan that is approved by CDFW prior to project construction based on the following criteria:
  - CDFW approves the avoidance and minimization plan provided by Regional San.
  - A qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).
  - The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.
  - If there is any change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to halt activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from CDFW.
  - If monitoring by the qualified biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by CDFW. The qualified biologist will excavate the burrow in accordance with the latest CDFW guidelines for burrowing owl to prevent reoccupation after receiving approval from CDFW.

- During Non-Breeding Season: During the non-breeding season (September 1 through January 31), the qualified biologist will establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer will be allowed. Construction activities within the non-disturbance buffer will be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites:
  - A qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
  - The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.
  - If there is any change in owl foraging behavior as a result of construction activities, the qualified biologist will have authority to halt activities within the 250-foot buffer.
  - If the owls are gone for at least 1 week Regional San may request approval from CDFW that a qualified biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed, and construction may continue.
  - Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.
  - During construction of the proposed project, 250-foot construction buffer zones will be established and maintained around any occupied burrow. A qualified biologist will monitor the site to ensure that buffers are enforced, and owls are not disturbed. The qualified biologist will also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into or is found in the active construction zone.
  - Passive relocation is not allowed without the written approval of CDFW. Passive owl relocation may be allowed on a case-by-case basis during the non-breeding season (September 1 through January 31) with the written approval of CDFW, if the other measures described in this mitigation measure preclude work from continuing. Passive relocation must be done in accordance with the latest CDFW guidelines for burrowing owl. Passive relocation will only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of the proposed project. If passive relocation is approved by CDFW, a qualified biologist can passively exclude owls from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors will be in place for 48 hours to ensure that owls have left the burrow, and then the biologist will excavate the burrow to prevent reoccupation. Burrows will be excavated using hand tools only. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside.

Significance after Mitigation

Implementing Mitigation Measure 3.4-2 would reduce project-related impacts on burrowing owl to a **less-than-significant** level because it would avoid the potential disturbance or loss of active burrows during project construction, and requires a CDFW approved avoidance, minimization, and monitoring plan for construction within the 250-foot no disturbance buffer during the nesting season as long as the burrow is not disturbed.

Tricolored Blackbird, Sandhill Crane, and Other Special-Status Birds

Lesser sandhill crane is a CDFW species of special concern that winters in the project vicinity and is a regular visitor to the Bufferlands. Greater sandhill crane, which is listed as threatened under the California Endangered Species Act (CESA) and a fully protected species pursuant to the California Fish and Game Code (CFGC), is also a regular (often daily) visitor during the winter. Sandhill cranes do not breed near the project site but are commonly observed foraging and resting in annual grassland habitat within the Bufferlands during the winter. Construction of the proposed project would occur during the dry season (summer) when sandhill cranes do not occur in the region or use habitats in the Bufferlands near the project site. If project activities were initiated during winter when the

Bufferlands are being used by sandhill cranes for foraging or resting, the cranes would likely move offsite because suitable habitat is available and relatively abundant adjacent to the project site on the Bufferlands. Therefore, the disruption to winter habitat within the SRWTP site is not expected to affect the local wintering population abundance or viability of Sandhill crane.

However, grading and other construction activities for the proposed project could result in the loss of nests, or disruption to nesting attempts, of tricolored blackbird, and possibly other special-status bird species if they nest along the riparian area adjacent to the project site in the future.

Tricolored blackbird is a CDFW species of special concern and is listed as a threatened species under the CESA. There are no records of nesting tricolored blackbird colonies in the project vicinity, but they are known to forage on the Bufferlands. Riparian habitat, which includes, Himalayan blackberry along Laguna Creek north of the project site may provide suitable nesting habitat for tricolored blackbird. Construction of the proposed project could disturb nesting tricolored blackbirds if they were to nest within the riparian area adjacent to the project area.

The potential disturbance or loss of tricolored blackbirds, or other special-status bird nests, if they are found to occur in or immediately adjacent to the project site in the future prior to construction, as a result of project construction would be a potentially significant impact.

Mitigation Measure 3.4-3: Avoid Disturbance to Tricolored Blackbird, or Other Special-Status Birds

Regional San will implement the following measures that are consistent with AMMs included in the SSHCP:

- A qualified biologist will conduct a field investigation to determine if existing or potential nesting or foraging sites are present in adjacent areas within 500 feet of the project footprint. Potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow, blackberry, wild rose, thistle, and other thorny vegetation. Foraging habitat includes annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. The qualified biologist will map all existing or potential nesting or foraging sites. Nesting sites will also be noted on construction maps.
- Preconstruction surveys will be required to determine if active nests of tricolored blackbird or other special-status birds are present within 500 feet of the project site, if potential nesting sites are found during field investigations and construction activities will occur during the breeding season (March 1 through September 15). A qualified biologist will conduct preconstruction surveys within 30 days and again within 3 days of ground-disturbing activities in areas of potential nesting habitat within 500 feet of the proposed project site to determine the presence of nesting tricolored blackbird or other special-status birds. If a tricolored blackbird nest colony or nest of other special-status bird is present, then the following measures shall be implemented:
  - If active nests are found within the project footprint or within 500 feet of any project-related activity, Regional San will establish a temporary no-disturbance buffer, the size of which has been determined by a qualified biologist around the active nest site until the young have fledged.
  - If nesting tricolored blackbirds are present within 500 feet of any project-related activity, then a qualified biologist will monitor the nest colony throughout the nesting season and to determine when the young have fledged. The qualified biologist will be on site daily while construction-related activities are taking place near the no-disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the qualified biologist determines that tricolored blackbirds are exhibiting agitated behavior, construction will halt until the buffer size is increased to a distance necessary to prevent harm or harassment of nesting tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with Regional San will be held to determine the best course of action to avoid nest abandonment or take of individuals. CDFW will be consulted, if necessary, to identify appropriate avoidance measures for the tricolored blackbird nesting colony. The qualified biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a tricolored blackbird flies into an active construction zone (i.e., outside the buffer zone).

Significance after Mitigation

Implementing Mitigation Measure 3.4-3 would reduce project-related impacts on tricolored blackbirds and other special-status birds to a **less-than-significant** level because it would avoid the potential disturbance or loss of active nests during project construction and requires 500-foot no disturbance buffer during the nesting season as long as the nest/colony is occupied.

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

No impact. Riparian habitat or other sensitive natural communities do not occur within the project site or staging area. In addition, the project would not require any tree removal or affect riparian habitat or sensitive natural communities in the adjacent Bufferlands. Therefore, there would be **no impact**.

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

No impact. No state or federally protected wetlands occur within the project site or staging area. As discussed above, the nearby drainage ditch is part of the SRWTP system and is not considered a state or federally protected wetland. In addition, the project would not have a substantial adverse effect on the drainage ditch. Therefore, there would be **no impact**.

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

Less-than-significant impact. The project site is located within the Pacific Flyway, which is a major north-south route for migratory birds along western North America. Large numbers of waterfowl, shorebirds, and cranes may move through the area seasonally and may congregate in wetlands, grasslands, and agricultural fields for winter or use them as resting grounds during longer migrations from the Arctic to Central or South America. However, the project would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds. All of the proposed facilities would be built within the existing disturbed SRWTP site, which is surrounded by higher quality habitat on the adjacent Bufferlands. Because suitable foraging habitat would be available nearby on the Bufferlands and surrounding areas, and the project is located within a previously disturbed area, the relatively small amount of permanent and temporary disturbance associated with the proposed project would not result in substantial effects on wildlife movement patterns. Additionally, areas that would be affected by construction within the project site are not known to contain native wildlife nursery sites, such as colonial bird rookeries or bat roosts.

Although the project would not require tree removal, implementation of the project could adversely affect common migratory birds through disturbance during the breeding season. Loss of active nests of common species would be inconsistent with the Migratory Bird Treaty Act (MBTA) and CFGC. However, the list of MBTA- and CFGC-protected birds includes many common species not otherwise protected under federal, state, or local laws. Potential loss of active nests of common species during project construction would be limited to those few nests that are present in proximity to noise or visual disturbances during construction and this loss would not substantially reduce the abundance of any species, nor cause any species to drop below self-sustaining levels. As such, potential adverse effects on common migratory birds and CFGC-protected birds would not alone constitute a significant impact. In addition, potential impacts to common nesting bird species would be addressed through implementation of Mitigation Measures 3.4-1 through 3.4-3. Therefore, impacts related to migratory species would be **less than significant**.

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

Less-than-significant impact. Project development would not require removal of the any trees. Therefore, the project would not conflict with the Sacramento County Tree Protection Ordinance. No riparian habitat or wetlands would be affected by the project. The project has the potential to result in disturbance or habitat loss for sensitive species listed above; however, mitigation measures are identified above to reduce impacts special-status species to a less-than-significant level. Therefore, the project would not conflict with any policies or ordinances protecting biological resources. This impact would be less than significant.

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

No impact. The project site is within the area covered by the SSHCP. The proposed project will not remove land cover habitat that requires mitigation fees pursuant to the SSHCP, additionally the mitigation and minimization measures included above were taken from the covered species take AMMs from the SSHCP, thus the project would not conflict with the SSHCP. There would be no impact.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
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) Substantially disturb human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.5.1 Environmental Setting

In January 2020, ESA completed a cultural resources assessment for the Regional San Recycled Water Distribution Mains, Lateral Pipelines, and On-Farm Connections Project (Regional San 2020a). The report covered an area that began approximately 0.25-mile south of the current project site and continued to the south. Therefore, while the background setting information is appropriate for the proposed project, the cultural resources records search conducted for the report did not cover the current project site.

RECORDS SEARCH

An updated cultural resources records search was completed at the North Central Information Center (NCIC) of the California Historical Resources Information System on December 15, 2020 (File No. SAC-20-175). The results of the NCIC search revealed no archaeological resources, built-environment historical resources, or previous reports within the project site or staging area. One previously recorded historic-period resource, the Western Pacific Railway, is located outside of the project site but within the 8-mile search radius. Eight cultural reports have been conducted outside of the project site but within the search radius.

ARCHAEOLOGICAL SENSITIVITY

Landforms that predate the earliest estimated periods for human occupation in the region are considered to have a very low potential for buried archaeological resources, while those that postdate human occupation are considered to have a higher potential for buried archaeological resources. Currently, archaeological research indicates that the earliest evidence for human occupation of California dates to the Late Pleistocene, which ended approximately 11,500 before present. Therefore, the potential for buried archaeological deposits in landforms from or predating the Late Pleistocene is very low (Regional San 2020a:24).

The project site and staging area are mapped as Pleistocene-age sediments. Because these sediments were deposited prior to human occupation in the area, the potential for buried archaeological resources representing past human use and occupation would be very low (Regional San 2020a:24).

3.5.2 Discussion

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

No impact. There are no built-environment structures within the project site or staging area and the records search revealed no built-environment historical resources within the project vicinity. Therefore, there would be **no impact** to historical resources.

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

Less than significant with mitigation incorporated. Although the NCIC records search did not reveal any previously identified archaeological resources and the project site has a low sensitivity for buried resources, project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. This impact would be potentially significant.

Mitigation Measure 3.5-1: Unanticipated Discoveries of Archaeological Resources

If a prehistoric archeological site (such as any unusual amounts of stone, bone, or shell) or a historic-period archaeological site (such as concentrated deposits of bottles or bricks, amethyst glass, or other historic refuse), is uncovered during grading or other construction activities, all ground-disturbing activity within 100 feet of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. Regional San will be notified of the potential find and a qualified archeologist shall be retained to investigate its significance. If the find is a prehistoric archeological site, the appropriate Native American group shall be notified, and Mitigation Measure 3.18-1 shall be implemented. Any previously undiscovered resources found during construction will be recorded on appropriate California Department of Parks and Recreation 523 forms and evaluated for significance under all applicable regulatory criteria. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with Regional San to follow accepted professional standards such as further testing for evaluation or data recovery, as necessary. If artifacts are recovered from significant historic archaeological resources, they shall be housed at a qualified curation facility. The results of the identification, evaluation, and/or data recovery program for any unanticipated discoveries shall be presented in a professional-quality report that details all methods and findings, evaluates the nature and significance of the resources, and analyzes and interprets the results.

Significance Conclusion

Implementation of Mitigation Measure 3.5-1 would reduce impacts to archaeological cultural resources to a **less-than-significant** level by requiring preservation options and proper curation if significant artifacts are recovered.

c) Substantially disturb human remains, including those interred outside of formal cemeteries?

Less-than-significant impact. There are no known cemeteries or burials on the project site or immediate area. However, because earthmoving activities associated with project construction would occur, there is potential to encounter buried human remains or unknown cemeteries in areas with little or no previous disturbance.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.

These statutes require that, if human remains are discovered, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the County coroner shall be notified immediately. If the remains

are determined by the coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, the NAHC-designated Most Likely Descendant and the landowner shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments, if present, are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, this impact would be **less than significant**.

3.6 ENERGY

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

3.6.1 Environmental Setting

ENERGY TYPES AND SOURCES

California relies on a regional power system composed of a diverse mix of energy sources, including:

- **Petroleum**: Petroleum products (gasoline, diesel, jet fuel) are consumed almost exclusively by the transportation sector, which is responsible for 85 percent of the petroleum consumed in the state (EIA 2020). In 2015, a total of 15.1 billion gallons of gasoline were sold in California (CEC 2020). To meet CARB regulations, all gasoline and diesel fuel sold in California for motor vehicles is refined to be a specific blend of motor gasoline called California Reformulated Gasoline (EIA 2020).
- **Natural gas**: While the majority of natural gas consumers in California are residential and small commercial users, these users consume only about 35 percent of natural gas in the state. Larger volume gas consumers, such as utilities for electricity generation and industrial consumers, although fewer in number, consume the remaining 65 percent of natural gas used in the state (CPUC 2020). Biogas is renewable energy alternative to the use of natural gas.
- **Electricity and renewables**: In 2002, Senate Bill [SB] 1078 established a renewables portfolio standard (RPS) program. In 2018, SB 1078 was superseded by SB 100, which created the 60 percent target by 2030 described below. The program is jointly implemented by the California Public Utilities Commission and the California Energy Commission and requires all load-serving entities to procure 60 percent of their total electricity retail sales from renewable energy sources by 2030. Most retail sellers met or exceeded their 29-percent interim RPS target in 2018, including all large investor-owned utilities, which provide electricity to 75 percent of all utility customers (CPUC 2019; EIA 2019). Biogeneration facilities, such as the proposed project, that use digester gas to generate electricity are eligible for RPS credits under the RPS Eligibility Guidebook. SMUD is the load-serving entity that is the primary electricity supplier Sacramento County.
- **Alternative fuels**: Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity). Use of alternative fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, AB 32 Scoping Plan).

ENERGY FACILITIES AND SERVICES IN THE PROJECT VICINITY

Electricity service is provided to the SRWTP site and the project site by SMUD. SMUD operates the nearby Pocket and Elk Grove electrical substations, complexes of transformers, and switches located to the north and south, respectively. These two major substations are supplied with 230,000 volts (230 kilovolts) from the larger electrical grid and, along

with the Carson Cogen Plant, supply electricity to the SRWTP. On average, the SRWTP requires up to 12 MW of electricity each day. Natural gas service is provided to the SRWTP site and project site by PG&E.

Currently, Regional San delivers renewable biogas generated by the SRWTP wastewater treatment process to SMUD according to the terms of the Commodity Agreement. Treated biogas resulting from digestion of solids at the SRWTP is captured and diverted to the Carson Cogen Plant or injection into a SMUD-owned, natural gas utility pipeline that delivers the combined gas to the Cosumnes Power Plant located at Rancho Seco. When used, the Carson Cogen Plant SRWTP biogas in a duct burner that, along with natural gas turbines, generates electricity. Waste heat from the gas turbine creates steam for use in a steam turbine to generate electricity. Together, two generators generate up to 100 MW of power for local residential and industrial use. Power from the Cogen Plant is typically delivered to the local power grid, but it can also be sent directly to the SRWTP. More recently, SRWTP biogas is primarily sent to Cosumnes Power Plant, which uses the combination of natural gas and SRWTP biogas as fuel for turbines and produces up to 600 MW of power. SMUD claims credits towards its obligations under the RPS program for the biogas is uses to generate electricity at the Cosumnes Power Plant; however, SMUD does not claim RPS credit for the lesser amount of biogas it uses at the Carson Cogeneration Plant (CEC 2017; Cutlip, pers. comm. 2021).

3.6.2 Discussion

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

Less-than-significant impact. The project would result in energy consumption during construction and operation. Operation of the project would also result in generation of electricity and heat.

Construction

Energy would be required to construct the proposed project, operate, and maintain construction equipment, and transport construction materials. The one-time energy expenditure required to construct the new building and infrastructure associated with the proposed project would be non-recoverable. Most energy consumption would result from operation of construction equipment and vehicle trips associated with commute trips by construction workers and haul trucks supplying materials.

Construction of the project is estimated to require consumption of 30,813 gallons of diesel by off-road construction equipment, 145 gallons of diesel from construction-related truck trips, and 359 gallons of gasoline associated with construction workers commuting to and from the construction site. The energy needs for project construction would be temporary and are not anticipated to require additional capacity or increase peak or base period demands for electricity or other forms of energy. Construction equipment and associated energy consumption would be typical of that associated with construction of energy recovery projects.

Operation

Energy would also be required for operation of the project related to electricity, heat, and fuel for employees. Compliance with California Code of Regulations Title 24 Energy Efficiency Standards would result in an energy-efficient building. The new biogeneration facility would require electricity for operation. However, the proposed combustion engine generators would produce between 10 and 15 MW of power, which would offset utility power purchases. In addition, the project would result in a decrease in electricity demand from the Carson Cogen Plant and/or Cosumnes Power Plant, which is where the biogas is currently processed. Annual electricity generated by the engines is estimated to be between 74,460 megawatt hours (MWh) and 105,000 MWh per year.

Operation of the project would also require the use of natural gas for blending with the biogas to generate electricity and heat. However, the project would result a decrease in natural gas demand at the Carson Cogen Plant and/or Cosumnes Power Plant, which is where the biogas is currently processed. Therefore, the overall natural gas use is

expected to be similar to existing conditions. Operation of a biogeneration facility at the SRWTP site would result in more increased efficiencies compared to delivering the biogas to SMUD in exchange for electricity and steam.

Operation of the proposed project would require fewer than 10 new employees and would result in small increase in maintenance-related vehicle trips. Project trips would be limited to employee trips only and fuel consumption associated with vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy includes decreasing overall per capita energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. Given that the proposed project is a renewable energy project, it would increase reliance on renewable energy sources. The proposed project's energy consumption through construction, building operation, or transportation would not be considered wasteful, inefficient, or unnecessary. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. Relevant plans that pertain to the efficient use of energy include the California Energy Commission's (CEC's) Integrated Energy Policy Reports, which provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets, renewable energy, energy provisioning reliability and infrastructure, and transportation energy demand (Bailey et al. 2021).

Project-generated VMT would increase slightly related to a small increase in long-term employees. Although the addition of up to 10 new employees would result in more energy use, the project would be designed with energy efficiency design features and the implementation of the project would offset all electricity use through electricity generated by the project. In addition, the project would further the state's goals for use of renewable energy. Therefore, the project would not conflict with a state or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

3.7 GEOLOGY AND SOILS

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

3.7.1 Environmental Setting

REGIONAL GEOLOGY

The project site lies within the Great Valley Geomorphic Province. The geologic parent material within the region was primarily formed from erosion of the Sierra Nevada range to the east and, to a lesser extent, the Coast Ranges to the west. About 30 million years ago, Great Valley deposition became dominated by freshwater runoff from the growing

Sierra Nevada and Coast Range mountains. This runoff created large alluvial fan complexes and vast lakes that filled the valley with thick accumulations of river and lacustrine sediments.

The merging of the massive alluvial fans of the Sierra Nevada and the smaller fans from the Coast Ranges and subsequent sea level rise and development of the Sacramento-San Joaquin Delta have confined the Sacramento River to a relatively narrow channel where it formed its current flood plain and historic natural levees.

SEISMICITY

The project site is not located within the vicinity of an Alquist-Priolo zone (CGS 2021). No known active faults occur in the project vicinity (Jennings and Bryant 2010). The closest known fault to the project site is the Vaca fault, located approximately 25 miles to the southwest (Sacramento County 2017). The nearest active (within the last 200 years) faults are the Cordelia and Green Valley faults, which are 37 and 41 miles from the project site, respectively.

TOPOGRAPHY AND SOILS

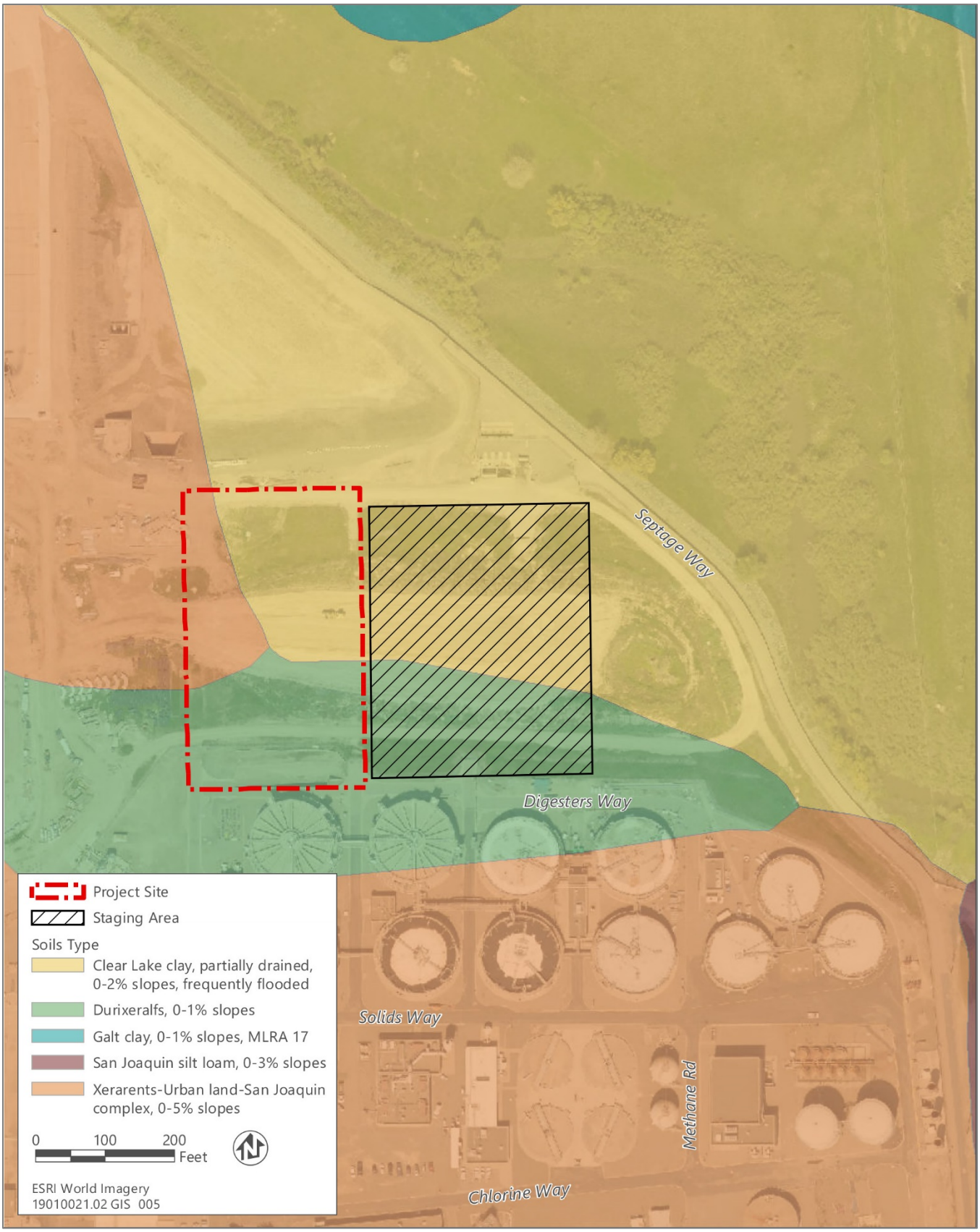
The project site is relatively flat. Soils underlying the project site and staging area include Clear Lake clay, partially drained, 0-2 percent slopes, Durixeralfs, 0-1 percent slopes, and Xerarents-Urban Land San Joaquin Complex, 0-5 percent slopes (Figure 3.7-1). All of these soil groups have slow permeability and runoff and high shrink-swell potential (NRCS 1993).

PALEONTOLOGICAL RESOURCES

Significant nonrenewable vertebrate and invertebrate fossils and unique geologic units have been documented throughout California. The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks. Paleontological potential refers to the likelihood that a rock unit will yield a unique or significant paleontological resource. Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered as having a high paleontological potential while Holocene-age deposits (less than 10,000 years old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms.

The project site is located in the Sacramento Valley. The depositional history of the Sacramento Valley during the late Quaternary period (1.6 million years ago to the present) included several cycles related to fluctuations in regional and global climate that caused alternating periods of deposition followed by periods of subsidence and erosion.

A review of a geologic map prepared by Wagner et al. (1981) indicates that the project site is located within the Pleistocene-age Riverbank Formation. The Riverbank Formation is Pleistocene in age; estimates place it between 130,000 and 450,000 years before present. The Riverbank formation is known to contain vertebrate fossils. The Society of Vertebrate Paleontology Standard Guidelines indicate that the Riverbank Formation would be considered to have a high sensitivity for paleontological resources. A search of the University of California Museum of Paleontology's database was conducted on January 5, 2021. Records of paleontological finds maintained by the University of California Berkeley Museum of Paleontology (UCMP) state that there are 13 localities at which fossil remains have been found in Sacramento County; however, none of the sites are in the project vicinity (UCMP 2021).



Source: Data downloaded from NRCS in 2018 and adapted by Ascent Environmental in 2020

Figure 3.7-1 Soils

3.7.2 Discussion

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

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

No impact. The Alquist-Priolo Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project site is not located within a fault zone as delineated on an Alquist-Priolo Fault Zoning Map (CGS 2021), nor is it located within a seismically active area. In addition, the project would not include any buildings for human occupancy. Therefore, **no impact** would occur.

ii) Strong seismic ground shaking?

Less-than-significant impact. No faults are mapped as crossing or trending towards the project site; therefore, the potential for surface rupture within the project site is considered low. Moderate ground motion could occur as a result of faults in the surrounding area; however, the new building and associated facilities would be constructed in accordance with the California Building Code (CBC), which provides minimum standards for building design in the State of California. Chapter 16 of the CBC (Structural Design Requirements) includes regulations and building standards governing seismically resistant construction and construction techniques to protect people and property from hazards associated with excavation cave-ins and falling debris/construction materials. Chapter 18 of the CBC provides regulations regarding site excavations, foundations, retaining walls, and grading, including, but not limited to, requirements for seismically resistant design, foundation investigation, stable cut and fill slopes, and excavation, shoring, and trenching. Because the project would be designed in accordance with the most recent provisions of the CBC, the project's seismic hazard impacts would be **less than significant**.

iii) Seismic-related ground failure, including liquefaction?

Less-than-significant impact. Liquefaction is possible in areas of loose, sandy soils with a high-water content. Soils located within the project site and staging area are moderately to well drained; however, groundwater depths are shallow (10 to 20 feet below sea level) (Regional San 2016). As discussed above in item a) ii), the new building and associated facilities would be constructed in accordance with the CBC, which provides regulations and building standards governing seismically resistant construction. Because the project would be designed in accordance with the most recent provisions of the CBC, the project's seismic hazard impacts related to liquefaction would be **less than significant**.

iv) Landslides?

Less-than-significant impact. The project site and surrounding area are located in a flat area. In general, landslide susceptibility is low in areas where slopes are low, even in weak ground material. Because slopes are generally flat in the project vicinity, landslide susceptibility for the project would be low. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. Grading and excavation during project construction would result in exposure of soil to potential wind and water erosion until the project site and staging area are effectively stabilized and revegetated. The project would disturb up to 5.6 acres that is not currently paved, and construction projects disturbing 1 acre or more

need to obtain coverage under the State Water Resources Control Board's Construction General Permit. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP). The SWPPP would include best management practices (BMPs) to protect stormwater runoff; a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs.

Runoff from the project site and staging area flows into the storm drainage system within the SRWTP site and is routed to the SRWTP for treatment. Treated stormwater is discharged in accordance with Regional San's existing the National Pollutant Discharge Elimination System (NPDES) permit (Order R5-2010-0114) for discharge of treated effluent to the Sacramento River. Compliance with these permitting requirements for construction and operation of the project would reduce this impact to a **less-than-significant** level.

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

Less-than-significant impact. Slope instability includes landslides, debris flows, and rock fall. The only portion of Sacramento County that is considered to have landslide potential is along the eastern boundary, from the Placer County line to the Cosumnes River (Sacramento County 2017), which is not in the vicinity of the proposed project. In addition, the topography of the project site and staging area is relatively flat, and landslides and debris flows are not anticipated. Therefore, project-related impacts related to unstable soils would be **less than significant**.

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

Less-than-significant impact. Substantial risk to life or property would generally occur to habitable buildings, which could experience compromised structural integrity because of expansive soils. The project does not include construction of any habitable buildings. However, if expansive soils are encountered on-site, damage to building foundations, underground utilities, and other subsurface facilities could occur if these facilities are not designed and constructed to resist the changing soil conditions. The project would comply with the CBC, which includes provisions for construction on unstable and expansive soils. As required by the CBC, preparation of a preliminary soils report and/or geotechnical investigation would assess site-specific conditions and include measures to prevent unstable or expansive soils from becoming problematic, such as fill selection, moisture control, and compaction during construction. Therefore, expansive soils would be addressed through standardized foundation engineering practices, and the project would be constructed in compliance with applicable CBC regulations and other County and state requirements to address expansive soils. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. The project would include construction of a restroom that would connect to the SRWTP's existing general sanitary sewer drainage system. No septic tank or alternative waste disposal system would be constructed. Therefore, this impact would be **less than significant**.

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

Less than significant with mitigation incorporated. Although a UCMP records search did not identify fossils from the project vicinity, the project site and staging area are underlain by the Riverbank Formation, which is considered to have a high sensitivity for paleontological resources. Ground-disturbing activities in fossil-bearing soils and rock formations have the potential to encounter paleontological resources during project construction. Therefore, there is the potential to inadvertently damage or destroy paleontological resources that may be present below the ground surface. This impact would be potentially significant.

Mitigation Measure 3.7-1: Conduct Paleontological Worker Awareness Training Prior to Ground-Disturbing Activities

- The construction contractor shall conduct training with training materials prepared by a qualified paleontologist that will alert all construction personnel and operational staff involved in equipment training about the possibility of encountering fossils. The appearance and types of fossils likely to be seen during construction will be described. Construction personnel shall be trained about the proper notification procedures should fossils be encountered.
- If paleontological resources are discovered during earthmoving activities, the construction contractor shall immediately halt operations within 100 feet of the find and notify Regional San. Regional San shall retain a qualified paleontologist for identification and salvage of fossils so that construction delays can be minimized. If large specimens are discovered, the paleontologist shall have the authority to halt or divert grading and construction equipment while the finds are removed. The paleontologist shall be responsible for implementing all tasks summarized below.
  - In the event of discovery, salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster-jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits.
  - Recovery or stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting.
  - Laboratory preparation (cleaning and repair) of collected fossil remains to a point of curation, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens.
  - Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database.
  - Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection.

Significance Conclusion

Implementation of Mitigation Measure 3.7-1 would reduce potential impacts associated with paleontological resources to a **less-than-significant** level because construction workers and operational personnel would be alerted to the possibility of encountering paleontological resources, work would stop if a paleontological resource was encountered, and if unique paleontological resources are encountered they would be identified and salvaged by a qualified paleontologist, thereby preventing the destruction of a unique paleontological resource.

3.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions.				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

3.8.1 Environmental Setting

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHG emissions contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial onsite fuel usage, and agriculture and forestry. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing together (IPCC 2014:5).

Climate change is a global problem. GHGs are global pollutants because even local GHG emissions contribute to global impacts. GHGs have long atmospheric lifetimes (one to several thousand years) and persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any particular GHG molecule is dependent on multiple variables and cannot be determined with any certainty, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration (IPCC 2013:467).

3.8.2 Regulatory Setting

STATEWIDE GHG EMISSION TARGETS AND THE CLIMATE CHANGE SCOPING PLAN

Reducing GHG emissions in California has been the focus of the state government for approximately two decades (CEC 2019). GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (AB 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (SB 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015:3).

CLIMATE CHANGE SCOPING PLAN

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the California Air Resources Board (CARB), outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017a:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). Among many other reductions, it calls for the use of renewable biofuels, including biogas generated at wastewater treatment plants, in place of fossil fuels (CARB 2017a:64).

RENEWABLES PORTFOLIO STANDARD PROGRAM

California has passed legislation requiring the increase in use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018). These targets are the basis of California's Renewables Portfolio Standard (RPS) program.

SHORT-LIVED CLIMATE POLLUTANT REDUCTION STRATEGY

Pursuant to SB 1383 of 2016, CARB adopted the *Short-Lived Climate Pollutant (SLCP) Reduction Strategy*, which is part of CARB's 2017 Scoping Plan and is California's plan for reducing emissions of high global-warming potential gases with short atmospheric lifetimes, including methane. As one of its measures, the strategy strives to reduce GHG emissions and displace fossil-based natural gas (CARB 2017b; CARB 2017a:3). It calls for the use of anaerobic digestion facilities at wastewater treatment plants to produce methane and the use of this methane to generate electricity (CARB 2017b:77–78).

Under existing conditions, the biogas generated by the SRWTP anaerobic digesters is used by SMUD at two of its power plants. SMUD pipes most of the biogas to its Cosumnes Power Plant, which is located near its Rancho Seco Facility in Herald, California, but also uses some of the biogas at the Carson Cogeneration Plant, which is also called the Central Valley Financing Authority Cogeneration Plant (CVFA Cogen 1) and is adjacent to the SRWTP. SMUD claims credits towards its obligations under the RPS program for the biogas is uses to generate electricity at the Cosumnes Power Plant; however, SMUD does not claim RPS credit for the lesser amount of biogas it uses at the Carson Cogeneration Plant (CEC 2017; Cutlip, pers. comm. 2021).

LOCAL CLIMATE ACTION PLANS

Most of the local jurisdictions served by the SRWTP have established their own plans for reducing GHGs, including Sacramento County, and the Cities of Sacramento, Elk Grove, Citrus Heights, Folsom, and West Sacramento. The City of Rancho Cordova and the communities of Courtland and Walnut Grove are also served by the SRWTP but have not prepared climate action plans. Each climate action plan establishes a local inventory of GHG emissions, adopts a GHG reduction target, and identifies GHG reduction measures for achieving these targets. Many of the GHG reduction measures in these local CAPs emphasize the need to reduce reliance on nonrenewable forms of energy and, conversely, encourage the use of renewable forms of energy, including solar and biogas. While these local CAPs recognize the GHG emissions associated with the treatment of wastewater generated within their jurisdictions—treatment that is provided by the SRWTP—the local climate action plans do not include measures pertaining to how the SRWTP operates.

3.8.3 Discussion

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

No impact. Construction-related GHGs would be emitted by off-road equipment, haul trucks transporting equipment and materials, and commute trips by construction workers. GHG emissions associated with the proposed project were estimated for project construction and operation using CalEEMod, Version 2016.3.2 (CAPCOA 2016). See Appendix A for detailed input parameters and modeling results. Based on modeling conducted, it is estimated that construction of the project would generate a total of 320 metric tons of carbon dioxide equivalent ($MTCO_2e$) over the duration of all construction activities (2022–2023). This one-time level of emissions would not exceed SMAQMD's adopted mass emission threshold of 1,100 $MTCO_2e$/year for analyzing construction emissions (SMAQMD 2020).

The project's operational GHG emissions would include GHGs emitted by the new cogeneration system that would use biogas from the digesters to generate electricity, and by the additional worker commute trips to and from the project site. Based on the CalEEMod modeling, it is estimated that worker commute trips during operation of the project would generate approximately 55 $MTCO_2e$/year. Based on preliminary off-model emission calculations prepared to support the permit application to SMAQMD, it is estimated that combustion of the biogas by Regional San's new cogeneration system to produce electricity would emit 61,736 $MTCO_2e$/year. These emission calculations are also provided in Appendix A. However, the same biogas is combusted under existing conditions at SMUD's facilities producing approximately the same mass of GHGs.

In other words, Regional San's digesters would produce the same amount of biogas as they do under existing conditions but, instead of being used by SMUD to generate electricity for the grid, the biogas would be delivered to a new on-site cogeneration engine system operated by Regional San. Regional San's cogeneration system would supply electricity to equipment operated at the SRWTP. In addition, the thermal energy from the new on-site cogeneration system would be used to heat the digesters. Because more of Regional San's demand for electricity would be met by the electricity produced by its new cogeneration engine system, Regional San would need to purchase less electricity from SMUD (via the grid). Furthermore, because SMUD would no longer have the biogas to use at its Cosumnes Power Plant, SMUD would replace the biogas with another source to generate carbon-free electricity to meet its RPS obligations (e.g., solar, wind). For these reasons, it is anticipated that there would be a net decrease in GHG emissions because the proposed combined heat and power system operated by Regional San would be more energy efficient, and therefore more GHG efficient, than the existing handling and use of the biogas under current conditions. The energy and GHG efficiencies of the proposed combined heat and power system, as compared to a separate heat and power system, are demonstrated with the Combined Heat and Power Energy and Emissions Savings calculator, developed by EPA, which is also included in Appendix A. Furthermore, Regional San's backup natural gas-fired boilers, which are used to heat the digesters when the Carson Cogeneration Plant experiences a shutdown (planned or unplanned), would be used less, as would the backup flaring systems that are used to handle excess biogas during these shutdowns. Also, more of the thermal energy would be captured by Regional San's new cogeneration system and used to heat the digesters. These changes associated with implementation of the project are discussed in greater detail in the discussion of air quality impacts in Section 3.3.2 of this document, and Table 3.8-1 summarizes the net change in annul GHG emissions that would result from implementation of the project.

As shown in Table 3.8-1, the project would result in a net reduction in GHG emissions of 47,449.6 $MTCO_2e$/year.

In summary, project-related construction emissions of 320 $MTCO_2e$ would not exceed the SMAQMD-recommended threshold of 1,100 $MTCO_2e$/year, and this increase would be offset by GHG reductions realized by the net reduction in operational GHG emissions. Therefore, the project's GHGs would not be cumulatively considerable contribution to climate change. There would be **no impact**.

Table 3.8-1 Net Change in Operational Greenhouse Gas Emissions

Emissions Source	MT CO_2e/year
New Combined Heat and Power Generators[1]	60,761
Worker Commute Trips	55
Reduced Flaring by Waste Gas Burners	-1,101.3
Reduced Flaring by Ground Flares	-1,101.3
Shutdown of Steam-Generating Boilers	-670
Displaced Generation of Natural Gas–Based Electricity	-87,306
Displaced Steam Generation[2]	-18,087
Total Net Annual Emissions[3]	**-47,449.6**

Notes: $MTCO_2e$/year = metric tons of carbon dioxide equivalent

[1] The new CHP generators would produce between 10 and 15 MW of electricity. These emission estimates reflect a number and type of engines that would generate 15 MW of electricity.

[2] The size of these emission reductions is conservatively low because it is assumed that the heat recovery steam generator at the CCGT that currently supplies steam to the SRWTP would cease to operate rather than the more emissions intensive auxiliary boiler.

[3] Totals may not sum due to rounding.

See Appendix A for detailed modeling and calculations.

Source: Calculations prepared by Brown & Caldwell, Trinity Consultants, and Ascent Environmental in 2021.

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

No impact. While those cities that are served by the SRWTP and have qualified climate action plans recognize the GHG emissions associated with the treatment of wastewater generated within their jurisdictions—treatment that is provided by the SRWTP—their climate action plans do not include measures pertaining to how the SRWTP operates. Therefore, CARB's 2017 Scoping Plan and CARB's Short-Lived Climate Pollutant Reduction Strategy are the GHG reduction plans most applicable to activities at the SRWTP, including the proposed project. Both the 2017 Scoping Plan and the Short-Lived Climate Pollutant Reduction Strategy call for the use of renewable biofuels, including biogas generated at wastewater treatment plants, in place of fossil fuels (CARB 2017a:64). The Short-Lived Climate Pollutant Reduction Strategy also calls for the use of anaerobic digestion facilities at wastewater treatment plants to produce methane and the use of this methane to generate electricity (CARB 2017b:77–78). The project would use biogas in place of natural gas to generate electricity, and this biogas is generated by the anaerobic digestion of biosolids and other feedstock. Thus, the project would be consistent with both the 2017 Scoping Plan and the Short-Lived Climate Pollutant Reduction Strategy. Therefore, there would be **no impact**.

3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or 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?	☐	☐	☒	☐

3.9.1 Environmental Setting

HAZARDOUS MATERIALS

The project site is within the SRWTP property, which is surrounded by the Bufferlands. Under existing conditions, routine operation of the SRWTP requires the on-site storage and use of a variety of chemicals in support of the wastewater treatment process and daily operations and maintenance. Chemicals utilized or otherwise located on-site in reportable quantities are inventoried and reported in accordance with applicable regulations. All chemicals are either consumed during use or disposed of as hazardous waste, in accordance with applicable regulations and requirements.

A database search of various agency lists was conducted for the project site and surrounding area to identify hazardous waste contamination sites. There are no hazardous waste sites within 0.25-mile of the project site (DTSC 2021, CalEPA 2021, SWRCB 2021).

SCHOOLS AND AIRPORTS

The project site is not located within 0.25-mile of a school. The nearest schools to the project site are John D Sloat Elementary School and Edward Kemble Elementary School, both of which are 1.4 miles away.

The Borges-Clarksburg Airport, a small, unpaved private airstrip for primarily agricultural and limited recreational use, is located approximately 2.5 miles west of the project site, immediately west of the Sacramento River. The next closest airport is the Sacramento Executive Airport, which is located approximately 4.2 miles northwest of the project site. The project site is not located within any airport approach or departure safety zones.

HAZARD AND HAZARDOUS MATERIALS PLANS

Existing hazards and hazardous materials are managed on-site through several risk management plans, programs, and requirements. SRWTP's Risk Management Plan/Process Safety Management Program identifies the equipment, maintenance, inspection, and training associated with the procedures used in handling hazardous/regulated substances at the facility, in excess of federal and State threshold quantities. The program describes the analyses of hazards conducted to assess possible effects to employees, offsite public and environmental receptors, and equipment.

General emergency response for the SRWTP is provided by the Cosumnes Fire Department as the first responder for fire and other emergency services. Hazardous materials/waste spills are managed via a contract with a licensed hazardous waste hauler.

SRWTP also maintains an existing hazardous materials plan (HMP) pursuant to the requirements of the Sacramento County Environmental Management Department to satisfy requirements for emergency response provisions of California Health and Safety Code Section 6.95 (Regional San 2020b). The HMP was most recently revised in 2020 and is certified annually by the Sacramento County Environmental Management Department pursuant to the requirements of California Health and Safety Code Section 25503.3(c). The purpose of the HMP is to minimize the potential for employee exposure or public exposure to an actual or threatened hazardous material release at the existing facility.

Principal elements of the HMP are descriptions of hazardous materials used at SRWTP, their properties and functions, training programs that facilitate their proper use, and maps showing locations of their use and storage. The plan also provides detailed instructions for reporting emergency events and notifying key response personnel and authorities in the event of a release; site evacuation procedures; and methods to use to mitigate a release, including locations and capabilities of emergency response equipment, spill containment, cleanup, and sources of technical advice.

The Sacramento County Evacuation Plan and the HMP identify evacuation routes in the project vicinity. Evacuation routes include major arterials, I-5, and Dwight Road (Sacramento County OES 2018).

WILDLAND FIRE HAZARDS

The California Department of Forestry and Fire Protection maintains fire hazard severity zone (FHSZ) maps for the Local Responsibility Area (LRA) and State Responsibility Area. These areas are mapped based on fuels, terrain, weather, and other relevant factors. The project site is located within the LRA but is not categorized as a "Very High" FHSZ (CAL FIRE 2021).

3.9.2 Discussion

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

Less-than-significant impact. Construction of the project would involve the routine transport and handling of hazardous substances such as diesel fuels, lubricants, and solvents. Handling and transport of these materials could result in the exposure of workers to hazardous materials. Construction workers would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations, including California Occupational Safety and Health Administration and California Department of Toxic Substances Control (DTSC) requirements and manufacturer's instructions, during project construction. Small amounts of lubricants would be stored on-site for operation of the biogas facility. The project would be required to implement and comply with existing hazardous materials regulations and the storage and handling of hazardous materials would be consistent with chemicals currently stored on-site for operation of the SRWTP. In addition, any changes to storage of on-site chemicals would be addressed by SRWTP's existing hazard and hazardous materials plans. Therefore, the project would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials. This impact would be **less than significant**.

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

Less than significant with mitigation incorporated. There are no reported or anticipated sources of hazardous material contamination within the project site or staging area. In addition, the potential for accidental release of hazardous materials such as fuels, oils, grease, and lubricants during construction or operation, and the storage and handling of hazardous materials for operation would be addressed by SRWTP's existing hazard and hazardous materials plans. However, construction within the project site including excavation of soils, could potentially result in disturbance of previously unknown contaminants. These actions could result in the exposure of construction workers to hazardous materials. Therefore, this impact would be potentially significant.

Mitigation Measure 3.9-1: Discovery of Unknown Contaminated Soils During Construction

If, during construction, currently unknown contaminated soils are discovered (discolored soils, odorous, other indications), construction within the area shall be halted, the extent and type of contamination shall be characterized, and a clean-up plan shall be prepared and executed. The plan shall require remediation of contaminated soils. Remediation can include in-situ treatment, disposal at an approved landfill, or other disposal methods, as approved. Construction can proceed within the subject area upon approval of and in accordance with the plan.

Significance Conclusion

Implementation of Mitigation Measure 3.9-1 would reduce the potential for the project to create hazards by requiring remediation upon discovery of unknown contaminates on the site. Therefore, this impact would be reduced to a **less-than-significant** level.

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

No impact. As stated above, the nearest schools are both located approximately 1.4 mile from the project site. There are no schools within 0.25-mile of the project site. Therefore, there would be **no impact**.

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

No impact. The Hazardous Waste and Substances Sites List (Cortese List) is a planning document used by the state and local agencies, and developers to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires California Environmental Protection Agency to develop at least annually an updated Cortese List. DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data.

As discussed above, review of regulatory agency databases indicated that there are no hazardous waste sites within 0.25-mile of the project site (DTSC 2021, CalEPA 2021, SWRCB 2021). In addition, neither the project site nor staging area are identified on the Cortese list or other state or county hazardous materials lists. 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 airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No impact. There are no public airports within 2 miles of the project site, and the project site is not within an airport land use plan area. The nearest airport is Borges-Clarksburg Airport, which is a private airstrip located 2.5 miles from the project site. This airstrip is limited to agriculture and recreational use and would not result in excessive noise for people working on-site. Therefore, there would be **no impact**.

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

Less than significant with mitigation incorporated. The County Evacuation Plan and the HMP identify evacuation routes in the project vicinity. Trucks and equipment traveling to the project site would use Laguna Boulevard, Dwight Road, and Central Street. Dwight Road is identified as an evacuation route. Construction vehicles would stage within the project footprint, and they would not stage near or block any evacuation routes. However, use of Dwight Road for construction equipment could temporarily affect accessibility of roadways to emergency vehicles. This impact would be potentially significant.

Mitigation Measure 3.9-2: Traffic Management Plan

Implementation of the project shall include a traffic management plan (TMP) that would minimize impacts on traffic as a result of construction activities. The TMP shall be approved by the County of Sacramento prior to construction and complied with at all times during construction of the project. The TMP shall be prepared by a qualified transportation engineer and would include but not be limited to the following measures:

- Emergency services access to and surrounding the project site shall be maintained at all times for the duration of construction activities. Local emergency service providers shall be informed of proposed construction activities and identified haul routes.
- Identify procedures for construction area evacuation in the case of an emergency declared by county or other local authorities.
- Roadside safety protocols shall be complied with to reduce the risk of accident.
- Use flaggers to direct traffic, as necessary.

Significance Conclusion

Implementation of Mitigation Measure 3.9-2 would reduce impacts associated with emergency access during construction to a **less-than-significant** level because it would require the emergency access and access for local land uses be maintained.

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

Less-than-significant impact. The project site is not in an area designated as having a high potential for wildland fires. Vehicles and other equipment would be used during construction, but the project would adhere to spark-arresting and fire extinguishing requirements. In the long-term, the project would result in construction of a new biogeneration facility that would have the potential for a fire hazards during operations related to the use of compressed natural gas (CNG) on-site. However, the CNG facilities would be within a paved area, and the facilities would have extensive safety measures. Additionally, CNG is currently used on-site at the Carson Cogen Plant. Furthermore, the project would not introduce new residents into a high fire severity zone. Therefore, the project would not expose people or structures to a significant loss, injury, or death involving wildland fires. This impact would be **less than significant**.

3.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any 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 on- or offsite erosion or siltation;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☐	☒
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.10.1 Environmental Setting

SURFACE WATER

The project site is located within the 180-square-mile Morrison Creek Stream Group watershed, which includes Morrison, Laguna, and Unionhouse (also known as Beacon) creeks, among others. The entire Morrison Creek Stream Group watershed has two major sub-basins: an upper basin upstream of the Beach Lake dike and a lower basin downstream of the Beach Lake dike. The project site is located in a low-lying alluvial basin at the upper/lower Morrison Creek watershed boundary.

The upper portion of the Morrison Creek watershed contains an area of approximately 128 square miles above the I-5 bridge on Morrison Creek. Areas contributing runoff to this sub-basin include: the city of Sacramento south of Highway 50; the city of Elk Grove, the communities of Florin, Laguna, Franklin, Point Pleasant, and Hood; former Mather Air Force Base and former Sacramento Army Depot campuses; and rural areas in the eastern and southern parts of the watershed. Runoff in the watershed is conveyed through a network of streams that generally flow from east to west. The major creeks, Morrison, Unionhouse, and Laguna, converge just downstream of upper Beach Lake on the northeast side of the SRWTP. The combined discharge of the three watercourses continues as Morrison Creek, which is pumped to the Sacramento River via Sump 90 operated by the City of Sacramento.

Precipitation is the primary source of surface runoff at the project site and within the Morrison Creek Stream Group watershed. The average annual rainfall is approximately 20 inches in Sacramento, with approximately 90 percent of the annual rainfall occurring during the rainy season from November to April (Western Regional Climate Center 2020).

WATER QUALITY

The SRWTP operates under its existing individual the NPDES permit (Order R5-2016-0020) issued by the RWQCB for discharge of treated effluent to the Sacramento River.

In 2009, the State Water Resources Control Board adopted an amended General Permit for Discharges of Storm Water Associated with Construction Activity, NPDES Order No. CAS000002, Order No. 2009-0009-DWQ (Construction General Permit). Effective July 1, 2010, the amended Construction General Permit requires the development and implementation of a SWPPP. The SWPPP must include a site map showing the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the site. The SWPPP must list BMPs the discharger will use to protect stormwater runoff; a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

On May 31, 2013, the RWQCB adopted Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Waters, Order R5-2013-0074 NDPES No. CAG995001 (General Order for Dewatering). Individuals, public agencies, private businesses, and other legal entities discharging relatively pollutant-free wastewaters that pose little or no threat to the quality of surface waters, for either 4 months or less or have an average dry weather flow less than 0.25 million gallons per day (mgd), may obtain authorization under this General Order to discharge.

GROUNDWATER

The project site is within the Sacramento Valley Groundwater Basin and overlies a portion of the South American Subbasin. The South American Subbasin is a groundwater subbasin defined by the Department of Water Resources as extending from the Sierra Nevada to the Sacramento River, bounded on the north by the American River and on the south by the Cosumnes and Mokelumne Rivers. The South American Subbasin continues to be classified as a high priority basin under the California Statewide Groundwater Elevation Monitoring Basin Prioritization (Regional San 2016).

FLOODING

The local watershed of the Morrison Creek Stream Group has been subject to several large flooding events since the 1950s, with the largest and most significant event in February 1986.

The existing SRWTP flood protection system is a combination of conventional flood control levees, and natural land surface topography. The SRWTP perimeter levee around the treatment plant extends from the northeast corner near Laguna Creek and the Union Pacific Railroad and along the outside of Dedicated Land Disposal unit-5, -4, and -3.

To provide a greater level of flood protection and remove the SRWTP from the 100-year floodplain, the U.S. Army Corps of Engineers (USACE) and Sacramento Area Flood Control Agency (SAFCA) constructed a series of flood control improvements within the Morrison Creek Stream Group (USACE and SAFCA 2011). The flood control system

includes enhancement of the Morrison, Elder, Florin and Unionhouse creek floodwalls and levees, excavating channels to increase flood flow conveyance capacity, and retrofitting bridges to accommodate the enlarged channels.

DRAINAGE FACILITIES

The SRWTP includes approximately 2,144 acres of Bufferlands surrounding the 1,049-acre SRWTP. Much of the precipitation that lands on the undeveloped Bufferlands percolates to groundwater. Ponded stormwater on permeable surfaces infiltrates into the ground, while water in seasonal ponds over low permeability materials evaporates over time. Excess stormwater runoff flows from the Bufferlands into unlined ditches. Ditches in the northeast and northwest of the Bufferlands discharge to Laguna and Morrison Creeks. The southern area of the Bufferlands drains to the Beach-Stone Lake system.

The SRWTP site drainage system consists of two separate systems known as the "general sanitary sewer drainage system" and the "storm drainage system." Both the general sanitary sewer drainage and stormwater drainage systems are routed to the SRWTP headworks for treatment.

The general sanitary sewer drainage system collects drainage originating inside all treatment plant structures and from outdoor areas directly associated with equipment, storage tanks, chemicals, and sanitary processes. A network of gravity flow pipes augmented by sumps, pumps, manholes, oil interceptors, and sluice gates serve the general sanitary sewer drainage system. Numerous sumps in the general sanitary sewer drainage system are required as a result of the many tributary drains in lower elevations, within structures, and in the various tunnels traversing the plant.

The storm drainage system is designed to separately collect irrigation and/or precipitation runoff from those areas that pose the least threat for contributing pollutants to receiving waters. This includes runoff from rooftops, roads, and treatment plant grounds.

3.10.2 Discussion

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

Less-than-significant impact. Construction of the project would disturb more than 1 acre and would be subject to the Construction General Permit. The Construction General Permit requires the development and implementation of a Water Pollution Control Plan (WPCP). The WPCP would include BMPs to protect stormwater runoff; a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs. In addition, if dewatering is required during construction, the project would comply with the General Order for Dewatering.

Drainage from the project site and staging area flows into the storm drainage system within the SRWTP site and is routed to the SRWTP headworks for treatment. Treated stormwater is discharged in accordance with Regional San's existing NPDES permit (Order R5-2016-0020) for discharge of treated effluent to the Sacramento River. Construction of the project would alter drainage on the project site and the new facilities would include a restroom that would generate wastewater. With project construction of the project, stormwater would continue to drain into the SRWTP's storm drain system and wastewater from the new restroom would be connected to the SRWTP's general sanitary sewer drainage system. Both drainage systems would be routed to the SRWTP headworks for treatment and would continue to be discharged in accordance with Regional San's existing NPDES permit.

Compliance with these permitting requirements for construction and operation of the project would reduce this impact to a **less-than-significant** level.

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

Less-than-significant impact. The project site is underlain by the South American Subbasin, which is classified as a high priority basin. However, no groundwater would be withdrawn during project construction or operation; therefore, the project would not impede sustainable groundwater management of the basin.

The project site is currently undeveloped, and construction of the project would increase impervious surfaces on-site. The project is expected to result in a maximum increase of 3.4 acres of impervious surfaces. Project implementation has the potential to alter groundwater recharge within the project site; however, the increase in impervious surfaces would not be substantial in relation to the size of the groundwater basin. Therefore, the project would not substantially interfere with groundwater recharge within the groundwater basin. For these reasons, there would be a **less-than-significant** impact on groundwater supplies and groundwater recharge.

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 on- or offsite erosion or siltation;

Less-than-significant impact. Project construction would involve excavation and movement of soil, which could result in erosion and siltation. These activities have the potential to cause or increase soil erosion and could discharge wastes into waterways in runoff. Compliance with existing requirements associated with the Construction General Permit and the General Order for Dewatering, if needed, would reduce potential erosion or siltation so that the project would not result in substantial long-term effects on water quality. In compliance with the Construction General Permit, a SWPPP and sediment and erosion control plan would be prepared and implemented. Project construction would include BMPs that would reduce and avoid substantial on- or offsite erosion and siltation or discharge of pollutants. As a result, this impact would be **less than significant**.

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

Less-than-significant impact. The project site is currently undeveloped and with project construction, the site would be covered by pavement and a new building. Project implementation has the potential to alter surface runoff from the addition of pavement on what is currently an undeveloped site. However, the project would not result in a substantial increase in impervious surfaces that would result in flooding on- or off-site. Drainage from the project site and staging area would continue to flow into the storm drainage system within the SRWTP site and be treated at the SRWTP. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. As discussed above, drainage from the project site and staging area would continue to flow into the storm drainage system within the SRWTP site and be routed to the SRWTP for treatment. The project would not substantially increase the runoff from the project site and the SRWTP has adequate capacity to treat runoff from the project site. Therefore, the project would not exceed existing or planned stormwater capacity or create a substantial increase in runoff. This impact would be **less than significant**.

iv) Impede or redirect flood flows?

No impact. Since construction of the flood control improvements by USACE and SAFCA, the project site and staging area are no longer within a 100-year floodplain. In addition, there are no waterways within the project site or staging area and the project would not affect any waterways or redirect existing flows of a waterway. Therefore, the project would not impede or redirect flood flows. There would be **no impact**.

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

Less-than-significant impact. The project site and staging area are not located within a flood hazard, tsunami, or seiche zone. The nearest large waterway is the Sacramento River, which could be subject to seiche. However, the project site is more than 2 miles from the river, and the potential for the project to be affected by a seiche or release pollutants as a result of a seiche is very low. This impact would be **less than significant**.

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

Less-than-significant impact. Project construction would be subject to the Construction General Permit, which requires development and implementation of a SWPPP including BMPs to protect stormwater runoff. Wastewater and stormwater runoff generated by the project would be treated at the SRWTP and discharged in accordance with Regional San's existing NPDES permit, so there would be no conflict with or obstruction of a water quality control plan during project operation. Project operation would not require the use of groundwater. Project implementation would result in a slight increase in wastewater use related to the new restroom. However, the increase in wastewater use would not be substantial and would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan. Therefore, this impact would be **less than significant**.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning.				
Would the project:				
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?	☐	☐	☒	☐

3.11.1 Environmental Setting

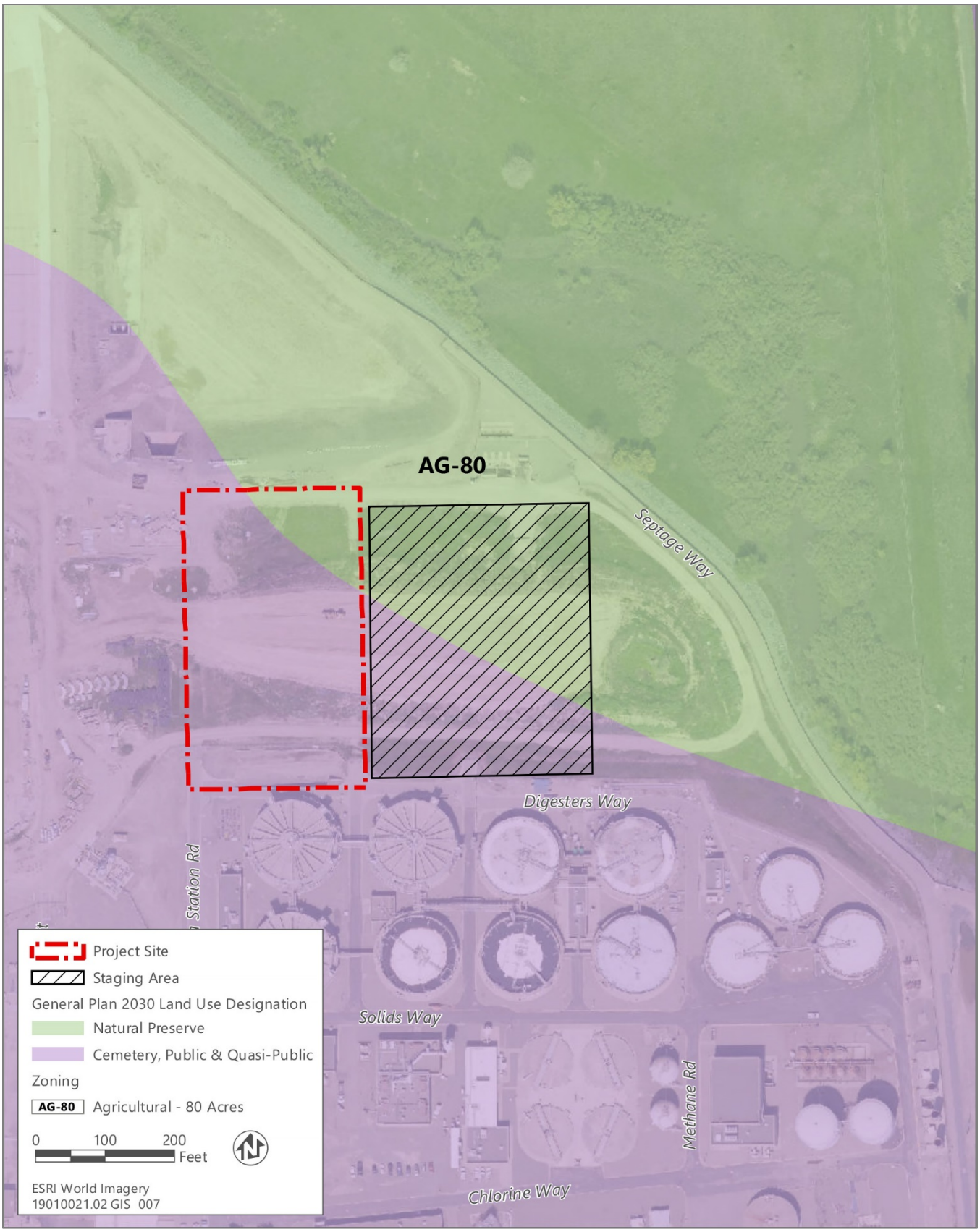
The project site is within the SRWTP property in Sacramento County. Surrounding land uses include the SRWTP facilities and the Bufferlands. The project site and staging area are currently vacant disturbed land immediately north of the existing digesters.

The Sacramento County General Plan designates the project site as Cemetery, Public & Quasi-Public and Natural Preserve (Figure 3.11-1). The Cemetery, Public & Quasi-Public designation allows for public uses such as education, solid and liquid waste disposal, and cemeteries. The Natural Preserve designation identifies critical natural habitat for priority resource protection. This designation includes riparian Valley Oak woodland and permanent or seasonal marshes with outstanding wildlife value (Sacramento County 2020b). The project site and surrounding area are zoned as Agricultural (AG-80). The Agricultural zoning designation promotes the long-term agricultural use and discourage the premature and unnecessary conversion of agricultural land to urban uses. Allowable uses include agriculture, one single-family residence, and government and local agency buildings and uses (Sacramento County 2015).

3.11.2 Discussion

a) Physically divide an established community?

No impact. The project site is located within an existing wastewater treatment plant site and construction of the biogeneration facility would be compatible with the surrounding wastewater treatment facilities. Therefore, the project would not divide the established community. There would be **no impact**.



Source: Data downloaded from Sacramento County in 2018

Figure 3.11-1 General Plan Land Use Designation and Zoning

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

Less-than-significant impact. The proposed project would be consistent with the Cemetery, Public & Quasi-Public land use designation that applies to the majority of the project site and the southern half of the staging area and the AG-80 zoning designation, which allows for government and local agency buildings and uses; however, the new biogeneration facility would not be consistent with the Natural Preserve land use designation. When special districts, including Regional San, are conducting governmental activities they are exempt from local government plans, policies, and ordinances. Nonetheless, Regional San voluntarily seeks to operate consistently with local governance to the extent feasible. While the proposed project would not be consistent with the land use designation for the northeast corner of the project site, these designations do not reflect the current conditions at the site. The northeast corner of the site is contained within a larger parcel that extends north of the SRWTP site into the surrounding Bufferlands where the land use designation is consistent with the land management practices employed throughout the Bufferlands. While there are several trees east of the staging area, no trees would be removed by the project. There is no riparian Valley Oak woodland or permanent or seasonal marshes on-site, the preservation of which is the objective of the Natural Preserve land use designation. Therefore, the project site and staging area do not contain any of the sensitive resources (i.e., riparian habitat, seasonal marshes) that are protected by the Natural Preserve land use designation. While the project would not be consistent with the land use designation, the project would not result in any changes to the existing land use that would conflict with the existing land use designations for the project site. This impact would be **less than significant**.

3.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources.				
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.12.1 Environmental Setting

Mineral resources in Sacramento County include sand, gravel, clay, gold, silver, peat, topsoil, lignite, natural gas, and petroleum. The principal resources that are in production are aggregate (sand and gravel) and natural gas (Sacramento County 1993).

According to the Sacramento County General Plan Conservation Element, no significant mineral deposits have been identified on the project site (Sacramento County 1993).

3.12.2 Discussion

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?

No impact. The project site is within the SRWTP property and is not located within an area of known mineral resources. In addition, the project site is not used for or zoned as a mineral resource area. Therefore, construction of the project would not affect the availability of known mineral resources that would be of value to the region and the residents of the state, and **no impact** would occur.

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

No impact. There are no locally important mineral resource recovery sites delineated on a local general plan, specific plan, or other land use plan that include the project site. No significant mineral deposits have been identified on the project site by the Sacramento County General Plan (Sacramento County 1993). Therefore, development of the project would have no effect on the availability of known mineral resources, and **no impact** would occur.

3.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐
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?	☐	☐	☒	☐

3.13.1 Environmental Setting

ACOUSTIC FUNDAMENTALS

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. Sound is the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on a variety of factors, including geometric spreading (i.e., spherical or cylindrical spreading), ground absorption (i.e., hard versus soft sites), atmospheric conditions (e.g., wind direction and speed, air temperature, humidity, turbulence), and shielding by natural or human-made features.

The amplitude of pressure waves generated by a sound source determines the loudness of that source, also called the sound pressure level (SPL). SPL is most commonly described by using decibels (dB) because this logarithmic unit best corresponds to the way the human ear interprets sound pressures. However, the decibel scale does not adequately characterize how humans perceive noise because the human ear is not equally sensitive to loudness at all frequencies (i.e., pitch) in the audible spectrum. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of A-weighted decibels) can be computed based on this information. All sound levels discussed in this section are expressed in A-weighted decibels.

Because decibels are logarithmic units, SPLs expressed in dB cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3-dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013:2-10).

COMMON NOISE DESCRIPTORS

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels are used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors used in this chapter include:

- Equivalent Continuous Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period;
- Maximum Noise Level (L_{max}): The highest instantaneous noise level during a specified time-period;
- Minimum Noise Level (L_{min}): The lowest instantaneous noise level during a specified time-period;
- Day-Night Noise Level (L_{dn}): The 24-hour L_{eq} with a 10-dB penalty applied to sounds occurring during the noise-sensitive hours from 10:00 p.m. to 7:00 a.m., which are typically reserved for sleeping. The L_{dn} and CNEL (below) are the most common noise descriptors used for transportation noise considerations or other noise sources that may occur both during daytime and more noise-sensitive nighttime (during typical relaxation and sleep) hours when background noise is typically less; and
- Community Noise Equivalent Level (CNEL): CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m. (Caltrans 2013:2-48).

GROUND VIBRATION

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Groundborne vibration is vibration of and through the ground. Sources of ground-borne of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions).

Groundborne vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) but can also be expressed in decibel notation (VdB), which is used mainly in evaluating human response to vibration.

EXISTING NOISE ENVIRONMENT

The project site is at the SRWTP facility in the unincorporated area of Sacramento County (Chapter 2, "Project Description," Figure 2-1). The project site would be located within the SRWTP site in a previously disturbed area bordered by Digesters Way/Oregon Trail to the south and Septage Way to the north (Chapter 2, "Project Description," Figure 2-2).

The existing noise environment in the project vicinity is primarily influenced by transportation noise from vehicle traffic on the roadway systems (e.g., Laguna Boulevard, Franklin Boulevard, I-5, State Route 99). Other noise sources that contribute to the existing noise environment include existing activities at the SRWTP. These include heavy duty equipment such as tractors, maintenance vehicles, and employee vehicles, as well as stationary noise sources associated with pumps and motors that run the various processes at the SRWTP.

An ambient noise survey was conducted on March 7, 2013, as part of the noise analysis for the EchoWater Project Draft EIR (Regional San 2014:4.11-12 and 4.11-13). The purpose of the survey was to characterize existing noise conditions at different parts of the SRWTP facility in the project vicinity. Several short-term noise measurements were

collected measure noise levels on the SRWTP facility within its vicinity. The noise levels measured at a location nearest the site of the proposed biogas project are shown in Table 3.13-1.

Table 3.13-1 Summary of Existing Ambient Noise Measurements

Start (Date/Time)	Stop (Date/Time)	A-Weighted Sound Level (dBA)		
		L_{eq}	L_{eq}	L_{eq}
March 7, 2013/9:00 A.M.	March 7, 2013/9:15 A.M.	51	64	47

Source: Data collected by Ascent Environmental in 2013 and presented in the Regional San EchoWater Draft EIR (Regional San 2014:4.11-13)

These noise level measurements were taken in accordance with American National Standards Institute (ANSI) standards using a Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter (SLM). The SLM was calibrated before and after use with an LDL Model CAL200 acoustical calibrator. The equipment used meets all pertinent specifications of the ANSI for Type 1 SLMs (ANSI S1.4-1983[R2006]). Meteorological conditions during the measurement period were adequate for reliable noise measurements, with clear blue skies, temperatures ranging from 60 °F to 70 °F, and light winds averaging 1 mile per hour.

The noise environment at the project site has not changed substantially since these measurements were collected in 2013, although it does experience construction noise associated with development of the EchoWater Project.

NOISE-SENSITIVE RECEPTORS

There are no residential land uses, schools, or other noise-sensitive receptors adjacent to the project site or staging area. The nearest residential area to the project site lies east of Franklin Boulevard, which is approximately 4,740 feet away.

3.13.2 Regulatory Setting

FEDERAL

Federal Transit Administration

To address the human response to ground vibration, the Federal Transit Administration has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in Table 3.13-2.

Table 3.13-2 Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 microinch/second)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65 [4]	65 [4]	65 [4]
Category 2: Residences and buildings where people normally sleep.	72	75	80
Category 3: Institutional land uses with primarily daytime uses.	75	78	83

Notes: GBV = ground-borne vibration; VdB = vibration decibels referenced to 1 microinch per second and based on the root mean square velocity amplitude.

[1] "Frequent events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional events" is defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent events" is defined as fewer than 30 vibration events of the same source per day.

[4] This criterion is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018

STATE

California Department of Transportation

In 2013, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual (Caltrans 2013).

The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.13-3 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.13-3 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4–0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006–0.019	Vibration unlikely to cause damage of any type

Notes: PPV= peak particle velocity; in/sec = inches per second.

Source: Caltrans 2013

LOCAL

The project site is located in unincorporated Sacramento County; therefore, the County's policies pertaining to noise are germane. Because project construction noise could affect existing land uses in Elk Grove, policies in the City of Elk Grove General Plan are also considered.

Sacramento County General Plan

The Noise Element of the *Sacramento County General Plan* (Sacramento County 2017) contains the following policies and standards related to noise that may be applicable to the project:

- Policy NO-6. Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 [presented as Table 3.13-4] at existing noise-sensitive areas in the project vicinity.
- Policy NO-7. The "last use there" shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 3 [presented as Table 3.13-4] standards at the property line of the generating use in anticipation of the future neighboring development.

In addition to the policies listed above, Sacramento County has established noise standards for land uses affected by non-transportation noise (Table 3.13-4).

Table 3.13-4 Non-Transportation Noise Standards Median (L_{50})[1]/Maximum (L_{max})[2]

Receiving Land Use	Outdoor Area[3]		Interior[4]
	Daytime	Nighttime	Day/Night
All Residential	55/75	50/70	35/55
Transient Lodging[5]	55/75	-	35/55
Hospitals & Nursing Homes[6,7]	55/75	-	35/55
Theaters & Auditoriums[7]	-	-	30/50
Churches, Meeting Halls, Schools, Libraries, etc.[7]	55/75	-	35/60
Office Buildings[7]	60/75	-	45/65
Commercial Buildings[7]	-	-	45/65
Playgrounds, Parks, etc.[7]	65/75	-	-
Industry[7]	60/80	-	50/70

Notes: L_{50}= noise level that is exceeded 50 percent of the time during the specified duration; L_{max}= the maximum instantaneous noise level

[1] Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

[2] Standards in this table shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of this table, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.

[3] The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

[4] Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

[5] Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.

[6] Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

[7] The outdoor activity areas of these uses (if any) are not typically utilized during nighttime hours.

Source: Sacramento County 2017

Sacramento County Code

Section 6.68.070 of the Sacramento County Code (Sacramento County 2020c) contains exterior noise standards for specific zoning districts (Table 3.13-5).

Table 3.13-5 Exterior Noise Standards

Noise Area	County Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, R-D-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7:00 a.m.-10:00 p.m.	55 dB
		10:00 p.m.-7:00 a.m.	50 dB

Source: Sacramento County 2020c (SCC 490 Section 2, 1981; SCC 254 Section 1, 1976)

Section 6.68.090 of the Sacramento County Code provides the following exemption to the exterior noise standards:

> Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to

operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner (SCC 254 § 1, 1976).

City of Elk Grove General Plan

The SRWTP site is adjacent to residences that are located within the City of Elk Grove. Chapter 8 of the City of Elk Grove General Plan (City of Elk Grove 2019) includes the following noise policies that are applicable to the project:

- **Policy N-2-1.** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 8-4 [presented as Table 3.13-6], as measured immediately within the property line of lands designated for noise-sensitive uses.
- **Policy N-2-2.** The following criteria shall be used as CEQA significance thresholds for transportation and stationary noise sources:
  - Where existing ambient noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels shall be considered significant; and
  - Where existing ambient noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels shall be considered significant; and
  - Where existing ambient noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels shall be considered significant. Public roadway improvements to alleviate traffic congestion and safety hazards shall utilize FHWA [Federal Highway Administration] noise standards to allow a reasonable dollar threshold per dwelling to be used in the evaluation and abatement of impacts.
  - The standards outlined in Table 8-4 [presented as Table 3.13-6] shall not apply to public projects to alleviate traffic congestion and safety hazards.

Table 3.13-6 Noise-Level Performance Standards for New Projects Affected by or Including Non-Transportation Noise Sources

Performance Standards for Stationary Sources	Noise Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Performance Standards for Typical Stationary Noise Sources[a]	Hourly L_{eq}, dB	55[c,d]	45[c,d]
Performance Standards for Stationary Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music[b]	Hourly L_{eq}, dB	50[c,d]	40[c,d]

* Applies to noise-sensitive land uses only.

[a] These standards will apply generally to noise sources that are not tonal, impulsive, or repetitive in nature. Typical noise sources in this category would include HVAC systems, cooling towers, fans, and blowers.

[b] These standards apply to noises which are tonal in nature, impulsive, repetitive, or which consist primarily of speech or music (e.g., humming sounds, outdoor speaker systems). Typical noise sources in this category include pile drivers, drive-through speaker boxes, punch presses, steam valves, and transformer stations. HVAC/pool equipment are exempt from these standards.

[c] These noise levels do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwelling). HVAC/pool equipment are exempt from these standards.

[d] The City may impose noise level standards which are more or less restrictive based upon determination of existing low or high ambient noise levels.

Source: City of Elk Grove 2019:8-58

City of Elk Grove Municipal Code

Section 6.32.080 of the Elk Grove Municipal Code contains exterior noise standards for sensitive receptors, outlined in Table 6.32-1 [presented as Table 3.13-7 below]. The metric of these standards is L_{eq} because they are identical to the noise level performance standards included in the General Plan.

Table 3.13-7 Exterior Noise Standards for Sensitive Receptors

	7:00 am to 10:00 pm	10:00 pm to 7:00 am
Stationary noise sources, generally	55 dB	45 dB
Stationary noise sources which are tonal, impulsive, repetitive, or consist primarily of speech or music	50 dB	40 dB

Source: Section 6.32.080 of the Elk Grove Municipal Code

The City of Elk Grove uses the same construction noise exemptions as Sacramento County, as indicated above under "Sacramento County Code."

3.13.3 Discussion

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

Less-than-significant impact. Construction of the project would last between 18 and 24 months and is anticipated to begin in spring of 2022. Typical construction activities would include earthwork such as grading, excavation, trenching, backfilling, hauling, and compaction. Additionally, underground piping and utilities would be installed. Paving, lighting, drainage, and reinforced structures, including the new building, would be constructed. Construction equipment would involve the use of heavy equipment, including excavators, dozers, compactors, graders, and backhoes.

Typical construction work hours would be Monday through Friday from 7:00 a.m. to 7:00 p.m. No nighttime work is anticipated. Equipment, material, and vehicle staging would be accommodated immediately east of the project site, as shown in Figure 2-2 in Chapter 2, "Project Description."

The loudest pieces of equipment that would be used during construction would include excavators, pavers, and dozers, all of which individually generate 85 dB L_{eq} at 50 feet (FHWA 2006:3). Calculations assumed simultaneous operation of three pieces of heavy equipment close to each other at the boundary of the project site closest to residential areas, 4,740 feet (0.9 miles) to the east. It was also assumed that building walls would provide 24 dB of attenuation for interior noise levels at the receptor (EPA 1971:11).

Based on detailed calculations consistent with guidance in FHWA's Roadway Construction Noise Model User's Guide (FHWA 2006) and presented in Appendix C, exterior noise exposure at the nearest residence could reach up to 47 dB L_{eq}. Given that buildings typically provide an exterior-to-interior reduction of 24 dB (EPA 1971:11), interior noise levels at this receptor would not exceed 23 dB L_{eq}. These modeled noise levels would not exceed the City of Elk Grove's daytime noise standard for outdoor areas of 55 dB L_{eq} (7:00 a.m. to 10:00 p.m.) as established in Section 6.32.080 of the Elk Grove Municipal Code (City of Elk Grove 2020). Additionally, no nighttime work is anticipated, and typical construction work hours would be Monday through Friday from 7:00 a.m. to 7:00 p.m.

Operation of the project would not change the operating hours at the existing SRWTP, which operates continuously 24 hours per day, every day. Routine maintenance would occur for all new facilities and would generally include regular preventative maintenance and inspections and adjustments. Maintenance would occur periodically or annually depending on the specific facility and would be similar to existing maintenance activities. Because the project would result in the long-term employment of no more than ten additional full-time employees and the increase in associated vehicle trips and traffic noise would be nominal.

In summary, because construction and operation of the project would not result in the exposure of noise-sensitive receptors to noise levels that exceed applicable local noise standards, this impact would be **less than significant**.

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

Less-than-significant impact. As described in Chapter 2, "Project Description," project-related construction would not involve the use of ground vibration–intensive activities, such as pile driving or blasting that typically generate the highest vibration levels and are, therefore, of greatest concern when evaluating construction-related vibration impacts. Pieces of equipment that generate lower levels of ground vibration such as excavators, front-end loaders, compactors, and trucks would be used during construction. However, these types of equipment do not generate excessive vibration that could result in off-site effects. Because no pile driving or blasting would occur during project construction, construction-generated vibration would not result in adverse vibration effects to off-site receptors, buildings, or infrastructure. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. The nearest airport to the project site is the Borges-Clarksburg Airport, a small private airport, located approximately 2.5 miles west of the project site. Sacramento Executive Airport is the next closest airport and is located approximately 4.2 miles north of the project site. The project site is not within 2 miles of an airport or within an area subject to an airport land use plan. Therefore, the proposed project would not result in the exposure of people to excessive noise levels associated with airport activity. This impact would be **less than significant**.

3.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing.				
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Environmental Setting

According to the U.S. Census Bureau, in 2019 the County of Sacramento's population totaled 1,552,058, and the county had 570,752 housing units (U.S. Census Bureau 2019). The project would be within the SRWTP site and there is no housing within the project site or surrounding area.

3.14.2 Discussion

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)?

No impact. The proposed project does not include the construction of new homes or businesses nor does it extend roads or infrastructure that would lead to population growth. The project would construct a new biogeneration facility but would not increase the capacity of the SRWTP. Therefore, there would be **no impact** on population growth.

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

No impact. Implementation of the proposed project would not require the removal of any homes causing the construction of replacement housing. Currently, there are no houses within the project site or staging area and the project would not displace any adjacent residences. No people would be displaced due to implementation of the project. There would be **no impact**.

3.15 PUBLIC SERVICES

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

3.15.1 Environmental Setting

FIRE PROTECTION SERVICES

The Cosumnes Fire Department provides fire protection services to the project site. The nearest fire station is Fire Station #75 located approximately 2.7 miles southwest of the project site.

POLICE PROTECTION SERVICES

The Sacramento County Sheriff's Department provides law enforcement services to the project site. The Sacramento County Sheriff's Department provides specialized law enforcement to the county and local police protection to unincorporated areas. The project site is within the Central Division (Sacramento County Sheriff's Office 2021).

SCHOOLS

The nearest schools to the project site are John D Sloat Elementary School and Edward Kemble Elementary School, both of which are 1.4 miles away.

PARKS AND OTHER PUBLIC FACILITIES

No public access is provided to the SRWTP site and there are no recreation facilities on-site. The nearest park is Willie Caston Park located approximately 1 mile from the project site. The park is 6.3 acres and includes picnic areas, playgrounds, and a trail. The park is maintained by the City of Sacramento (City of Sacramento 2020).

3.15.2 Discussion

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

FIRE PROTECTION

No impact. Implementation of the project would not increase the demand for fire protection services because the project would expand the existing facilities at the SRWTP and would not generate new residences or businesses, which is the driving factor for fire protection services. Because the project would not increase demand for fire protection services, no construction of new or expanded fire service facilities would be required. Therefore, the project would have **no impact** on fire protection services.

POLICE PROTECTION

No impact. Implementation of the project would not increase demand for police protection services because the project would not generate new residences or businesses, which is the driving factor for police protection services. Because the project would not increase demand for police protection services, no construction of new or expanded police service facilities would be required. Therefore, the project would have **no impact** on police services.

SCHOOLS

No impact. The project would not provide any new housing that would generate new students in the community nor result in an increase in employment opportunities that could indirectly contribute new students to the local school district. Therefore, the project would have **no impact** on school services and facilities.

PARKS

No impact. The project would not result in any additional residents/employees that would increase the demand for recreational facilities, necessitating new or expanded park facilities. Therefore, the project would have **no impact** on parks.

OTHER PUBLIC FACILITIES

No impact. The project would be an addition to the existing SRWTP, which is addressed throughout this Initial Study. No other public facilities exist in the project vicinity that could be affected by implementation of the project. Therefore, the project would have **no impact** on other public facilities.

3.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.16.1 Environmental Setting

No public access is provided to the SRWTP site and there are no recreation facilities on-site. The nearest park is Willie Caston Park located approximately 1 mile from the project site. The park is 6.3 acres and includes picnic areas, playgrounds, and a trail. The park is maintained by the City of Sacramento (City of Sacramento 2020).

3.16.2 Discussion

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?

No impact. The project would not include any new housing or businesses that would increase the population in the project vicinity. In addition, the proposed project would not increase the capacity of the SRWTP and would have no effect on population growth or increase demand for recreation facilities or programs. Therefore, use of existing neighborhood and regional parks or other recreational facilities would not change as a result of the project. Because the project would not result in the physical deterioration of public recreational facilities, **no impact** would occur.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No impact. The project would not require construction of new homes or infrastructure, including parks and recreational facilities. **No impact** would occur.

3.17 TRANSPORTATION

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

3.17.1 Environmental Setting

EXISTING ROADWAYS

I-5 provides primary regional access in the project vicinity. Access to the project site and staging area would be provided via Laguna Boulevard to Dwight Road, then to Central Street, which connects to Septage Way. Septage Way is a paved roadway within the SRWTP site and is not a public roadway.

I-5 is a north-south interstate highway west of the project site. I-5 extends through Sacramento to the north and connects the region to Stockton and the San Joaquin Valley to the south. In the project vicinity, I-5 is a six-lane roadway with an interchange at Laguna Boulevard.

Laguna Boulevard is an east-west arterial roadway that connects to I-5 to the west and State Route 99 to the east. In the project vicinity, Laguna Boulevard is a six-lane roadway with a posted speed limit of 45 miles per hour.

Dwight Road is a north-south collector roadway that connects the SRWTP site to Laguna Boulevard. It is a four-lane roadway with a center two-way left-turn lane.

Central Street is a local street providing north-south access. Central Street is two-lanes and extends from Dwight Road to the SRWTP site.

EXISTING TRANSIT SERVICE

The City of Elk Grove Transit Services and Sacramento Regional Transit District provide fixed-route transit service to the project vicinity. The nearest bus stop to the project site is located at the Laguna Boulevard/Dwight Road intersection.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Bicycle facilities can be classified into one of the following three categories:

- Class I Bike Path – Off-street bike paths within exclusive right-of-way.
- Class II Bike Lane – Striped on-road bike lanes adjacent to the outside travel lane on preferred corridors for biking.

- Class III Bike Route – Shared on-road facility, usually delineated by signage.

Bicycle facilities in the project vicinity include Class II bike lanes located along Laguna Boulevard and Dwight Road.

3.17.2 Discussion

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

Less-than-significant impact. Project construction could temporarily interfere with existing vehicle, transit, bicycle, and pedestrian circulation as it would result in a temporary increase of vehicles on surrounding roadways attributed to worker commutes and materials delivery, which may result in additional traffic or congestion. Operation of the project would result in a small increase in long-term vehicle trips associated with 10 new employees and increased maintenance activity. While project operation would result in a small increase in vehicle trips, it would not increase the transit, pedestrian, or bicycle use in comparison to the existing conditions. Project construction would be temporary and would not require road closures, and operation of the project would result in a small increase in long-term vehicle trips. Therefore, the project would not conflict with programs, plans, ordinances, or policies related to circulation. This impact would be **less than significant**.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

Less-than-significant impact. Temporary construction activities would result in an increase in vehicle trips associated with worker commutes and materials delivery. However, these additional trips would only occur during the 18- to 24-month construction period. During operation, there would be a small increase in vehicle trips associated with the 10 new employees and increased maintenance activity. However, the project would generate fewer than 110 trips per day which is generally assumed to cause a less-than-significant transportation impact, as described in the Technical Advisory on Evaluating Transportation Impacts (OPR 2018). Because the project would not change land uses in the project vicinity or increase the amount of development projected for the area, the project would be consistent with the population growth and vehicle miles travelled projections in regional and local plans. This impact would be **less than significant**.

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

Less-than-significant impact. The project would not require the construction, re-design, or alteration of any public roadways. The ingress and egress for the project site and staging area would be designed consistent with County design and safety standards. The project would not result in any geometric design features (e.g., sharp curves or dangerous intersections) therefore, impacts related to traffic hazards would be **less than significant**.

d) Result in inadequate emergency access?

Less than significant with mitigation incorporated. As discussed above in Section 3.9, "Hazards and Hazardous Materials," major arterials in the project vicinity are designated as evacuation routes. Use of area roadways for construction equipment could temporarily affect accessibility of roadways to emergency vehicles. This impact would be potentially significant.

Mitigation Measure 3.9-2: Traffic Management Plan

Implement Mitigation Measure 3.9-2 above.

Significance Conclusion

Implementation of Mitigation Measure 3.9-2 would reduce impacts associated with emergency access during construction to a **less-than-significant** level because it would require the emergency access and access for local land uses be maintained.

3.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?		☒ Yes		☐ No
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

3.18.1 Environmental Setting

The project site and surrounding area is historically attributed to the Plains Miwok, a subgroup of the Eastern Miwok. Historic maps and accounts of early travelers to the Sacramento Valley testify that the valley consisted of open grasslands and occasional oak groves, with abundant elk. The area was generally wet in winter and exceedingly dry in summer. Native Americans typically situated their larger, permanent settlements on high ground along the region's major rivers, such as the Cosumnes, to the east of the project site. The Plains Miwok are part of the larger Eastern Miwok language group who form one of the two major divisions of the Miwokan subgroup of Utian speakers. Plains Miwok speakers lived in the Central Valley along the Sacramento, Cosumnes, and Mokelumne Rivers, and built their homes on high ground, with principal villages concentrated along major drainages (Regional San 2020a:16).

As with other California Native American groups, the California Gold Rush of 1849 had a devastating effect on the Plains Miwok. The flood of miners that came to the area in search of gold brought diseases with them that decimated the Native populations. Those who survived were subjected to violence and prejudice at the hands of the miners, and the Plains Miwok eventually were pushed out of their ancestral territory. Although this contact with settlers had a profound negative impact on the Native American population through disease and violent actions, the Plains Miwok people survived and continue to maintain strong communities and action-oriented organizations (Regional San 2020a:16).

TRIBAL CONSULTATION

Under PRC section 21080.3.1 and 21082.3, Regional San must consult with tribes traditionally and culturally affiliated with the project site that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

On November 5, 2020, Regional San sent notification letters that the project was being addressed under CEQA, as required by PRC Section 21080.3.1, to the three Native American tribes that had previously requested such notifications for projects in Sacramento County, Wilton Rancheria, United Auburn Indian Community (UAIC), and Ione Band of Miwok Indians. Wilton Rancheria responded requesting consultation. Consultation with Wilton Rancheria is ongoing, and while the specific details of consultation are confidential pursuant to California law, no tribal cultural resources have been identified within the project site. However, the area is sensitive for tribal cultural resources and mitigation measures were requested by UAIC and Wilton Rancheria.

A record search of NAHC Sacred Lands File (SLF) was completed on October 26, 2020. The NAHC search indicated that the SLF was negative for the presence of Native American resources within the project site.

3.18.2 Discussion

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

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

No impact. The project site and staging area contain no tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. Therefore, there would be **no impact**.

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

Less than significant with mitigation incorporated. Although the NAHC SLF was negative and neither UAIC nor Wilton Rancheria identified a tribal cultural resource on the project site, consultation with Wilton Rancheria revealed that the project site is considered culturally sensitive. Therefore, it is possible that yet-undiscovered tribal cultural resources could be encountered or damaged during ground-disturbing construction activities. This impact would be potentially significant.

Mitigation Measure 3.18-1: Develop and implement a Worker Environmental Awareness Program.

Prior to any ground disturbing construction activities, a qualified archaeologist shall develop a construction worker tribal cultural resources awareness brochure for all construction personnel and supervisors who will have the potential to encounter and Tribal and cultural resources. The brochure will be developed in coordination with representatives from

Native American Tribes culturally affiliated with the project site. The topics to be addressed in the Worker Environmental Awareness Program will include, at a minimum:

- types of Tribal and cultural resources expected at the project site;
- types of evidence that indicates Tribal or cultural resources might be present (e.g., ceramic shards, trash scatters, lithic scatters);
- what to do if a worker encounters a possible resource;
- what to do if a worker encounters bones or possible bones; and
- penalties for removing or intentionally disturbing Tribal and cultural resources, such as those identified in the Archeological Resources Protection Act.

Mitigation Measure 3.18-2: Unanticipated Discoveries of Potential Tribal Cultural Resources

If any suspected tribal cultural resources are discovered during ground disturbing construction activities, including midden soil, artifacts, chipped stone, exotic rock (nonnative), or unusual amounts of baked clay, shell, or bone, all work shall cease within 100 feet of the find. Appropriate tribal representative(s) shall be immediately notified and shall determine if the find is a tribal cultural resource (pursuant to PRC Section 21074). The tribal representative will make recommendations for further evaluation and treatment, as necessary.

Preservation in place is the preferred alternative under CEQA and the tribes' protocols, and every effort must be made to preserve the resources in place, including through project redesign. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project vicinity where they will not be subject to future impacts. The Tribe does not consider curation of tribal cultural resources to be appropriate or respectful and request that materials not be permanently curated, unless approved by the Tribe. Treatment that preserves or restores the cultural character and integrity of a tribal cultural resource may include tribal monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.

Significance Conclusion

Implementation of Mitigation Measures 3.18-1 and 3.18-2 would reduce impacts to tribal cultural resources to a **less-than-significant** level by training workers to properly handle inadvertent discovery of sensitive resources and requiring appropriate treatment and proper care of significant tribal cultural resources, in the case of a discovery.

3.19 UTILITIES AND SERVICE SYSTEMS

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

3.19.1 Environmental Setting

WASTEWATER

Wastewater service for the project site is provided by Regional San. Regional San owns and operates the regional wastewater conveyance system and the SRWTP, and provides wastewater conveyance and treatment services to residential, industrial, and commercial customers throughout unincorporated Sacramento County; the cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, Sacramento, and West Sacramento; and the communities of Courtland and Walnut Grove. The wastewater treatment process generates a variety of solids including primary sludge, grit, screenings (i.e., large debris), return activated sludge, and waste activated sludge. Regional San feeds blended primary sludge and thickened waste activated sludge to six primary anaerobic digesters and two blending digesters, which produce biogas. The SRWTP is permitted to discharge an average dry weather flow (ADWF) of 181 mgd to the Sacramento River.

As described above in Section 3.10, "Hydrology and Water Quality," wastewater from the SRWTP site is captured by the general sanitary sewer drainage system, which is routed to the SRWTP headworks for treatment and discharged into the Sacramento River.

WATER

Drinking water, or potable water, is used at the SRWTP in all domestic water supplies (i.e., sinks, toilets, hot water heaters, eyewashes, and safety showers). Potable water can also be used for fire protection when non-potable water and high-pressure reclaimed water is not available. Potable water is supplied to the SRWTP by two independent sources: one from the north from the City of Sacramento and one from the south from the Sacramento County Water Agency's Zone 40 water distribution system.

Non-potable water is non-drinkable water. It is used throughout the SRWTP for a variety of cleaning and flushing uses including for pump seals, cooling water, utility stations, and chemical bath water. Non-potable water is produced through treatment processes at the SRWTP, including the Title 22 Water Reclamation Facility.

STORM DRAINAGE

As described above in Section 3.10, "Hydrology and Water Quality," stormwater runoff from the SRWTP site is captured by the stormwater drainage system, which is routed to the SRWTP headworks for treatment and discharged into the Sacramento River.

SOLID WASTE

Solid waste at the SRWTP consists of trash generated by Regional San staff, yard waste from grounds maintenance, and grit and screenings generated by the wastewater treatment process. Refuse from the SRWTP site is hauled to the Sacramento County Kiefer Landfill. Kiefer Landfill is currently sized to satisfy all county landfill disposal needs through 2064.

Biosolids generated during wastewater treatment processes are managed through two strategies: 1) on-site disposal of biosolids to lined dedicated land disposal sites; and 2) recycling at the biosolids recycling facility. None of the biosolids produced by the SRWTP are disposed at a landfill.

NATURAL GAS AND ELECTRICITY

As discussed above in Section 3.6, "Energy," currently, Regional San delivers renewable biogas generated by the SRWTP wastewater treatment process to SMUD in exchange for electricity. Treated biogas resulting from digestion of solids at the SRWTP is captured and diverted to the Carson Cogen Plant or Cosumnes Power Plant. When used, the Carson Cogen Plant uses SRWTP biogas in a duct burner that, along with natural gas turbines, generates up to 100 MW of electricity for local residential and industrial use. More recently, SRWTP biogas is primarily sent to Cosumnes Power Plant, which uses the combination of natural gas and SRWTP biogas as fuel for turbines and produces up to 600 MW of power.

In addition to the Carson Cogen Plant, electrical power to the SRWTP is supplied by SMUD. SMUD operates the nearby Pocket and Elk Grove electrical substations, complexes of transformers, and switches located to the north and south, respectively. These two major substations are supplied with 230,000 volts (230 kilovolts) from the larger electrical grid and, along with the Carson Cogen Plant, supply electricity to the SRWTP. On average, the SRWTP requires up to 12 MW of electricity each day.

3.19.2 Discussion

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

Less-than-significant impact. The project would include construction of a new biogeneration facility, which would generate electricity and steam. The effects of construction of this new facility are addressed throughout this Initial Study. Construction and operation of the project would result in a small increase in generation of wastewater and demand for water; however, these increases would be small and would not require construction or relocation of new facilities. The biogeneration facility would also result in an increase in electricity demand; however, the proposed project would produce between 10 and 15 MW of power, which would offset utility power purchases. Therefore, the project would not result in an increase in energy usage such that construction of new or expanded electrical facilities would be required. The project would not require construction of other new or expanded telecommunication facilities. The project would result in an increase in impervious surfaces but would not result in a substantial increase in runoff from the project site or require construction of new stormwater facilities outside of the project footprint. Stormwater runoff would continue to be captured and treated on-site and the project would not require expansion of the capacity of the stormwater drainage system. Therefore, the project would not require construction of new or expanded facilities beyond those discussed in this Initial Study. This impact would be **less than significant**.

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

Less-than-significant impact. This project would result in a small increase in water supplies for construction and operation. However, the existing potable water system has adequate capacity to accommodate the increase in demand and is not expected to require capacity related upgrades. No new water supply entitlements, expanded entitlements, or facilities would be required. This impact would be **less than significant**.

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

Less-than-significant impact. Wastewater generated by the proposed project would be captured by the general sanitary sewer drainage system, which is routed to the SRWTP for treatment. The SRWTP is currently permitted to discharge an ADWF of 181 mgd and has adequate capacity to serve the project. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. During construction, there may be solid waste generated that would require disposal at a landfill. Spoil (soil and rock) excavated during construction would either be reused on-site for backfill or disposed of properly. Spoil not suitable for reuse would be temporarily stored at staging areas until characterized, and then hauled away to the proper disposal site (e.g., landfill). Additional solid waste would be generated by construction crews, which would need to be hauled off-site to be disposed. Operation of the project would generate a small amount of solid waste including waste from the digester conditioning system. Solid waste generated during construction and operation of the project would be delivered to Kiefer Landfill. This landfill is currently sized to satisfy all county landfill disposal needs through 2064. Therefore, the project would not generate solid waste in excess of state or local standards. This impact would be **less than significant**.

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

Less-than-significant impact. The disposal of waste as described in item d) above would be in compliance with federal, state, and local laws and regulations related to solid waste. This impact would be **less than significant**.

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?		☐ Yes		☒ No
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

3.20.1 Environmental Setting

As discussed above in Section 3.9, "Hazards and Hazardous Materials," the project site and staging area are located within the LRA and is not categorized as a "Very High" FHSZ (CAL FIRE 2021).

3.20.2 Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant with mitigation incorporated. See Section 3.9, "Hazards and Hazardous Materials" item f). Use of area roadways by construction vehicles could temporarily affect accessibility of roadways to emergency vehicles. This impact would be potentially significant.

Mitigation Measure 3.9-2: Traffic Management Plan

Implement Mitigation Measure 3.9-2 above.

Significance Conclusion

Implementation of Mitigation Measure 3.9-2 would reduce impacts associated with emergency access during construction to a **less-than-significant** level because it would require the emergency access and access for local land uses be maintained.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No impact. The project would not exacerbate wildfire risks or include construction of structures that would be inhabited. In addition, the project site and staging area are generally flat and are not located within a wildfire hazard zone. Therefore, the project would not exacerbate wildfire risks in the project vicinity. There would be **no impact.**

c) Require the installation 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?

No impact. The project would include construction of a new biogeneration facility within the SRWTP site. The project would be connected to existing utilities at the SRWTP site and would not require the installation of infrastructure that could exacerbate fire risk. The project would not require construction of new roads, fuel breaks, emergency water sources, or power lines. Therefore, there would be **no impact**.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No impact. The project is in an area of flat terrain and would not involve changing slopes on the project site, which could expose people to risks of post-fire slope instability. Implementation of the project would result in a small increase in impervious surfaces within the project site. However, the additional impervious surfaces would not result in substantial runoff or drainage changes that would expose people or structures to significant risks that would increase the likelihood of flooding. Therefore, there would be **no impact**.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

3.21.1 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Less than significant with mitigation incorporated. As discussed in the biological resources and cultural resources sections of this Initial Study, the project would result in potentially significant impacts and could degrade the quality of the environment. However, adoption and implementation of mitigation measures described in this Initial Study would reduce these individual impacts to less-than-significant levels.

The project site and staging area provide potentially suitable habitat for common raptors and bird species, which could be affected by the project. However, implementation of Mitigation Measures 3.4-1 through 3.4-3 would reduce potential impacts nesting raptors or bird species to a less-than-significant level by requiring pre-construction surveys and maintaining buffers around any nests found during the surveys.

Although no documented cultural resources are located within the project site or staging area, the potential exists to encounter previously undiscovered archaeological resources during construction-related ground disturbing activities. However, adoption and implementation of Mitigation Measure 3.5-1 would reduce this potential impact to a less-

than-significant level because these measures would require professionally accepted and legally compliant procedures for the discovery of previously undocumented significant archaeological resources.

Although there are no known tribal cultural resources within the project site or staging area, it is possible that yet-undiscovered tribal cultural resources could be encountered or damaged during ground-disturbing construction activities. Implementation of Mitigation Measures 3.18-1 and 3.18-2. would reduce impacts to tribal cultural resources to a less-than-significant level by requiring appropriate treatment and proper care of significant tribal cultural resources, in the case of a discovery.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than significant with mitigation incorporated. Cumulative environmental effects are multiple individual effects that, when considered together, would be considerable or compound or increase other environmental impacts. Individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time. The purpose of the project is to construct a new biogeneration facility to beneficially use biogas from the SRWTP. The project would not increase population growth either directly or indirectly beyond what has been planned for in the County General Plan. Implementation of the mitigation measures proposed in this Initial Study would reduce the project's impacts to a less-than-significant level. The project's contribution to environmental impacts would be less than cumulatively considerable.

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

Less than significant impact with mitigation incorporated. As identified in this Initial Study, the project could have impacts associated with biological resources, cultural resources, geology and soils, hazards and hazardous materials, transportation, tribal cultural resources, and wildfire. Impacts to biological resources, cultural resources, geology and soils, and tribal cultural resources would not directly affect human beings and would be reduced to a less-than-significant level with mitigation. All other impacts would be temporary and would be mitigated to a less-than-significant level. Therefore, implementation of the proposed project would not result in substantial adverse effects on human beings, either directly or indirectly. With implementation of mitigation, this impact would be less than significant.

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3.21 Mandatory Findings of Significance

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