



**Sonora Regional Wastewater
Treatment Facility Improvements
Project**

Administrative Draft CEQA Initial
Study/Mitigated Negative Declaration

November 2019

Prepared for:

Tuolumne Utilities District

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**SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

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Abbreviations and Glossary

AADF	Annual average daily flow
AB	Assembly Bill
ADT	average daily traffic flow
ADWF	average dry weather flow
AFY	acre feet per year
amsl	above mean sea level
APCDs	Air Pollution Control Districts
APE	Area of Potential Effects
ATCM	Airborne Toxic Control Measures
BAGEPA	Bald and Golden Eagle Protection Act
BFE	base flood elevation
BFFP	Board of Forestry and Fire Protection
BMPs	Best Management Practices
BOD	Biochemical Oxygen Demand
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCIC	Central California Information Center
CDFW	California Department of Fish and Wildlife
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFG	California Fish and Game
CFR	Code of Federal Regulations
CH ₄	methane
CLOMR	Conditional Letter of Map Revision of Map Revision
CNDDB	California Natural Diversity Database
CNELs	community noise exposure levels
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CRLF	California red-legged frog
CRPR	California Rare Plant Ranking
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act



**SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA
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CWC	California Water Code
CWSRF	Clean Water State Revolving Fund
dBA	A-weighted decibels
DBH	Diameter at Breast Height
District	Tuolumne Utilities District
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EEAS	extended aeration activated sludge
EOP	Emergency Operations Plan
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FIRMs	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
ft	foot/feet
gal	gallon
GHGs	greenhouse gases
GPS	Geographic Positioning System
GWP	Global Warming Potential
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbons
HRT	hydraulic retention time
HUC	Hydrologic Unit Code
IS/MND	Initial Study/Mitigated Negative Declaration
IWMP	Irrigation and Watershed Management Program
lb	pound
Ldn	day-night average sound level
L _{eq}	equivalent continuous sound level
LM	Light Manufacturing
LOMR	Letter of Map Revision
LOS	level of service
LRA	Local Responsibility Area
LSAA	Lake and Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCV	Manual for California Vegetation
MDF	maximum daily flow
Mgal	million gallons
MGD	million gallons per day
mg-min/L	milligrams- minutes per liter



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mg/L	milligram per liter
ML	Limited Manufacturing
MLD	most likely descendant
mm	millimeter
MM	Mitigation Measure
MMDF	maximum month daily flow
MMRP	Mitigation Monitoring and Reporting Program
MRZ	Mineral Resource Zones
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NH ₃	ammonia
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
NVC	National Vegetation Classification
O ₃	ozone
OES	Office of Emergency Services
OSHA	Occupational Safety and Health Administration
OWCA	Oak Woodlands Conservation Act
OWCP	Oak Woodlands Conservation Program
P	Public/Quasi Public
Pb	lead
PFC	perfluorocarbons
PFL	Professional Forester's Law
PG&E	Pacific Gas & Electric Company
PHF	peak hour flow
PM	particulate matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
proposed Project	SRWWTF Improvements Project
RAS	return activated sludge
Reclamation Permit	District's Master Reclamation Permit R5-2002-0202
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SF ₆	sulfur hexafluoride
SLS	Sacred Lands Search
SMARA	Surface Mining and Reclamation Act



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SO ₂	sulfur dioxide
SPCCP	Spill Prevention Control and Countermeasure Plan
SR	State Route
SRT	solids retention time
SRWWTF	Sonora Regional Wastewater Treatment Facility
SSC	Species of Special Concern
SSMP	sewer system management plan
State	State of California
SVP	Society of Vertebrate Paleontology
SWRCB	State Water Regional Control Board
SWPPP	Stormwater Pollution Prevention Program
TAC	Toxic Air Contaminant
TCAPCD	Tuolumne County Air Pollution Control District
THCSD	Twain Harte Community Service District
TKN	total kjeldahl nitrogen
TPZ	Timberland Production Zone
TSS	total suspended solids
UCMP	California Museum of Paleontology
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMPA	Urban Water Management Planning Act
VSS	volatile suspended solids
WAS	waste activated sludge
WCB	Wildlife Conservation Board
WDR	Waste Discharge Requirement
Williamson Act	California Land Conservation Act
WOTUS	Waters of the United States
WQC	Water Quality Certification



SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Introduction

1.0 INTRODUCTION

Tuolumne Utilities District (District) provides wastewater collection, treatment, and disposal services to the majority of the population of Tuolumne County. The District owns and operates the Sonora Regional Wastewater Treatment Facility (SRWWTF), which is a conventional trickling filter secondary wastewater treatment plant permitted for an average dry weather flow rate of 2.6 million gallons per day (MGD). The District also operates the County's largest septage receiving facility, which is located at the SRWWTF.

The existing SRWWTF was originally constructed in 1974. The current plant processes include screening, aerated grit removal, primary clarification, trickling filtration with plastic media, secondary clarification, polishing ponds, and a chlorine contact basin. Solids are processed through a primary and a secondary anaerobic digester and then dewatered through a combination of sand and tile drying beds, as well as a centrifuge. The Class B biosolids that are produced are hauled and disposed of by contract with Synagro.

Operation of the SRWWTF and effluent and biosolids produced there are governed by Waste Discharge Requirements (WDRs) Order No. R5-2014-0008 issued by the Central Valley Regional Water Quality Control Board (CVRWQCB).

1.1 NEED FOR PROJECT

Based on recent flows and loads, influent flow limits identified in the WDRs are not exceeded, however, the SRWWTF appears to be at its design Biochemical Oxygen Demand (BOD) influent load limit, as well as exceeding its design suspended solids loading criteria. Over recent years the effluent quality at the plant has decreased. The District staff observed seasonal change in biomass growth in the trickling filter media, which resulted in reduction in BOD removal. With the proposed Project, the District intends to resolve the issues identified above.



SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Project Description

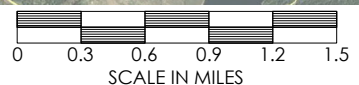
2.0 PROJECT DESCRIPTION

The SRWWTF Improvements Project (proposed Project) is located in the City of Sonora in Tuolumne County, California at the existing District SRWWTF. The proposed Project is located within the Sonora U.S. Geological Survey 7.5-minute quadrangle map at Township 1N, Range 14E, and Section 1. Figure 1 presents the proposed Project vicinity and Figure 2 represents the proposed Project study area.

The proposed Project will provide replacement of existing polishing ponds with a new activated sludge treatment facility consisting of the following: headworks primary screening and grit removal, new activated sludge/extended aeration secondary treatment processing, new secondary clarifiers, new chlorine disinfection facilities, renovated sludge digestion to aerated digestion, and new sludge dewatering facilities. A new administration and electrical building (Building A) will be constructed adjacent to the treatment facility. A new Building B will contain headworks and sludge dewatering systems. The existing digestion building will be a renovated Building C. Existing septage receiving station, headworks, primary clarifiers, trickling filters, and secondary clarifiers will be demolished as part of the project. The existing Emergency Storage Basin (ESB) Pond A will be lined and reused in the proposed Project. The new facilities will be constructed in the location of the existing polishing ponds. The land area will be reclaimed by draining and filling the ponds with approximately 90,000 cubic yards of fill material to be generated on-site. The conceptual proposed Project components are identified in Figure 3 and described below.

The SRWWTF receives a combination of three influent waste streams: 1) septage, 2) raw sewage, and 3) primary effluent from the Twain Harte Community Service District (THCSD). The primary source of the wastewater is municipal. Due to water conservation, average annual wastewater inflow has decreased from 1.59 MGD in 2016 to 1.31 MGD in 2018. Concentrations of particulate, suspended, and dissolved constituents have increased, such that the load of constituents has been relatively consistent.





PROJECT LOCATION
Sonora Regional
Wastewater Treatment
Facility

PROJECT LOCATION
SONORA, CA
TUOLUMNE COUNTY

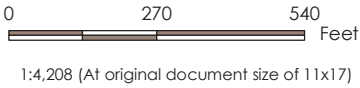
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Legend

Project Study



Project Location
T1N, R14E, S01
Mount Diablo Quad
Tuolumne County, CA

Prepared by L.McCandless
Technical Review by M. Kersten

Client/Project
Tuolumne Utilities District
Sonora Regional Wastewater Treatment
Facility Improvements Project

Figure No.
2

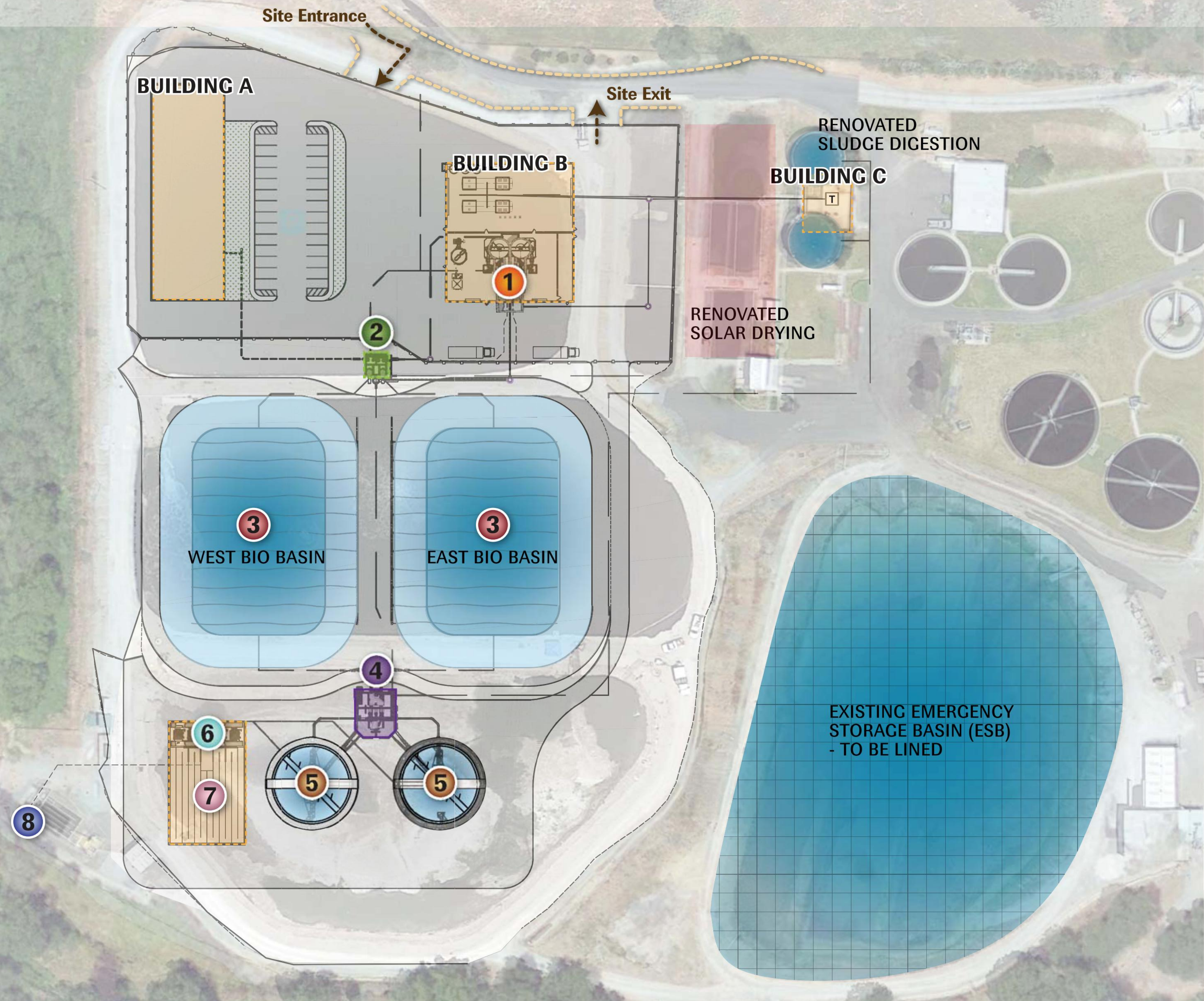
Title
Project Study Area

Notes

1. Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
2. Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

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TUOLUMNE WASTEWATER TREATMENT SYSTEM CONCEPT LAYOUT
AUGUST 2019 - SONORA, CA



LEGEND

BUILDING A - ADMIN & ELECT BUILDING

BUILDING B - HEADWORKS & SOLIDS DEWATERING

BUILDING C - SLUDGE PROCESSING

- 1 HEADWORKS
- 2 NORTH SPLITTER BOX / ESB PUMP STATION / DRAIN PUMP STATION
- 3 SECONDARY TREATMENT - BIOLOGICAL BASINS
- 4 SOUTH SPLITTER BOX
- 5 SECONDARY CLARIFIERS 80' O
- 6 FILTRATION
- 7 CHLORINE CONTACT & DOWNSTREAM EQUALIZATION
- 8 DOWNSTREAM CONNECTION TO DISTRIBUTION

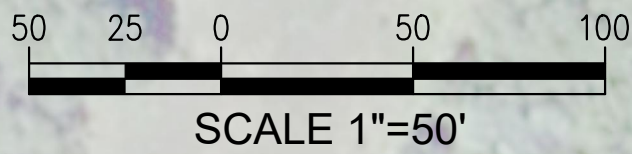
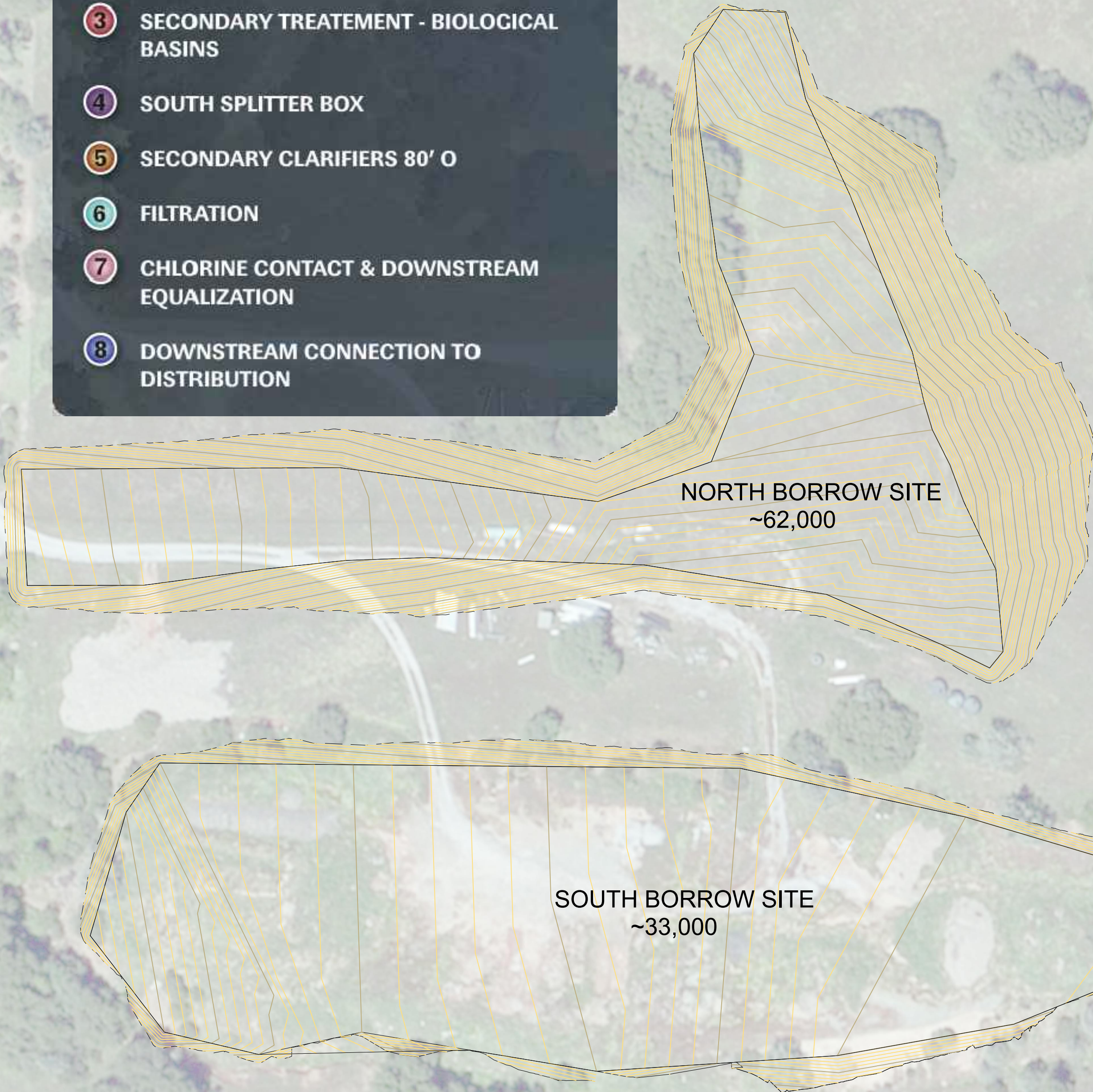


Figure 3 Project Components

SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Project Description

Design parameters for the updated treatment facility are shown in the Table below, consisting of 2.0 MGD average annual influent flow at 2018-2019 constituent concentrations, such that the design loading is similar or higher than the existing facility design load. This design flow value assumes a 1.09% annual growth rate over the next 20 years from the 2016 peak inflow of 1.59 MGD. Peaking factors have been applied based on empirical peaking measured in the past, including a 1.25 MMDF peak factor, a 2.5 MDF peak factor, and a 5 PHF peak factor, as summarized in Table 2.1-1.

Table 2.1-1 Updated SRWWTF Design Flow and Load

Design Flows	Value	Units
Annual Average Daily Flow (AADF)	2.0	MGD
Maximum Month Daily Flow (MMDF)	2.5	MGD
*Maximum Day Flow (MDF)	5.0	MGD
Peak Hour Flow (PHF)	10.0	MGD
Influent Parameter	Value	Units
BOD	350 (5,838)	mg/L (lbs/day)
TSS	470 (7,840)	mg/L (lbs/day)
TKN	50 (834)	mg/L (lbs/day)
Ammonia (NH ₃)	35 (584)	mg/L (lbs/day)

*Flows exceeding 5.0 MGD not stored in the freeboard of the bio basins will be pumped to the ESB Pond A for storage and re-processing.

2.1 HEADWORKS & SEPTAGE RECEIVING FACILITY IMPROVEMENTS

The existing headworks does not have consistent fine screening, is at the end of its useful life, and does not have the capacity to handle the peaks from wet weather and septage receiving and will need to be upgraded and relocated to a new headworks facility. The new headworks at the SRWWTF will be constructed in the southern part of Building B and will be adjacent to the new solids processing room, north of the new secondary treatment basins.

Septage trucks will deliver raw septage by gravity from the truck's tank into the upstream end of the headworks consisting of coarse 6-12 mm screening equipment. After coarse screening, influent raw sewage will mix with coarse screened septage and will be processed through grit removal and 2-6 mm fine screening equipment to remove additional debris. Both the coarse and fine screens, and grit removal equipment, will incorporate redundancy for treatment flexibility. Screenings and grit removed from the influent headworks will be washed and compacted on site to prepare for hauling and landfill disposal. Existing primary treatment will be demolished and not used as part of the proposed treatment trains. No longer will anaerobic digestion be used in the proposed facility.



Project Description

2.2 SECONDARY TREATMENT IMPROVEMENTS

Currently, the SRWWTF maintains two 75-ft trickling filters and two 50-ft secondary clarifiers for biological oxidation and clarification. The quality of secondary effluent has diminished over the past several years, and to improve the secondary effluent quality, the existing trickling filter process is being upgraded to a Biolac or equal extended aeration high HRT/SRT activated sludge process in lined basins.

2.2.1 Upgrade the Process to Extended Aeration Activated Sludge Process

The extended aeration activated sludge (EAAS) process utilizes a longer hydraulic retention time and provides a treatment process that is stable and able to handle fluctuating loads and flows with minimal operation and without pre- and post-equalization. Equalization will be provided in the freeboard of the secondary basins to accommodate varying influent flows. The EAAS process typically produces effluent with BOD and TSS less than 10 mg/L and can provide both nitrification and denitrification by creating multiple oxic and anoxic zones within each aeration basin. As such, the primary clarifiers and trickling filters at the facility will be abandoned and two (2) 80-ft diameter secondary clarifiers with a new return activated sludge (RAS) pumping system will be constructed in the area currently identified as Polishing Pond No. 3. The RAS pumping system will return mixed liquor solids back to the aeration basins after settling in the secondary clarifiers. The excess biomass produced from the EAAS process is typically well-stabilized which can result in less additional sludge treatment after leaving the treatment process.

The aerated basins will be designed based off a maximum month daily flow of 2.5 MGD and a hydraulic retention time (HRT) of 48 hrs. The basins will be sized with adequate freeboard to dampen the diurnal and peak influent flows so that the secondary clarifiers and disinfection process can experience a fairly constant flow rate. After the new facility installation, all three existing polishing ponds will not be needed for treatment and will be graded to accommodate the new treatment processes. The site grading will be balanced to optimize import/export cut and fill, with a net import of fill estimated to be +/-90,000 yd³ in order to improve site access and circulation, reduce dewatering during construction, and to ensure new facilities are above the 1:100 year flood plain. Existing clarifiers, trickling filters, and appurtenances on the east side of the property will be demolished and the restored back to line and grade matching the surrounding land surface.

2.3 DISINFECTION & FUTURE FILTRATION IMPROVEMENTS

The project proposes to construct two (2) new chlorine contact basins located south of the secondary clarifiers. The basins will be designed to disinfect secondary clarified water compliant with Title 22 requirements for reuse. The chlorine contact system will be sized to treat up to 5.0 MGD of flow using the requirements for future unrestricted reuse of recycled water requiring chlorination (combination of chlorine residual and modal contact time) of 450 mg-min/L for tertiary recycled water. Therefore, chlorine will be dosed to yield a chlorine residual of 5 mg/L and the basins will be designed to have a contact time of 90 minutes at 5.0 MGD. Filter basins for future filters will be provided upstream of the chlorine contact basins, to allow for gravity filtration in the future.



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Project Description

2.4 SLUDGE STABILIZATION AND DEWATERING IMPROVEMENTS

The existing concrete digester tanks totaling 450,000 gallons of volume will be renovated and updated to provide a 28-day aerobic solids retention time to provide EPA Class B Biosolids through required pathogen reduction and volatile suspended solids (VSS) destruction. The waste activated sludge (WAS) from the secondary clarifiers will be thickened during digestion to 2.5% solids. The existing centrifuge has limited capacity to dewater produced sludge and is nearing the end of its useful life. It also requires considerable operational attention. A new screw press/centrifuge dewatering system will replace the existing centrifuge and will produce an 18-20% sludge cake which will be hauled offsite for disposal. Existing gravity solar drying beds will also be renovated for use in sludge dewatering or drying in the warm months.

2.5 SRWWTF OPERATION AND MAINTENANCE

No additional SRWWTF labor cost is anticipated. However, operational and maintenance costs are expected to increase as a result of the proposed Project.

2.6 CONSTRUCTION ACTIVITIES AND ESTIMATED SCHEDULE

Construction activities will include grading, site preparation, excavation, concrete placement, and mechanical and electrical equipment installation. The proposed Project construction activities are described in Table 2.6-1 below. The proposed Project construction is anticipated to take place in 2021 and 2022. The total length of proposed Project construction is anticipated to take approximately 18 months but could extend as long as 24 months. Construction is expected to take place Monday through Friday from 7am to 5pm.

Table 2.6-1 Project Component Construction Activities

Project Component	Construction Activities
Site Improvements	• Clean out and line Pond A to be used as a polishing pond during construction and as an emergency storage basin after the new facility is operational • Generate approximately 90,000 cubic yards of material to be used to fill in the existing polishing ponds • Relocate approximately 325 linear feet of 15-inch sewer main to avoid conflicts with the proposed borrow sites. • Grading for new access road and parking area • Site preparation for new operations building • Installation of liner for all ponds and basins



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Project Description

Project Component	Construction Activities
Secondary Treatment Improvements	• Grading • Site preparation • Excavation • Concrete Placement • Mechanical and Electrical Equipment Installation
Sludge Dewatering Improvements	• Grading • Site preparation • Mechanical and Electrical Equipment Installation • Construction of covered solids storage structure • Demolition/Wasting/Salvage of Existing Mechanical Equipment (Centrifuge and associated appurtenances thereto)

2.7 CEQA PROCESS

The California Environmental Quality Act (CEQA) is the state environmental law that requires project proponents to disclose the significant impacts to the environment from proposed development projects. The intent of CEQA is to foster good planning and to consider environmental issues during the planning process. The District is the Lead Agency under CEQA for the preparation of this Initial Study/Mitigated Negative Declaration (IS/MND). The CEQA Guidelines (Section 21067) define the Lead Agency as “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment”. The approval of the proposed Project is considered a public agency discretionary action, and therefore the proposed Project is subject to compliance with CEQA. The public, City of Sonora, Tuolumne County, the State Water Resources Control Board (SWRCB), and other local and state agencies will be given the opportunity to review and comment on this document during the 30-day Public review period. Comments received during the 30-day review period will be considered by the District Board prior to the certification of this CEQA document, and proposed Project approval. As currently planned, environmental permits are not expected to be necessary.

The State Water Resources Control Board, Division of Financial Assistance, administers the Clean Water State Revolving Fund (CWSRF) Program. The District is seeking funds from this program to assist in financing the proposed Project. The CWSRF Program is partially funded by a capitalization grant from the United States Environmental Protection Agency (USEPA).

2.8 SCOPE OF THIS STUDY

As the Lead Agency under CEQA, the District is responsible for compliance with the environmental review process prescribed by the CEQA guidelines. This study focuses on the proposed Project. A complete Project Description is included above. Section 3 includes the environmental impact analysis of the proposed Project. References are included in Section 4. The Mitigation Monitoring and Reporting Program (MMRP) is included in Appendix A.



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3.0 ENVIRONMENTAL CHECKLIST FORM AND ANALYSIS

- 1. Project Title:** Tuolumne Utilities District Sonora Regional Wastewater Treatment Facility (SRWWTF) Improvements Project (proposed Project)
- 2. Lead Agency name and address:** Tuolumne Utilities District
18885 Nugget Boulevard
Sonora, CA 95370
- 3. Contact person and phone number:** Contact: Erik Johnson, District Engineer
Phone: 209-532-5536
- 4. Project location:** The proposed Project is located at the existing District SRWWTF. A map of the proposed Project location is included in Figures 1, 2, and 3 of the previous section. The SRWWTF is located in the City of Sonora in Tuolumne County. The SRWWTF facilities are located at 1400 Southgate Drive, Sonora, CA 95370.
- 5. Project sponsor's name and address:** Erik Johnson, District Engineer
Tuolumne Utilities District
18885 Nugget Boulevard
Sonora, CA 95370
Phone: 209-532-5536
- 6. General plan designation and zoning:**
 - City of Sonora Zoning Map Designation (2011): Limited Manufacturing (ML)
 - City of Sonora General Plan Land Use Designation (February 2017): Public/Quasi Public (P)
- 7. Description of Project:** Refer to the Project Description in Section 2 above.
- 8. Surrounding Land Uses and Setting:** Surrounding land uses and setting of the proposed Project area are generally designated as Agricultural/Residential, Residential Estates (City of Sonora Zoning 2011), and Light Manufacturing (City of Sonora General Plan 2017).
- 9. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**
 - Refer to Project Description (Section 2.8 above).



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3.1 AESTHETICS

3.1.1 Regulatory Setting

Federal

No federal regulations related to aesthetics are applicable to the proposed Project.

State

California Scenic Highway Program

The State of California Department of Transportation (Caltrans) administers State scenic route designations within Tuolumne County. State scenic route designations include (Caltrans 2011):

- State Route (SR) 108 (Eligible State Scenic Highway- Not Officially Designated);
- Highway 49 (Eligible State Scenic Highway- Not Officially Designated).

Local

City of Sonora General Plan 2020

The following goals and policies from the Conservation and Open Space Element related to aesthetics, light, and glare are relevant to the proposed Project (City of Sonora 2007). Those goals and policies that directly pertain to the proposed Project are discussed in the impact analysis below.

- **Goal 4.C** Sustain and enhance the natural, scenic, and cultural resources and rural character of Sonora to preserve and enhance the city's quality of life and tourism economy.
- **Policy 4.C.1** Sustain the city's natural scenic resources along designated scenic transportation routes through and adjacent to the city.
- **Policy 4.C.2** Sustain and enhance the city's natural scenic resources at designated gateways to Sonora.
- **Policy 4.C.2** Sustain the natural scenic qualities of hillsides and hilltops.

The City of Sonora also designates and proposes SR 108 as a scenic gateway corridor within the city. (City of Sonora 2007)

3.1.2 Environmental Setting

The proposed Project is located within the existing SRWWTF footprint within the City of Sonora, California. The aesthetic character of the area surrounding the SRWWTF is typical of the foothills with gently sloping topography and varied oak woodlands with chaparral vegetation communities. The SRWWTF itself is a developed area with storage ponds, pumps, and various other equipment and



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buildings associated with the operations of the facility. Although the SRWWTF can be seen from SR 108, an Eligible State Scenic Highway (Caltrans 2011), these views are intermittent due to the varied topography and the vegetation blocking most of the views. Additionally, the SRWWTF is an existing facility and the proposed Project will not significantly change the existing view of the SRWWTF from the highway.

3.1.3 Impact Analysis

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

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

Finding: Less than Significant

SR 108 is the only scenic route within view of the proposed Project. Based on a review of the City of Sonora General Plan and Caltrans State scenic route designations, SR 108 is considered a City of Sonora Scenic-Gateway Corridor and is a Caltrans eligible State Scenic Highway. However, the SRWWTF can only be seen for a brief period of time from SR 108. Views of the SRWWTF along SR 108 mostly blocked by the topography and the vegetation, thus preventing prolonged views of the facility. The SRWWTF itself is a developed area with storage ponds, pumps, and various other equipment and buildings associated with the operations of the facility. Currently, the SRWWTF uses earth tone colors and blends into the surrounding area. The proposed Project improvements would also use earth tones as



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part of the Project design. The proposed Project would occur within the existing footprint of the SRWWTF and views of the construction from SR 108 would be temporary, limited, and similar to the current view of the existing SRWWTF. As such, the proposed Project would not have a substantial adverse effect on any scenic vista. Therefore, the proposed Project would have a less than significant impact.

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

Finding: Less than Significant

Based on review of the Caltrans State Scenic Highway List and the City of Sonora General Plan, the proposed Project is adjacent to and partially visible from SR 108 which is an Eligible State Scenic Highway and Scenic-Gateway Corridor (Caltrans 2011; City of Sonora 2007). Although the SRWWTF is partially visible from SR 108, the proposed Project construction activities would occur within the existing footprint of the SRWWTF and would be consistent with the current operations within the facility. The construction activities would be temporary and once completed, the improvements to the SRWWTF would not be discernably different from the current components and operations of the facility. Therefore, impacts to scenic resources within a State scenic highway would be considered less than significant.

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

Finding: Less than Significant

The proposed Project would slightly alter the current visual character of the SRWWTF and its surroundings by incorporating minor improvements to the existing facility. Construction activities would temporarily alter the character of the site; however, the alteration would not be significant since the SRWWTF is previously disturbed and would be consistent with the current operations and aesthetics of the facility. Once constructed, the improvements would blend into the existing facility and would not substantially alter or change the existing visual character of the SRWWTF. Therefore, the proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings and any impact would be less than significant.

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

Finding: Less than Significant

Construction activities would temporarily introduce equipment and vehicles to the proposed Project area. However, proposed Project activities will be conducted during daytime hours and therefore no create a new source of substantial light or glare. The two new buildings to be constructed (Building A and Building B) will include outdoor lighting on the sides of the buildings, and new light poles will be installed in the south process areas. This permanent additional lighting would not be considered substantial due to the



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existing lighting at the current SRWWTF. Additionally, there are no residences within the proposed Project area or immediately adjacent to the proposed Project area that have the potential to be affected by new light sources. Therefore, there would not be any new sources of permanent light or glare and there would be little to no lighting from construction activities. Thus, impacts would be considered less than significant.

3.1.4 Mitigation Measures

No mitigation is required.

3.2 AGRICULTURAL AND FORESTRY RESOURCES

3.2.1 Regulatory Setting

Federal

Farmland Protection Policy Act (FPPA)

The Farmland Protection Policy Act (FPPA) of 1981 [Sections 1539-1549 P.L. 97-98, Dec 22, 1981], requires the Secretary of Agriculture to establish and carry out a program to "minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to the extent practicable, will be compatible with State, units of local government, and private programs and policies to protect farmland." [7 USC 4201-4209 & 7 USC 658] (Farmland Protection Policy Act 1981).

State

Williamson Act

The California Land Conservation Act (Williamson Act) of 1965 is the State's principal policy for the "preservation of a maximum amount of the limited supply of agricultural land in the State" (Cal. Government Code Section 51220(a)). The purpose of the Williamson Act is to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Williamson Act enables private landowners to contract with counties and cities to voluntarily restrict their land to agricultural and compatible open space uses. In return for this guarantee by landowners the government jurisdiction assesses taxes based on the agricultural value of the land rather than the market value, which typically results in a substantial reduction in property taxes (California Land Conservation Act 1965).

California Public Resources Code

The following California Public Resources Code sections are discussed in the impact analysis Section 3.2.3 below.

California Public Resources Code Section 12220(g): "Forest land" is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for



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management of one or more forest resources, including: timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits (California Public Resources Code 2012).

California Public Resources Code Section 4526: "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis (California Law 2012).

California Public Resources Code Section 51104(g): "Timberland Production Zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone" (California Public Resources Code 2012).

California Open Space Subvention Act

The California Open Space Subvention Act (California Government Code Section 16143) states that land shall be deemed to be devoted to open space uses of Statewide significance if it:

- a) Could be developed as prime agricultural land, or
- b) Is open-space land as defined in Section 65560 which constitutes a resource whose preservation is of more than local importance for ecological, economic, educational, or other purposes. The Secretary of the Resources Agency shall be the final judge of whether the land is in fact devoted to open-space use of statewide significance.

Local

City of Sonora General Plan 2020

The following goals and policies from the Conservation and Open Space Element related to agriculture and forestry resources are relevant to the proposed Project. Those goals and policies that directly pertain to the proposed Project are discussed in the impact analysis below.

Per the Sonora General Plan 2020, the California Department of Conservation's Important Farmland Inventory Series Maps do not include Tuolumne County. Based on a review of the Department of Conservation's guidelines for determining important farmlands (California Department of Conservation) and a review of the characteristics of soils within the city's sphere of influence (City of Sonora 2007), there are no rangelands or agricultural lands which are of sufficient size to be of economic importance for the production of food and fiber located within the city limits. Therefore, agricultural resources are not discussed further in Sonora General Plan 2020 except as necessary to ensure the ability of existing agricultural operations to continue within the city limits (Implementation Program 4.F.a) (City of Sonora 2007).



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3.2.2 Environmental Setting

A wide variety of agricultural products are grown and produced in Tuolumne County, which contributes to the richness of the local and statewide agrarian tradition. Livestock and poultry, field crops, fruits and vegetables, and timber are part of the Tuolumne agricultural industry. Livestock and poultry production are the County's leading farm commodity (Tuolumne County 2016).

The 2013 Williamson Act map for Tuolumne County (California Department of Conservation 2013) shows no lands with Williamson Act contracts in the proposed Project area. Additionally, the proposed Project area is outside the survey area for the State's Farmland Mapping and Monitoring Program (FMMP). Based on a review of the Department of Conservation's guidelines for determining important farmlands (California Department of Conservation) and a review of the characteristics of soils within the city's sphere of influence (City of Sonora 2007, Appendix 6B), there are no rangelands or agricultural lands which are of sufficient size to be of economic importance for the production of food and fiber located within the city limits (City of Sonora 2007).

The City of Sonora General Plan land use designation for the proposed Project area is currently Public/Quasi Public (P) and Light Manufacturing (LM) lands (City of Sonora 2007). The proposed Project area is not currently used as agricultural lands and is not planned to be converted to that use in the future.

3.2.3 Impact Analysis

II. AGRICULTURAL AND FORESTRY RESOURCES Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒



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II. AGRICULTURAL AND FORESTRY RESOURCES Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

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

Finding: No Impact

The proposed Project lies outside of the survey boundary of the FMMP (FMMP 2016). Because of this, the proposed activities would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The City of Sonora General Plan indicates there are no rangelands or agricultural lands which are of sufficient size to be of economic importance for the production of food and fiber located within the city limits. The treatment plant upgrades are on land not currently used as agricultural lands and the proposed use of the property is consistent with designated land uses and the present zoning classification. Since the proposed Project would not convert Farmland as designated by the FMMP to non-agricultural use, there would be no impact.

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

Finding: No Impact

The proposed Project area is currently zoned Limited Manufacturing (ML) (City of Sonora 2007). The proposed Project area would not convert any zoned or land use designated as agricultural land. The proposed Project area is not designated as an agricultural preserve nor is it under a Williamson Act contract based on a review of the most recent Williamson Act lands geographic information system map published (CDC 2013). The proposed Project would not conflict with existing zoning for agricultural use or a Williamson Act contract, therefore, there would be no impact.

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



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Finding: No Impact

Public Resources Code (PRC) Section 12220(g) defines forest land as, "... land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Additionally, timberland is defined by PRC Section 4526 as land, "...which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products."

The proposed Project area currently consists of the existing SRWWTF which includes previously disturbed areas and paved roads. The proposed Project area does not support 10 percent native tree cover. Therefore, no forest land or timberland activity could be supported on the proposed Project area. These conditions preclude the possibility of changes to forest land or timberland zoning resulting from the proposed Project. Since the proposed Project area is not located on land zoned as forest or timber land and would not conflict with existing zoning for forestry or timberland resources, there would be no impacts to forestry or timberland resources.

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

Finding: No Impact

The proposed Project is not located on forest land and consequently would not result in a significant conversion of forestland to non-forestland uses. Therefore, no impacts would occur.

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

Finding: No Impact

The proposed Project area is currently zoned ML (City of Sonora 2007), lies outside of the survey boundary of the FMMP (FMMP 2016), and is not located on land designated as a Williamson Act Contract. Additionally, the City General Plan determined that there are no rangelands or agricultural lands which are of sufficient size to be of economic importance for the production of food and fiber located within the city limits (City of Sonora 2007). The proposed Project would not cause a change in land use that would create conflict between two types of uses which could lead to abandonment of agricultural uses. Since the proposed Project would not involve any other changes in the existing environment that would result in conversion of farmland or forestland to non-agricultural or non-forest use, there would be no impacts by changes to the existing environment which could result in conversion of farmland.

3.2.4 Mitigation Measures

No mitigation is required.



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3.3 AIR QUALITY

3.3.1 Regulatory Setting

The proposed Project area is located in the City of Sonora within Tuolumne County, which is within the Mountain Counties Air Basin and is under the jurisdiction of the Tuolumne County Air Pollution Control District (TCAPCD), California Air Resources Board (CARB), and USEPA.

Federal

Federal Clean Air Act

The Federal Clean Air Act (FCAA) establishes the framework for modern air pollution control. The FCAA, enacted in 1970 and amended in 1990, directs the USEPA to establish ambient air quality standards for six pollutants: ozone (O₃), carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), particulate matter (PM₁₀, PM_{2.5}), and sulfur dioxide (SO₂). These standards are divided into primary and secondary standards; the former are set to protect human health, the latter are set to protect environmental values, such as plant and animal life.

State

California Clean Air Act

The California Clean Air Act (CAA) focuses on attainment of the California Ambient Air Quality Standards (CAAQS). These standards are more stringent than federal regulations with respect to certain Criteria Pollutants and averaging periods. Responsibility for monitoring the CAAQS is placed on the CARB and local air pollution control districts. Table 3.3-1 below shows the Tuolumne County area designations for State and National ambient air quality standards.



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Table 3.3-1 Tuolumne County Area Designations for State and National Ambient Air Quality

Criteria Pollutants	State Designation	National Designation
Ozone	Nonattainment	Unclassified/Attainment
PM ₁₀	Unclassified	Unclassified
PM _{2.5}	Unclassified	Unclassified/Attainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	-
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	-
Visibility Reducing Particles	Unclassified	-

Source: CARB 2017

Tuolumne County Air Pollution Control District

The TCAPCD adopted Rules 202, 205, and 207 to improve air quality in the district. Below is a summary of these rules as they apply to the proposed Project (CARB 2012):

- **Rule 202 – Visible Emissions:** The purpose of this rule is to reduce emissions in the atmosphere. The rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:
 - A. As dark or darker in shade as that designated as No. 1 on the Ringlemann Chart, as published by the United States Bureau of Mines, or
 - B. Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (A) of this section.
- **Rule 205 – Nuisance:** The purpose of this rule is to reduce the quantities of air contaminants and protect people and the environment from such emissions. This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or to the public, or which endanger the comfort, repose, health or safety of any such persons, or the public, or which cause to have a natural tendency to cause injury or damage to business or property.
- **Rule 207 – Particulate Matter:** This rule aims to reduce the amounts of particulate matter entering the atmosphere. This rule states that a person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants



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only, particulate matter emissions in excess of 0.1 grains per cubic foot of dry exhaust gas at standard conditions.

The TCAPCD significance thresholds emission limits are detailed in the Table 3.3-2 below.

Table 3.3-2 TCAPCD Tiered Significance Thresholds

	NO _x	ROG	PM ₁₀	CO
TCAPCD Significance Thresholds	1,000 lbs/day or 100 tons per year	1,000 lbs/day or 100 tons per year	1,000 lbs/day or 100 tons per year	1,000 lbs/day or 100 tons per year

Source: TCAPCD ND

NO_x, Reactive Organic Gases (ROG), PM₁₀, and CO emissions must be mitigated to a level below significant. If emissions for NO_x, ROG, PM₁₀, or CO exceeds 1000 pounds per day or 100 tons per year then there is a *significant* impact; below this threshold is *potentially significant* (TCAPCD ND).

Local

City of Sonora General Plan 2020

The following goal from the Air Quality Element are relevant to the proposed Project and discussed in the impact analysis below. (City of Sonora 2007)

Goal 8.A Maintain and improve air quality to ensure the health and safety of residents and to continue to attract tourists and other sources of economic development while maintaining the area's quality of life.

3.3.2 Environmental Setting

The proposed Project is located in the City of Sonora within the Mountain Counties Air Basin. The TCAPCD is responsible for the management of air quality in the Tuolumne County. Major air quality concerns in the district are PM emissions from wildfires, open burning, and residential wood heating appliances, as well as, ozone and ozone precursor (NO_x and ROG) emissions (CAPCOA 2015). According to the CARB, Tuolumne County violates state ozone standards; this is primarily related to prevailing winds transporting pollutants from the San Francisco Bay Area and the Central Valley up against the western Sierra Foothills. Table 3.3-1 describes Tuolumne County Area designations for State and National Ambient Air Quality (CARB 2017).

Ultramafic Rock, Serpentine, or Naturally Occurring Asbestos Occurrence

The proposed Project is not directly located in an area mapped as having, or otherwise known to have, ultramafic rock, serpentine or naturally occurring asbestos. The nearest ultramafic mapping unit is approximately three miles to the west of the proposed Project area (California Geologic Survey 2011). This area was known to be a former asbestos prospect and contains ultramafic rock. The Statewide Asbestos Airborne Toxic Control Measures (ATCM) would not apply unless ultramafic rock/serpentine is



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discovered during grading or trenching. If ultramafic rock is discovered, the TCAPCD must be notified no later than the following business day and the ATCMs will apply.

3.3.3 Impact Analysis

The potential proposed Project-related impacts and the mitigation to reduce such impacts to less than significant levels are discussed below. In order to assess potential Project-related impacts to air quality, the California Emissions Estimator Model (CalEEMod) was run using estimations of Project construction activities. The model was run using the following assumptions/Project details:

- The proposed Project construction activities would take approximately 18 to 24 months to complete;
- Operations would be similar to existing conditions; therefore, operational impacts were not modeled.

III. AIR QUALITY Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

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

Finding: Less than Significant with Mitigation Incorporated

The City of Sonora General Plan and the TACPCD have adopted goals and rules intended to improve air quality in the City of Sonora, Tuolumne County, and the air basin as a whole. Tuolumne County is in non-attainment for State Ozone standards. The applicable goals and rules of Tuolumne County and the TCAPCD to the proposed Project are listed above in the regulatory framework of this section and the assessment of this impact relies upon the proposed Project's potential to conflict with or obstruct implementation of these goals.



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To assess the proposed Project's potential to obstruct implementation of an air quality plan, localized criteria pollutant emissions were analyzed, as these are the pollutants with established ambient air quality standards. Potential localized impacts would include exceedances of State standards for ozone. Ozone emissions are generated from increased hauling and the use of off-road heavy-duty diesel equipment for site grading during construction.

During proposed Project construction, various types of equipment and vehicles would temporarily operate on the proposed Project area. Construction exhaust emissions would be generated from construction equipment, earth movement activities, construction workers' commutes, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants.

Air quality modeling was performed using proposed Project-specific details in order to determine whether the proposed Project would result in criteria air pollutant emissions in excess of the applicable thresholds of significance. Presented in Table 3.3-3, the proposed Project's construction-related emissions have been estimated using CalEEMod (See Table 3.3-3 and Appendix B). The results of the unmitigated emissions modeling were compared to the TCAPCD significance thresholds, also summarized in Table 3.3-3, in order to determine the associated level of impact. Although the proposed Project construction would temporarily cause localized increases in emission levels, the proposed Project would be in compliance with the TCAPCD significance thresholds for ROG, NO_x, CO, PM₁₀, and PM_{2.5} (Table 3.3-3, CalEEMod 2018).

Table 3.3-3 CalEEMod Predicted Maximum Daily Project Emissions Estimates

	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
Project Unmitigated Construction Emissions (lbs/day)	4.1	40.7	23.1	20.3	11.9
TCAPCD Significance Thresholds (lbs/day)	1,000	1,000	1,000	1,000	1,000

Because the TCAPCD is in nonattainment for State ozone (see Table 3.3-2), Mitigation Measure (MM) AIR-2: Implement Best Management Practices (BMPs) to Reduce Impacts on Air Quality from Construction Equipment Emissions, as described in Section 3.3.4, would be implemented to reduce the potential for proposed Project construction equipment emissions by prescribing measures that limit ozone emissions in accordance with TCAPCD mitigation measures. Additionally, as shown in Table 3.3-3 above, PM₁₀ emissions are well below the TCAPCD threshold and would not have a significant impact. However, MM AIR-1: Dust Control Measures as described in Section 3.3.4 would be implemented to further reduce the potential for proposed Project emissions to obstruct the implementation of an air quality plan by prescribing measures that limit dust particulate matter emissions in accordance with TCAPCD mitigation measures.

Additionally, CARB has adopted regulations to control emissions from portable equipment as a component of the State's air quality plans. All applicable portable engines and off-road equipment must be registered with CARB's portable engine and off-road equipment programs. To control emissions from



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portable equipment, MM AIR-2: Implement BMPs to Reduce Impacts on Air Quality from Construction Equipment Emissions would be implemented to reduce equipment idling times and ensure properly maintained equipment and thus, would be in compliance with TCAPCD mitigation measures.

The proposed Project construction would take approximately 18 to 24 months to complete and increases to criteria pollutants would be temporary. Operations would be similar to existing conditions of the SRWWTF; as such, the proposed Project does not represent a significant addition of long-term impacts to air quality. Therefore, the proposed Project would be consistent with the goals of the TCAPCD through the implementation of MM AIR-1 and MM AIR-2 and impacts are considered less than significant with mitigation incorporated.

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

Finding: Less than Significant with Mitigation Incorporated

A cumulative impact analysis considers a project over time in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants, such as ROG, NO_x, and CO is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant. Consequently, the TCAPCD's approach to cumulative thresholds of significance is relevant to whether local pollutants are cumulatively significant when modeling shows that combined emissions from the proposed Project and other existing and planned projects would exceed air quality standards. Due to the existing operations of the proposed Project area and the minimal ROG, NO_x, CO, PM₁₀, and PM_{2.5} emissions generated from construction of the proposed Project, it is not anticipated that combined emissions from the proposed Project and other potential projects would cause a cumulative impact. In addition, the District would implement MM AIR-1 and MM AIR-2, which would include a Dust and Air Emissions Control Program and construction equipment BMPs, respectively, to effectively reduce the levels of dust and vehicle related emissions from construction to a less-than-significant level. Therefore, the potential for the proposed Project to result in a cumulatively considerable impact would be considered less than significant with MM AIR-1 and MM AIR-2 incorporated.

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

Finding: Less than Significant with Mitigation Incorporated

The proposed Project construction involves operating heavy equipment and construction activities that would temporarily produce additional dust and air emissions. The nearest sensitive receptor to the SRWWTF is residence located approximately 0.11 miles to the east of the facility and a few scattered residences south of the facility across SR 108. These sensitive receptors could be affected by pollutants of concern such as CO, Toxic Air Contaminant (TAC), and asbestos emissions which are discussed in further detail below.



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Localized CO Emissions: Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed Project would not substantially increase traffic volumes on streets near the proposed Project area during construction or operation; therefore, the proposed Project would not be expected to increase local CO concentrations. Background localized CO concentrations are low due to the relatively rural setting of the proposed Project area. Project-generated vehicle trips during maintenance activities would result in the generation of CO emissions; however, maintenance activities would only occur periodically and would not represent a significant increase in localized CO emissions. Vehicle trips generated during the construction and operational phases of the proposed Project would not have the potential to change the level of service along the local roadways. Additionally, all Project specific emission estimates are below the TCAPCD thresholds of significance. Therefore, impact would be considered less than significant.

TAC Emissions: Construction activities have the potential to generate Diesel Particulate Matter (DPM) emissions related to the number and types of equipment typically associated with construction. Off-road, heavy-duty diesel equipment could result in the generation of DPM. However, construction would be temporary and would occur over a relatively short duration, 18 to 24 months. In addition, operation of construction equipment regulated by federal, State, and local regulations, including TCAPCD rules and regulations, and would occur intermittently throughout the course of a day. The likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be low. As described in Impact "a" above, CARB has adopted regulations to control emissions from portable equipment as a component of the State's air quality plans. As a part of proposed Project construction and MM AIR-2, all applicable portable engines and off-road equipment must be registered with CARB's portable engine and off-road equipment programs and would align with the requirements set forth in the attainment plans. In addition, MM AIR-1 would be implemented to reduce fugitive dust emissions. Therefore, it is not anticipated the proposed Project would expose sensitive receptors to substantial pollutant concentrations and impacts would be considered less than significant with mitigation incorporated.

Asbestos: The proposed Project is not located in an area mapped as having, or otherwise known to have, ultramafic rock, serpentine, or naturally occurring asbestos. Therefore, the Statewide Asbestos ATCM would not apply unless ultramafic rock/serpentine is discovered during grading or excavation. Therefore, impacts from asbestos would be considered less than significant.

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

Finding: Less than Significant

While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the TCAPCD. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor. The nearest sensitive receptor in the vicinity of the proposed Project area would be the residence located approximately 0.11 miles to the east of the SRWWTF. Due to ammonia oxidation, the



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odor would be decreased in the proposed facility as compared to the current SRWWTF, and therefore, the proposed Project construction and current and future operations would not emit or add to odors in the area. The proposed Project would not result in other emissions adversely affecting a substantial number of people and impacts are considered less than significant.

3.3.4 Mitigation Measures

Mitigation Measure AIR-1: Dust Control Plan

The District shall require that the selected contractor prepare and implement a Project Dust and Emissions Control Plan that is approved by the TCAPCD prior to construction. The following shall be included in the plan and shall be implemented throughout the construction period to limit and control dust and air emissions:

- All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and/or causing a public nuisance. Watering during construction activities shall occur at least three times daily, with application to all disturbed areas.
- All areas with vehicle traffic shall be watered or have dust palliative applied as necessary to minimize dust emissions.
- All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads within the proposed Project footprint.
- All inactive portions of the proposed Project area shall be covered, seeded, or watered or otherwise stabilized until a suitable cover is established.
- All material transported to or from off-site shall be either sufficiently watered or securely covered to prevent it from being entrained in the air and there must be a minimum of six-(6) inches of freeboard in the bed of the transport vehicle.

Mitigation Measure AIR-1 Implementation

Responsible Party: The District shall require that the contractor prepare and implement a Construction Emissions and Dust Control Plan. The District shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of Project development and construction by the contractor.

Timing: An Emissions and Dust Control Plan shall be prepared and approved by the TCAPCD and the District prior to construction and implemented during all activities that have the potential to generate dust.

Monitoring and Reporting Program: During construction, regular inspections shall be performed by a District representative and reports shall be kept on file for inspection by the TCAPCD or other interested parties.



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Standards for Success: Visible emissions and dust are kept to the lowest practicable level during construction periods. The goal is to minimize dust and emissions during construction and to the extent feasible, complaints from the public.

Mitigation Measure AIR-2: Implement BMPs to Reduce Impacts on Air Quality from Construction Equipment Emissions

- Employ best management construction practices to avoid unnecessary emissions (e.g., trucks and vehicles in loading and unloading queues would turn their engines off when not in use). Vehicle and equipment idling shall not be allowed to exceed five minutes, unless extenuating circumstances are documented occur requiring additional idling time. Any idling time exceptions shall be documented by District representatives kept on file.
- Encourage construction worker commuters to carpool or employ other means to reduce trip generation.
- The proposed Project contractor shall ensure that all construction equipment is properly maintained; and
- All applicable portable engines and off-road equipment must be registered with CARB's portable engine and off-road equipment programs.

Mitigation Measure AIR-2 Implementation

Responsible Party: The District shall require that the contractor implement construction equipment BMPs during all phases of Project development and construction by the contractor.

Timing: BMPs would be implemented during all phases of construction activities.

Monitoring and Reporting Program: Prior to construction, equipment inspections shall be performed by a District representative and reports shall be kept on file for inspection by the TCAPCD or other interested parties. Reports documenting exceptions to idling time and off-road heavy-duty diesel engine compliance shall also be completed by the District and a file copy submitted to for inspection or review by TCAPCD or interested parties.

Standards for Success: Construction queues minimized, and idling vehicle time limited to five-minute maximums, unless exceptions are documented. Workers encouraged to carpool.

3.4 BIOLOGICAL RESOURCES

The Biological Resources section addresses the regional and local biological environment of the proposed Project area by identifying and screening species that make up the natural environment and by establishing potential special status species and their likelihood of occurrence in the proposed Project area. The section then documents the Federal, State, and local regulations and guidelines applicable to biological resources potentially impacted by the proposed Project. Next, specific proposed Project-related



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impacts are evaluated based on the thresholds of significance established in the CEQA guidelines. The section concludes by detailing mitigation measures, if necessary, required to reduce potential impacts to less than significant levels.

3.4.1 Regulatory Setting

Federal, State of California (State), and City of Sonora, require the protection of plant and wildlife species, their habitats, and other biological resources. The Regulatory Setting outlines the laws and regulations relevant to the proposed Project.

Federal

Clean Water Act: Section 401

The USEPA regulates surface water quality in Waters of the United States (WOTUS) under Section 401 of the Clean Water Act (CWA) and in California this authority is delegated to the nine statewide Regional Water Quality Control Boards (RWQCB). CWA Section 401 Water Quality Certification (WQC) provides states and authorized tribes with an effective tool to help protect the physical, chemical, and biological integrity of water quality, by providing them an opportunity to address the aquatic resource impacts of federally issued permits and licenses. CWA 401 states that no Federal permit or license can be issued if a proposed action may result in a discharge to WOTUS, unless the RWQCB certifies that the discharge is consistent with standards and other water quality goals or waives certification (USEPA 2010). CWA 401 compliance is required for any project that produces a federal action with construction that could have an impact to surface water quality. This proposed Project does not trigger a Section 401 permit.

Clean Water Act: Section 404

The United States Army Corps of Engineers (USACE) and the USEPA regulate the discharge of dredge or fill material into WOTUS under Section 404 of the CWA. WOTUS include wetlands, lakes, rivers, streams, and their tributaries. Wetlands are defined, for regulatory purposes, as areas inundated or saturated by surface, or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3) (USEPA 2016a). If a project discharges any fill materials into WOTUS, including wetlands, before or after proposed project actions, then CWA 404 compliance must be met with the USACE. This proposed Project does not trigger a Section 404 permit.

Federal Endangered Species Act of 1973

The Federal Endangered Species Act (FESA) was passed by Congress in 1973 to protect and recover imperiled species and the habitat upon which they depend. The FESA is administered by the United States Fish and Wildlife Service (USFWS). Under the FESA, protected species are either listed as “endangered”, in danger of extinction throughout all or a significant region of the species range; or as “threatened”, likely to become endangered within the foreseeable future (USFWS 2017). According to Section 3(18) of the FESA, “take” is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or



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collect, or to attempt to engage in any such conduct." The FESA also designates "candidate" species as those plants and animals that the USFWS has sufficient data on their biological status to propose them to be listed under the FESA (USFWS 2017). Threatened and endangered species on the federal list (50 CFR Section 17.11, and 17.12) are protected from take, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation.

Pursuant to the requirements of FESA, an agency reviewing a proposed project within its action area must determine whether any federally listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Under the FESA, habitat loss is considered to be an impact to a species.

In addition, USFWS is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under the FESA or to result in the destruction or adverse modification of critical habitat proposed or designated for such species (16 United States Code [USC] 1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation.

Migratory Bird Treaty Act of 1918 and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (BAGEPA) (16 USC Section 668) protect specific species of birds and prohibits "take" (i.e., harm or harassment). The MBTA protects migrant bird species from "take" through setting hunting limits and seasons and protecting occupied nests and eggs (USFWS 2013a). BAGEPA prohibits the take or commerce of any part of the bald or golden eagle (USFWS 2013b). The USFWS administers both the MBTA and BAGEPA and reviews actions that may affect species protected under each act.

State

California Endangered Species Act: California Fish and Game Code Sections 2050-2116

The California Department of Fish and Wildlife (CDFW) has jurisdiction over plant and wildlife species listed as threatened or endangered under Section 2080 of the California Fish and Game (CFG) Code. The California Endangered Species Act (CESA) prohibits "take" of State-listed threatened or endangered species. The State CESA differs from the FESA in that it does not include habitat destruction in its definition of "take". CDFW defines "take" as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CDFW may authorize "take" under the CESA through Section 2081 of the CFG Code. If the results of a biological survey indicate that a State-listed species could be affected by a proposed project, then under Section 2081, CDFW could authorize take of species listed as endangered, threatened, candidate, or a rare plant, if that take is incidental to otherwise lawful activities and if certain conditions are met. (CDFW 2018a).

The State of California designates Species of Special Concern (SSC) as wildlife and plant species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational and/or



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educational values. These species do not have the same legal protection as listed species but may be added to official lists in the future (CDFW 2018b). Examples of SSCs that occur in Tuolumne County include black swift (*Cypseloides niger*), burrowing owl (*Athene cunicularia*), olive-sided flycatcher (*Contopus cooperi*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and San Joaquin roach (*Lavinia symmetricus*). In the 1960's California also created a designation to provide additional protection to rare species. This designation remains today and is referred to as "Fully Protected" species, and those listed "may not be taken or possessed at any time" (CDFW 2018c). Examples of "Fully Protected" species that occur in Tuolumne County include bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*).

California Environmental Quality Act: Guidelines Section 15380

Pursuant to CEQA Guidelines, Section 15380, protection is provided for federal- and/or State-listed species, as well as species not listed federally or by the State that may be considered rare, threatened, or endangered. Species that meet these criteria can include "candidate species", species "proposed for listing", and "species of special concern". Plants appearing on California Native Plant Society (CNPS) California Rare Plant Ranking (CRPR) System are considered to meet CEQA Guidelines Section 15380 criteria as well. Section 15380 also addresses a potential situation in which a public agency is to review a proposed project that may have a significant effect on, for example a "candidate species", which has not yet been listed by the USFWS or CDFW. Therefore, CEQA enables an agency to protect a species from significant proposed project impacts until the respective government agencies have had an opportunity to list the species as protected, if warranted. Impacts to these species would therefore be considered "significant" requiring mitigation (CDFW 2016, CDFW 2018b-d).

Lake and Streambed Alteration: California Fish and Game Code Sections 1600–1616

To protect, manage, and conserve rivers, streams, lakes, wetlands, etc., CDFW has jurisdictional authority, under CFG Code Sections 1600-1616, to regulate all work under the jurisdiction of the State. Such work includes those actions that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. In practice, CDFW marks its jurisdictional limit at the top of the stream or lake bank, or the outer edge of the riparian vegetation (where present), and sometimes extends its jurisdiction to the edge of the 100-year floodplain (CDFW 2018e). Because riparian habitats do not always support wetland hydrology or hydric soils, wetland boundaries, as defined by CWA Section 404, sometimes include only portions of the riparian habitat adjacent to a river, stream, or lake. Therefore, jurisdictional boundaries under Section 1600 may encompass a greater area than those regulated under CWA Section 404. If a proposed project has the potential to include any of the work activities within the boundaries of jurisdiction, then compliance is required through a CDFW Lake and Streambed Alteration Agreement (LSAA). This proposed Project does not trigger a LSAA permit.

Porter-Cologne Water Quality Control Act: (Porter-Cologne Act) (California Water Code § 13000 et. seq.)

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act), (California Water Code [CWC] § 13000 et. seq.), delegates responsibility to the SWRCB for water rights and water quality protection and



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directs each RWQCB to develop and enforce water quality standards within their jurisdiction. The Porter-Cologne Act requires any entity discharging waste, or proposing to discharge waste, within any region that could affect the quality of the “waters of the State” to file a “report of waste discharge” with the appropriate RWQCB. The appropriate RWQCB then must issue a permit, referred to as a WDR. WDRs implement water quality control plans and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, and the need to prevent nuisances (CWC Section 13263) (SWRCB and RWQCB 2018).

Nesting Migratory Birds and Raptors: California Fish and Game Code Sections 3503, 3503.5, and 3800

Nesting migratory birds and raptors are protected under CFG Code Sections 3503, 3503.5 and 3800, which prohibit the “take”, possession, or destruction of birds, their nests, or eggs. Implementation of “take” provisions require that proposed project-related disturbance within active nesting territories be reduced or eliminated during critical phases of the nesting cycle (approximately February 15 – August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young), or the loss of habitat upon which birds are dependent, is considered “take” and is potentially punishable by fines and/or imprisonment (CLI 2018a). Such taking would also violate federal law protecting migratory birds under the MBTA.

Native Plant Protection Act: California Fish and Game Code Section 1900 et seq.

The Native Plant Protection Act (NPPA) was enacted in 1977 and is administered by CDFW, CFG Code Section 1900 et seq. The NPPA prohibits “take” of endangered, threatened, or rare plant species native to California, apart from special criteria identified in the CDFW Act Code. A “native plant” means a plant growing in a wild uncultivated state which is normally found native to the plant life of the State. A “rare” species can be defined as species that are: broadly distributed but never abundant where found, narrowly distributed, or clumped yet abundant where found, and/or narrowly distributed or clumped and not abundant where found. If potential impacts are identified for a proposed project activity, then consultation with CDFW, permitting, and/or other mitigation may be required (CLI 2018b). Endangered, threatened, and/or rare species can be identified through the CNPS CRPR (CNPS 2018a).

California Oak Woodlands Conservation Act and Oak Protection: California Fish and Game Code Sections 1360-1372 and Public Resources Code Section 21083

The 2001 CFG Code Section 1360-1372 outlines the terms and conditions comprising the Oak Woodlands Conservation Act (OWCA) (CLI 2018c). An oak woodland is defined as an oak stand with greater than ten percent canopy cover, or that may have historically supported greater than ten percent canopy cover. The overall purpose of the OWCA is to provide funding for the conservation and protection of California’s oak woodlands. In addition, the OWCA is designed to support and encourage voluntary, long-term private stewardship and conservation of California’s oak woodlands by offering landowners financial incentives to protect and promote biologically functional oak woodlands over time, as mandated by the Wildlife Conservation Board (WCB). The WCB has established programs, including the Oak Woodlands Conservation Program (OWCP), to protect and restore oak woodlands. The OWCA



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encourages and defers to local jurisdictions to develop and implement oak conservations plans developed under the OWCA (WCB 2018).

Furthermore, the California PRC Section 21083.4 defines an oak as a native tree species in the genus *Quercus*, not designated as commercial species (i.e., Groups A and B) pursuant to regulations adopted by the State Board of Forestry and Fire Protection (BFFP) (i.e., Section 4526), that is five inches or more in Diameter at Breast Height (DBH) (diameter of a tree measured 4.5 feet above natural grade). In addition, the PRC defines a ten percent canopy cover stipulation that pertains to an individual stand of vegetation, and not all oaks within an entire project area. PRC 21083.4 does not apply to oak woodlands dominated by the black oak species (*Quercus kelloggii*). As part of the determination made pursuant to PRC Section 21080.1, it shall be determined prior to a project whether its jurisdiction may result in oak tree impacts and or a conversion of an oak woodland that will have a significant effect on the environment. When it is determined that project activities may have significant impacts to oak woodlands, mitigation is required, as described in the California PRC. Because no tree removal is a part of the proposed Project, there will be no impacts to the California Oak Woodlands Conservation Act.

Other State Tree Protection Regulations

Additional state laws or governing bodies that regulate and/or protect oaks and oak woodlands include: The Professional Forester's Law (PFL), CEQA, and the State BFFP. PFL addresses oak habitat evaluations. CEQA addresses that "a county shall determine whether a proposed project within its jurisdiction may result in a conversion of oak woodland that will have a significant effect on the environment" (Giusti and McCreary 2008). Thus, both PFL and CEQA apply to all local jurisdictions. Since it is a State agency, the BFFP has regulatory authority over all of California's forested landscapes, including the authority to regulate oak woodlands at the state or local level.

Local

City of Sonora General Plan 2020

The following goals and policies from the Conservation and Open Space Element of the City of Sonora General Plan related to biological resources are relevant to the proposed Project (City of Sonora 2007a). Those goals, policies, and implementation programs that pertain to the proposed Project are discussed in the impact analysis below.

Goal 4.D. Sustain and enhance biological resource quality, quantity, and diversity within the city.

Policy 4.D.1. Establish and implement protection measures for special status plants, fish, and wildlife species in the city's sphere of influence.

Policy 4.D.2. Establish and implement protection measures for habitat types of limited distribution.

Policy 4.D.3. Protect, maintain, and enhance wildlife corridors through Sonora including Sonora Creek, Woods Creek, and Dragoon Gulch.



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3.4.2 Environmental Setting

The following environmental setting provides the baseline of regional and local physical and environmental conditions within the proposed Project area, as it applies to biological resources.

Regional Setting

The proposed Project area is in the Sierra Nevada Foothills of Tuolumne County approximately one mile south of the city center of Sonora, California. The existing District SRWWTF is at approximately 1,600 feet to 1,700 feet (487-519 meters) in elevation above mean sea level (amsl), depending on the location within the SRWWTF. The SRWWTF is bordered by SR 108 to the south, moderately sloping blue oak (*Quercus douglasii*) foothill pine (*Pinus sabiniana*) woodland to the east and north, and Woods Creek riparian zone and dense oak woodland to the west. The area approximately a quarter mile to one mile around the proposed Project area is bounded on all sides by roads and railways, including SR 49 and 108, Sierra Railroad, and South Washington Street.

The proposed Project area is located within the Upper Tuolumne River Watershed, a component of the San Joaquin River Basin (USGS 2017). The sole major hydrologic source in the area is Woods Creek, tributary to Sullivan Creek and the Don Pedro Reservoir. The water entering Don Pedro Reservoir flows from the Upper Tuolumne River as well as many smaller tributaries, including Sullivan Creek, Curtis Creek, and Moccasin Creek, and is influenced by the amount of water released from Lake Eleanor, Cherry Lake, and Hetch Hetchy Reservoir. Don Pedro Reservoir supplies hydropower and water to the Turlock and Modesto Irrigation Districts as well as the City and County of San Francisco (TID and MID 2011).

The proposed Project is within the Central Valley geomorphic and ecological provinces (USFS 2009). Surface soils generally of shallow to moderately deep fine-loam soils that have moderate to moderately low permeability (City of Sonora 2007b).

The natural habitat is generally comprised of riparian and foothill woodlands. The proposed Project area includes limited or light manufacturing lands and is surrounded by open space and public use lands (City of Sonora 2007a). The climate can be described as “Mediterranean”, with cool winter rainy seasons, and hot dry summers.

Study Methods

A desktop analysis and field survey were used to determine the presence or absence of plant species, wildlife species, and/or the potential to occur for special status plant and wildlife species and other biological resources, and to evaluate their potential to be impacted by proposed Project activities. The desktop analysis study area included the proposed Project area and a five-mile buffer.

Desktop Analysis Methodology

Prior to conducting reconnaissance-level biological field surveys in February 2018, Stantec completed a desktop analysis to identify sensitive biological resources (e.g., wildlife species, plant species, and their



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habitats) that may occur within the proposed Project area and region, as defined by the CDFW, USFWS, and CNPS. The following resources were used to identify those potentially occurring biological resources:

- CDFW California Natural Diversity Database (CNDDDB) records search of special status species and habitat observations in the proposed Project area and within a five-mile buffer (CDFW 2018f);
- CNPS online Inventory of Rare and Endangered Plants of California for Tuolumne County between 1,600 and 1,700 feet in elevation for Angels Camp, Columbia, Columbia SE, New Melones Dam, Sonora, Standard, Keystone, Chinese Camp, and Moccasin United States Geological Survey (USGS) 7.5-minute Quadrangles (Quads) (CNPS 2018b);
- USFWS list of federal endangered, threatened, and candidate species in the proposed Project area and in the five miles surrounding the proposed Project area (USFWS 2018);
- USFWS Critical Habitat data for federally threatened and endangered species (USFWS 2018);
- Calflora online database for Sierra County (Calflora 2018). Calflora was used as a secondary tool for the purpose of assessing rare plant species that have the potential to occur within Tuolumne County.

Endangered, threatened, rare, and/or special status species that were identified during the desktop analysis of the proposed Project are compiled in Table 3.4-1 below and Appendix C. For the purpose of this IS/MND, special status species are defined by the following parameters:

- Species listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.12 for listed plants, 50 CFR 17.11 for listed animals, and various notices in the Federal Register for proposed species);
- Species that are listed or proposed for listing by California as threatened or endangered under the CESA (14 CCR 670.5);
- Plants listed as rare under the California Native Plant Protection Act of 1977 (CFG Code 1900 et seq.);
- Plants considered by the CNPS to be Rank 1- a) “plants presumed extirpated in California and either rare or extinct elsewhere, or b) “rare, threatened, or endangered in California and elsewhere”;
- Plants considered by CNPS to be a Rank 2- a) Plants presumed extirpated in California, but common elsewhere, or b) “rare, threatened, or endangered in California and common elsewhere”;
- Plants considered by CNPS to be a Rank 3- “plants about which more information is needed” and cannot be yet be excluded from review;
- Plants considered by CNPS to be a Rank 4- “plants with limited distribution”;
- Plant and wildlife species that meet the definitions of “rare” or “endangered” under CEQA Guidelines Section 15380;



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- Wildlife species designated by CDFW as SSC; and
- Plant and wildlife species that are designated as “special” or “those of greatest conservation need” by CDFW through the CNDDDB.

Field Study Methodology

On February 7, 2018 and October 7, 2019, Stantec conducted a reconnaissance-level biological survey of the proposed Project study area (Figure 2). Surveys were conducted within the proposed Project study area, on foot walking meandering transects to identify the presence of rare plants, and the presence of and/or habitat of special status wildlife species mentioned above.

Study Results

Biological Communities

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

Special Status Species

Based on the results of the background research listed above in Study Methods section above, 29 special status plant and 27 wildlife species were defined as potentially occurring within the proposed Project region (e.g., in USGS 7.5-minute Quads for Angels Camp, Columbia, Columbia SE, New Melones Dam, Sonora, Standard, Keystone, Chinese Camp, and Moccasin). This includes special status plant and wildlife species that are known to occur within five miles of the proposed Project area or have the potential to occur based on background research data from the CDFW CNDDDB, CNPS online inventory, Calflora, and USFWS list of Federal Endangered and Threatened Species (Table 3.4-1, Appendix C).

Conclusions in Table 3.4-1 and Appendix C regarding the habitat suitability and the potential for species occurrence were based on the background research, database searches, and local analysis habitat suitability during field surveys. For each special status species known to occur in the proposed Project



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region, the “potential for occurrence” at the proposed Project area has been evaluated and is defined as follows:

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

Species with a moderate or high potential to occur or are known to be present within the proposed Project area are further described in the species accounts below Table 3.4-1 and are analyzed for potential impacts. Species identified in the database search but determined to have a very low to nil or low potential to occur within the proposed Project area are included in Appendix C and do not warrant further evaluation.



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Table 3.4-1 Special Status Plant and Wildlife Species and Their Potential to Occur in the Proposed Project Area, Tuolumne County, California.

Common Name <i>Scientific Name</i>	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
Plants							
Nissenan manzanita <i>Arctostaphylos nissenana</i>	–	S1	1B.2	1,475-3,281 feet (450-1,100 meters)	Closed-cone coniferous forest; chaparral; rocky.	February- March	Moderate: Suitable habitat in the proposed Project area. Known occurrence from 2009, approximately one-mile northwest of the proposed Project area.
Birds							
nesting raptors and other migratory birds	MBTA	CESA	N/A	Migrants and resident species	Tree, shrub, ground, and riparian vegetation (nesting).	Breeding February 15- August 31	Moderate: Potential suitable habitat within the proposed Project area.
Mammals							
hoary bat <i>Lasiurus cinereus</i>	-	WL, S4	N/A	Throughout California from sea level to 13,200 feet (0-4,125 meters).	Dense foliage, medium to large trees; open habitats or habitat mosaics with access to trees for cover.	Year-round; depends on location and temperature	Moderate: Suitable habitat within the proposed Project area. Known occurrence from 1999 near the Horseshoe Bend of the Stanislaus River, approximately five miles northwest of the proposed Project area.



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Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
pallid bat <i>Antrozous pallidus</i>	-	SSC, S3	N/A	Occurs in California from Shasta to Kern Counties to northern Mendocino County, except for the high Sierra Nevada. Found below 6,562 feet (2,000 meters).	Grasslands, shrublands, woodlands, and mixed conifer forests. Water and suitable roosting habitat must be close by. Roosts in cliff fissures, abandoned buildings, and under bridges.	Year-round (in most of its range)	Moderate: Suitable habitat within the proposed Project area. Known occurrences from 1991, 1992, and 1999 near Jamestown Mine, Sullivan Creek, and the Horseshoe Bend of the Stanislaus River, approximately three miles southwest, five miles south, and five miles northwest of the proposed Project area, respectively.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	-	SSC, S2	N/A	Found throughout California.	Wide range of habitat from coniferous forest to desert to riparian communities but prefer mesic habitats. Populations dependent on caves and other suitable roosting habitats.	Year-round	Moderate: Suitable habitat within the proposed Project area. Known occurrences from 1991, 1992, and 2005 near Jumper Mine, Quartz Mountain, and Jamestown, approximately five miles south, four miles southwest, and two miles southwest of the proposed Project area, respectively.



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Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
western mastiff bat <i>Eumops perotis californicus</i>	-	SSC, S3S4	N/A	Central Valley, Coastal Range, southern and eastern California.	Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Year-round	Moderate: Suitable habitat within the proposed Project area. Known occurrences from 1995 and 1999 near Table Mountain and the Horseshoe Bend of the Stanislaus River, approximately five miles southwest and northwest of the proposed Project area, respectively.
western red bat <i>Lasiurus blossevillii</i>	-	SSC, S3	N/A	Throughout western California, from Shasta to San Diego County. West of the Sierra Nevada and Cascade ranges and southern California deserts.	Grasslands, shrublands, croplands, and open woodlands and mixed conifer forests. Roosts primarily in trees in edge habitats adjacent to streams, fields, or urban areas.	Year-round	Moderate: Suitable habitat within the proposed Project area. Known occurrence from 1999 near the Horseshoe Bend of the Stanislaus River, approximately five miles northwest of the proposed Project area.



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Common Name <i>Scientific Name</i>	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
Yuma myotis <i>Myotis yumanensis</i>	-	S4	N/A	Throughout California, uncommon in Mojave and Colorado Desert regions. Found from sea level to 11,000 feet (0-3,300 meters).	Open forests, woodlands with sources of water to feed above.	Spring-Fall	Moderate: Suitable habitat within the proposed Project area. Known occurrence from 1999 near the Horseshoe Bend of the Stanislaus River, approximately five miles northwest of the proposed Project area.

Notes:

Federal – U.S. Fish and Wildlife Service (USFWS)
 E = Listed as endangered under the federal ESA
 T = Listed as threatened under the federal ESA
 D = Delisted under the federal ESA
 PD = Proposed for delisting
 C = Candidate to become a proposed species
 MBTA = Migratory Bird Treaty Act
 = No listing.

State – California Department Fish and Wildlife (CDFW)
 E = Listed as endangered under the California ESA
 T = Listed as threatened under the California ESA
 R = Listed as rare under the California Native Plant Protection Act.
 This category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation.
 C = Candidate species for listing as endangered under the California ESA
 FP = Fully protected species
 SSC = Species of special concern in California
 – = No listing.

California Native Plant Society (CNPS)
 1B = Rank 1B species: rare, threatened, or endangered in California and elsewhere.
 2B = Rank 2B species: rare, threatened, or endangered in California but more common elsewhere.
 = Rank 3 species: plants about which more information is needed to determine their status.
 = Rank 4 species: plants of limited distribution.

References: Calflora. 2018, CDFW 2018f, CDFW 2018g, CNPS 2018b, CNPS 2018c, USFWS 2019.



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Special Status Plant Species

A special status plant species site suitability analysis evaluating the potential to occur within and near the proposed Project area was completed for all special status plant species that were identified prior to field surveys based on desktop research, database and records searches, elevation, evaluation of habitat, field site assessment, and soils present. Specifically, this analysis weighed proposed Project ecological characteristics and suitability with individual special status plant species suitability requisites; as well as known occurrences in the proposed Project region documented by CNDDDB, CNPS, and the federal and State Endangered Species Acts. Following the analysis results, a level of potential to occur within the proposed Project area was assigned to each species. Potential for occurrence for all special status plant species is outlined in Table 3.4-1 above and in Appendix C.

Based on desktop research and a records search, 29 special status plant species were identified as occurring within the general region of the proposed Project area (Table 3.4-1, Appendix C). Of these species, nine have been documented within five miles of the proposed Project area (CDFW 2018f), and the remaining 20 species have been known to occur in a nearby USGS quad and/or within the County (CNPS 2018b, USFWS 2018). Not all species within known occurrences within the proposed Project region were found to have potential suitable habitat and/or were observed within the proposed Project area during biological field surveys conducted in February 2018.

Nissenan manzanita (*Arctostaphylos nissenana*) is the only species with a CNPS Ranking of 1B and 2B as well as a moderate to high potential to occur in the proposed Project area and is discussed below. No special status plant species were observed during the reconnaissance-level survey.

Nissenan manzanita (Arctostaphylos nissenana)

Nissenan manzanita is a perennial evergreen herb that is endemic to California. It is part of the Ericaceae, or Heather family. This species can be found in rocky areas of closed-cone coniferous forest and chaparral vegetation communities. *Arctostaphylos nissenana* has a typical bloom period between February through March and can be found in elevations ranging from 1,475 to 3,281 feet (450 to 1,100 meters) (CNPS 2018c). This species is known to occur in California in the foothills and lower elevations of the Sierra Nevada, particularly in Placer, El Dorado, and Tuolumne Counties (Calflora 2018, CNPS 2018c). Threatened by development, this species is critically imperiled throughout the State, though it is not federally listed (CNPS 2018c). Nissenan manzanita has a moderate potential to occur within the proposed Project area, with suitable habitat present and a known occurrence approximately one-mile northwest of the proposed Project area from 2009. This species is unlikely to occur in disturbed areas of the proposed Project area. This species was not observed during baseline botanical surveys conducted on February 7, 2018.

Special Status Wildlife Species

Based on desktop research, database and records searches, 27 special status wildlife species including nesting raptors and other migratory birds were identified as potentially occurring in the proposed Project area and surrounding region (Table 3.4-1, Appendix C, CDFW 2018f, USFWS 2019). No special status



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species were observed during the survey conducted on February 7, 2018 by a Stantec biologist. However, following the reconnaissance-level field survey and habitat assessment, seven of the 26 special status species (including nesting raptors and other migratory birds) were determined to have a moderate potential to occur within the proposed Project area, all of which have been known to occur within five miles of the proposed Project area (CDFW 2018f). Those species are further discussed below and analyzed for potential impacts as a result of the proposed Project.

Bat species

Six bat species have been identified as having a moderate potential to occur in the proposed Project area including the hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillei*), and Yuma myotis (*Myotis yumanensis*). Hoary bats and western red bats are tree roosters and will roost in the foliage of trees, as well as hollows in trees or large diameter snags. Western mastiff bat is a cliff-roosting species, and Townsend's big-eared bat is a cave- and mine-roosting species, but both will also utilize trees and man-made structures such as tall buildings and tunnels. Pallid bats and Yuma myotis will roost in a variety of structures, including cliffs, buildings, bridges, caves, mines, and trees (WBWG 2017). The hoary bat is listed on the State Watch List, and the pallid bat, Townsend's big-eared bat, western mastiff bat, and western red bat are designated as SSC by CDFW.

All of the bat species are known to occur in mines and near water features within five miles of the proposed Project area, particularly Jamestown Mine, Jumper Mine, Quartz Mountain, Sullivan Creek, and the Horseshoe Bend of the Stanislaus River (CDFW 2018f). However, no evidence of the special status bat species listed above were observed during the field survey conducted by the Stantec biologist in February 2018. The existing buildings within the SRWWTF, such as the septage receiving station, chlorine storage and feed building, operations building, sludge dewatering building, and offices were surveyed for presence of roosting bats as well as for signs of roosting bats (e.g., guano below eaves). Therefore, it is unlikely bats currently or will be using these structures for roosting habitat and would not be disturbed. The riparian and oak woodland vegetation communities within and/or surrounding the proposed Project area may provide suitable roosting habitat for those species that are known to roost in trees. However, no tree removal is planned within the proposed Project area. The existing SRWWTF ponds, Woods Creek, and the associated riparian vegetation nearby may also be potential foraging for the bat species above, but proposed Project activities will be taking place during the daytime hours and will not impact the potential foraging of bats in the proposed Project area that would likely occur during dusk and nighttime hours.

Nesting raptors and other migratory birds

The areas adjacent to and within the proposed Project area possess potential suitable nesting habitat for bird species protected under the MBTA. This includes, but is not limited to, cavity-nesting species such as the acorn woodpecker (*Melanerpes formicivorus*) and the oak titmouse (*Baeolophus inornatus*); tree-nesting species such as the western scrub-jay (*Aphelocoma californica*); and ground nesting species such as the killdeer (*Charadrius vociferus*). Raptors that may potentially nest in or directly adjacent to the proposed Project area may include red-tailed hawk (*Buteo jamaicensis*) or red-shouldered hawk (*Buteo*



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lineatus). Therefore, a moderate potential exists for nesting raptors and other migratory bird species to occur within or adjacent to the proposed Project area. No nesting raptors or other migratory birds were observed during the survey conducted February 2018. However, reconnaissance-level biological survey was conducted just prior to the typical nesting season (typically February 15 – August 31) for the region.

3.4.3 Impact Analysis

IV. BIOLOGICAL RESOURCES Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or regulated by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on 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?	☐	☐	☒	☐



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

Finding: Less than Significant with Mitigation Incorporated

The Regulatory Setting above defines policies, regulations, and/or rules that protect the potentially occurring species. Special status plant and wildlife species that have a moderate or high potential to occur within the proposed Project area and region are included in Table 3.4-1. Those species that have a low or low to nil potential to occur within the proposed Project area are included in Appendix C of this IS/MND. The species identified within Table 3.4-1, have been further discussed below in regard to potential impacts as a result of the proposed Project. Based on the assessment of potential impacts to sensitive flora and fauna, and with the implementation of MM BIO-1, MM BIO-2, and MM BIO-3, potential impacts from proposed Project construction on species protected in local plans, policies, or regulations, or by the CDFW or USFWS would be reduced to a less than significant level. The following analysis discusses the proposed Project's potential to have a potentially significant impact on these identified special status species within the proposed Project area and how the implementation of mitigation measures will reduce these impacts to a less than significant level.

Special Status Plant Species

Although not identified during the February 2018 field survey, there is a moderate potential for Nissenan manzanita (*Arctostaphylos nissenana*) to occur within the proposed Project area. However, the proposed Project area does not contain mixed chaparral habitat, and therefore additional botanical surveys for Nissenan manzanita are not required by the city (City of Sonora 2007a).

Impacts to other special status plant species is unlikely due to the lack of suitable habitat within the proposed Project area. In addition, proposed Project activities will remain within roadways or previously disturbed areas where these plants do not typically grow. No special status species were observed within the proposed Project area and potential for impacts is extremely low. However, sensitive potential suitable habitat does exist adjacent to the proposed Project area, and therefore MM BIO-1: Pre-Construction Environmental Awareness Training will be implemented and will train construction personnel on how to recognize special status plants and habitats and how to proceed should a special status plant be encountered during construction. Therefore, with the implementation of MM BIO-1, impacts are considered less than significant.

Special Status Wildlife Species

California red-legged frog (Rana draytonii)

The California red-legged frog (CRLF) is federally listed as threatened under the Endangered Species Act (ESA) (61 FR 25813). There is a known historical occurrence from 1950 in the area of Woods Creek, however, not within the vicinity of the proposed Project (CDFW 2018f). The proposed Project is outside of the Woods Creek area and therefore, there is a very low risk of contact with CRLF and a low potential of occurrence within the proposed Project area.



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Bat species

Potential direct or indirect impacts to bat species include the removal of habitat, including roosting and foraging habitat, which could potentially cause displacement and decrease overall habitat availability. All man-made structures were surveyed in February 2018 for the presence of bats as well as evidence of any roosting bats within the SRWWTF. No roosting bats or bat activity was observed. As such, proposed Project activities will not eliminate roosting habitat. The three existing polishing ponds are potential foraging habitat for bat species and will be eliminated as part of the proposed Project. However, with the existing storage pond remaining in use and the nearby Woods Creek and riparian habitat that borders the SRWWTF, the removal of the three polishing ponds is not expected to be a significant impact. Therefore, no direct impacts to bats by injury or mortality is expected to occur from proposed Project activities. Construction disturbance such as noise, has the potential to cause short-term avoidance of the proposed Project area as potential bat habitat, including roosting and foraging habitat. However, the potential for impacts due to construction noise is low because there is limited potential roosting habitat in the area and proposed Project activities will also take place in the daytime hours and not while there is potential bat foraging activity during dusk and nighttime hours.

To ensure impacts to special status bat species that are known to occur in the proposed Project region, MM BIO-1 and MM BIO-2 will be implemented and include a worker environmental awareness training and pre-construction bat roosting survey to be conducted. MM BIO-2 would only be implemented IF any building demolition or tree removal/trimming occurs. Therefore, with the implementation of MM BIO-1 and MM BIO-2, potential impacts to special status bat species would be less than significant.

Nesting raptors and other migratory birds

There is a moderate potential for nesting raptors, including the golden eagle, and other migratory birds protected under the MBTA to occur within the proposed Project area. Construction activities during the nesting season (i.e., approximately February 15 – August 31) could disturb and/or cause nest abandonment, and subsequent loss of eggs or developing young at active nests. Disturbance resulting in nest abandonment or loss of eggs would be considered a potentially significant impact. Therefore, to avoid this potentially significant impact, MM BIO-1 and MM-BIO 3 shall be implemented.

The long-term loss of raptor and/or migratory bird breeding or foraging habitat due to construction activities is considered significant if the lost acreage is near active nests and is high quality, large in extent, and lacks similar suitable foraging or breeding habitat nearby. The proposed Project's upgrades to the existing SRWWTF are primarily in roadways and previously developed areas not considered breeding or foraging habitat. Permanent impacts (i.e., SRWWTF improvements) would be located on previously disturbed areas and non-native annual grassland and are less than or equal to five acres. Potential temporary impacts include primarily disturbed areas and non-native annual grassland as well as a small area of oak woodland from potential compaction in the proposed staging areas near Southgate Drive to the northwest of the SRWWTF and an unnamed dirt access road to the SRWWTF. Due to the limited extent of proposed Project impacts within the existing SRWWTF, location adjacent to SR 49 and 108, developed areas, the distance from the nearest known active nests, and the expansive woodland and



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grasslands nearby that provide good nesting habitat, the potential loss of foraging and breeding habitat is considered a less than significant loss, with no compensatory mitigation required.

Based on the assessment of potential impacts to nesting raptors and other migratory birds, the implementation of MMs BIO-1 and BIO-3 would reduce impacts to a less than significant level.

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

Finding: Less than Significant with Mitigation Incorporated

Riparian Habitat

Water features within the proposed Project area include treatment ponds at the existing SRWWTF. Site surveys conducted in February 2018 detected no riparian vegetation and habitat associated with these features. Woods Creek and the associated riparian habitat are not within the proposed Project area but are located within approximately 200 feet to the west of the existing treatment ponds. Due to the limited extent of proposed Project impacts within the existing SRWWTF, and lack of riparian habitat within the proposed Project area, potential loss of riparian habitat is considered a less than significant loss, with no mitigation required.

Oak Woodlands

Oak woodlands were observed within the proposed Project area during site surveys conducted in February 2018. This portion of the proposed Project area is also suitable wildlife habitat.

Construction activities such as site preparation (including site compaction) have the potential to have significant impacts on oak woodlands and suitable wildlife habitat as identified in local plans, policies, and regulations, or by the CDFW and USFWS. However, the majority of the proposed Project area is located within disturbed areas, and the proposed Project has been designed to avoid these sensitive resources. BMP such as staging of heavy equipment outside of tree driplines, will be practiced by the District or the District's contractor to the extent feasible. Additionally, with the implementation of MM BIO-1, impacts from proposed Project activities would be reduced to a less than significant level.

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

Finding: No Impact

No placement of fill or work within federally protected wetlands would occur during construction; therefore, the proposed Project has no impact to federally protected wetlands.



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

Finding: Less than Significant

Wildlife movement corridors are important habitats that allow wildlife to travel, migrate, or disperse between significant habitats (Harris and Gallagher 1989). Wildlife movement corridors have been recognized by federal agencies such as the USFWS and the State as important habitats worthy of conservation. In general, movement corridors are comprised of areas of undisturbed land cover that connects larger, contiguous habitats. The proposed Project area is located within developed and previously disturbed areas (i.e., the existing SRWWTF and roadways), non-native annual grassland, and oak woodland vegetation communities.

While the existing SRWWTF overlaps with the 50-foot buffer along Woods Creek for deer migration, the facility is fenced and inaccessible to deer, and the proposed staging area near Southgate Drive does not encroach into this buffer. With the exception of the Woods Creek corridor, the fragmentation of the surrounding landscape by the existing SRWWTF, SR 49 and SR 108, the Sierra Railroad, South Washington Street, and the nearby Mother Lode Fairgrounds likely reduces the use of other wildlife of the proposed Project area for migration or other movements within the proposed Project area.

Construction activities could cause temporary disturbance to common wildlife movements; however, the extent of the disturbance is limited, as wildlife could move around the area, given the availability of neighboring open spaces near the proposed Project area. As a result, the proposed Project construction and operation is expected to have a less than significant impact on species movements. Thus, the potential impacts to native resident or migratory wildlife species are considered less than significant with no mitigation necessary.

e/f) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the Project conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

Finding: Less than Significant

Based on site-specific field surveys completed on February 2018, the proposed Project is not likely to conflict with local ordinances relative to biological resources. The proposed Project was designed to avoid and minimize potential impacts to present natural habitats such as wetlands and riparian areas, wildlife habitat, and oak woodlands. The proposed Project area does not change the existing boundary of the SRWWTF. In accordance with the City of Sonora General Plan, the proposed Project is protective of streams, creeks, groundwater, wetland communities, riparian areas, fish and wildlife species, and their associated habitats, by avoiding, minimizing, and/or mitigating for proposed work in these areas. The proposed Project area is not currently subject to a Habitat Conservation Plan (HCP), or other approved local, regional, or State plans. Therefore, the proposed Project would not conflict with any approved or



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planned local policies or ordinances protecting biological resources. This potential impact would thus be considered less than significant, and no mitigation would be required.

BMPs such as staging of equipment outside of tree driplines, will be practiced by the District or the District's contractor to the extent feasible. If proposed Project activities affect individual oaks and/or oak woodland communities, conflicts would arise with the California Oak Woodlands Protection Act and/or other local, regional and/or State tree protection requirements. However, no impacts are expected, and the impacts would be considered less than significant.

3.4.4 Mitigation Measures

Mitigation Measure BIO-1: Pre-Construction Environmental Awareness Training

Prior to construction, a qualified biologist shall conduct one pre-construction Environmental Awareness Training for construction personnel. The Environmental Awareness Training shall be given to construction personnel to brief them on how to recognize special status plant species, wildlife species, and sensitive habitats that could occur in the proposed Project area (i.e., special status plant identification and habitat, special status avian identification and habitat, wetland habitats, riparian habitats, and relevant BMPs, including the importance of remaining within the proposed Project footprint). Environmental Awareness Training reference pamphlets shall also be provided to keep onsite for use by an environmentally trained foreman for training new proposed Project personnel in the absence of the biologist. If special status species are encountered in the work area, construction shall cease, and the District and a qualified biologist shall be notified for guidance prior to the continuation of construction activities. Depending on the listing of the observed species and its persistence in the area, the District shall consult with CDFW and/or USFWS for guidance.

Mitigation Measure BIO-1 Implementation

Responsible Party: The District shall ensure that a qualified biologist conducts one pre-construction Environmental Awareness Training to construction personnel.

Timing: Prior to the initiation of construction.

Monitoring and Reporting Program: The training shall be conducted by a qualified biologist and the Environmental Awareness Training reference pamphlets shall be kept on the construction site.

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

Mitigation Measure BIO-2: Avoid Disturbance to Roosting Bat Species

If proposed Project construction entails building demolition or tree removal/trimming, a pre-construction bat roosting survey shall take place. If this is to occur, a pre-construction bat roost survey shall be conducted by a qualified wildlife biologist experienced with bat species for the presence of bats in suitable habitat (e.g., trees or buildings within the proposed Project area). The survey shall be conducted within



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one hour prior to sunset and two hours after sunset at the sites where potential roosting habitat exists in order to detect potential roosting bats leaving their daytime roosting sites to forage, no greater than one week prior to construction.

- If it is determined that roosting bats are not present in the potential habitat within the proposed Project area, no further mitigation is required.
- If evidence of roosting bats is detected in the proposed Project area, the District shall consult with CDFW regarding measures to minimize impacts to bat species for the proposed Project. At a minimum these would include measures such as the avoidance of breeding areas (if determined to be breeding) until the bats have fully vacated the area.

Mitigation Measure BIO-2 Implementation

Responsible Party: The District shall ensure that a qualified biologist will complete the pre-construction bat roosting survey if proposed Project construction entails building demolition or tree removal/trimming.

Timing: One evening pre-construction bat roost assessment survey shall be conducted by a qualified biologist within one week of conducting building demolition or tree removal/trimming within the proposed Project area.

Monitoring and Reporting Program: The survey shall be conducted, and the results shall be documented by a qualified biologist familiar with bat species. A brief survey report shall be documented and kept on file with the District.

Standards for Success: Bats designated as SSC by CDFW will not be impacted as a result of proposed Project construction activities.

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

The District shall implement one of the following measures, depending on the specific construction timeframe, to avoid disturbing nesting raptors and other migratory birds.

1. If construction activities are scheduled to occur during the nesting season (i.e., approximately February 15 – August 31), a qualified biologist shall conduct a pre-construction nesting survey within the proposed Project area and within an approximate 100-foot buffer of the proposed Project area. If no active nests are observed, no additional mitigation is required.
2. If surveys indicate that active raptor or other active migratory bird nests are found in any areas that would be directly affected by construction activities, a no-disturbance buffer shall be established around the site to avoid disturbance or destruction of the nest site until after the breeding season, or after a wildlife biologist determines that the young have fledged. The extent of these buffers shall be determined through consultation with CDFW and/or USFWS (depending on the status of the species present) and the qualified biologist. Buffers shall depend on the species present, the level of noise or



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construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise, topographical or artificial barriers, and other disturbances.

3. If construction activities begin outside the breeding season (i.e., approximately September 1 – February 14), then construction may proceed until it is determined that an active migratory bird nest would be subject to abandonment because of construction activities. Optimally, all necessary vegetation removal/trimming shall be conducted before the breeding season so that nesting birds would not be present in the construction area during construction activities. If any bird nests are in the proposed Project area under pre-existing construction conditions, then it is assumed that they are habituated (or will habituate) to the construction activities. Under this scenario, the pre-construction survey described previously should still be conducted on or after February 15 to identify any active nests in the vicinity. A qualified biologist should monitor active sites periodically until after the breeding season or after the young have fledged. If active nests are identified on or immediately adjacent to the proposed Project area, then all non-essential construction activities (e.g., equipment storage, meetings, etc.) should be avoided in the immediate vicinity of the nest site, but the remainder of construction activities may proceed.

Mitigation Measure BIO-3 Implementation

Responsible Party: The District shall ensure that a qualified biologist will complete the pre-construction nesting raptor and other migratory bird survey.

Timing: One nesting survey shall be conducted by a qualified biologist no more than one week of initiating proposed Project construction, should the proposed Project commence between February 15 and August 31.

Monitoring and Reporting Program: The pre-construction nesting survey shall be conducted, and the results shall be documented by a qualified biologist. A brief survey report shall be compiled and kept on file by the District.

Standards for Success: No raptor and/or other active migratory bird nests shall be disturbed due to proposed Project activities.

3.5 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section was developed by Stantec pursuant to Section 15064.5 of CEQA. The purposes were to (1) identify and record cultural and tribal cultural resources in the proposed Project area; (2) make preliminary evaluations of such resources' significance according to the criteria of the California Register of Historical Resources (CRHR); and (3) recommend procedures for avoidance or mitigation of adverse effects to CRHR-eligible resources.

3.5.1 Regulatory Setting

This regulatory setting lists cultural and tribal cultural resources regulations relevant to the proposed Project.



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Federal

National Historic Preservation Act

Most regulations at the federal level stem from the National Environmental Policy Act (NEPA) and historic preservation legislation such as the National Historic Preservation Act (NHPA) of 1966, as amended. NHPA established guidelines to, "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations (Section 106) which pertains to all projects (including the proposed Project) that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. Provisions of NHPA establish the National Register of Historic Places (NRHP) maintained by the National Park Service, the Advisory Councils on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs.

American Indian Religious Freedom Act and Native American Graves Protection and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves Protection and Repatriation Act of 1990.

State

PRC Section 5024.1 California Register of Historical Resources

In order to be determined eligible for listing in the CRHR, a property must be significant at the local, State, or National level under one or more of the following four criteria as defined in PRC 5024.1 and CEQA Guideline 15064.5(a).

- (1) It is associated with events or patterns of events that have made a significant contribution to the broad patterns of the history and cultural heritage of California and the United States. (2) It is associated with the lives of persons important to the nation or to California's past. (3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. (4) It has yielded, or may be likely to yield, information important to the prehistory or history of the State and the nation;
- In addition to meeting one or more of the above criteria, a significant property must also retain integrity. Properties eligible for listing in the CRHR must retain enough of their historic character to convey the reason(s) for their significance. Integrity is judged in relation to location, design, setting, materials, workmanship, feeling, and association.



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PRC Section 21083.2 Treatment of Unique Archaeological Resources

PRC Section 21083.2 governs the treatment of unique archaeological resources, defined as, “an archaeological artifact, object, or site about which it can be clearly demonstrated” as meeting any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best example of its type;
- Is directly associated with a scientifically recognized important prehistoric or historic event or person; or
- If it can be demonstrated that a project will cause damage to a unique archaeological resource, appropriate mitigation measures shall be required to preserve the resource in place and in an undisturbed state. Mitigation measures may include, but are not limited to, 1) planning construction to avoid the site, 2) deeding conservation easements, or 3) capping the site prior to construction. If a resource is determined to be a “non-unique archaeological resource”, no further consideration of the resource by the Lead Agency is necessary.

PRC Section 7050.5 Encountering Human Remains

The possibility of encountering human remains cannot be entirely discounted. Pursuant to PRC Section 7050.5 if human graves are encountered, work should halt in the vicinity and the Tuolumne County Coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification.

Assembly Bill 52 (PRC Section 21084.2)

Assembly Bill (AB) 52 changes sections of the public resources code to add consideration of Native American culture within CEQA. The goal of AB 52 is to promote the involvement of California Native American Tribes in the decision-making process when it comes to identifying and developing mitigation for impacts to resources of importance to their culture. To reach this goal, the bill establishes a formal role for tribes in the CEQA process. CEQA lead agencies are required to consult with tribes about potential tribal cultural resources in the project area, the potential significance of project impacts, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.



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Local

City of Sonora General Plan 2020

The following goals and policies from the Cultural Resources Element related to cultural and tribal resources are relevant to the proposed Project (City of Sonora 2007). Those goals and policies that directly pertain to the proposed Project are discussed in the impact analysis below.

- **Goal 9.A: Identification and Evaluation of Resources.** Preserve and promote the City of Sonora's cultural heritage through the identification and evaluation of its cultural resources.
- **Policy 9.A.1.** Survey, record, inventory, and evaluate the significance of cultural resources in the city to assist in guiding cultural resources management activities.
- **Policy 9.A.2.** Prepare cultural resources inventories consistent with the standards and guidelines of the State Office Historic Preservation.
- **Policy 9.A.3.** Identify the city's important individual cultural resources and districts so that they may be preserved.
- **Goal 9.B: Resource Management.** Maintain the city of Sonora's cultural heritage, through the enlightened management, preservation, use, enhancement, restoration, and study of its cultural resources.
- **Policy 9.B.1.** Assist in retaining the special character of historic buildings, structures, and districts and promote compatible development within historic districts by providing flexible development standards to encourage preservation of historic buildings, structures, and districts.
- **Policy 9.B.2.** Emphasize the provision of incentives to encourage the retention, reuse, and restoration of historic structures.
- **Policy 9.B.3.** Seek the expertise of qualified professionals in evaluating potential impacts of proposed projects on cultural resources.
- **Policy 9.B.4.** Manage the city's cultural resources in a manner consistent with the Secretary of the Interior's Standards and Guidelines.
- **Policy 9.B.6.** Recognize and use cultural resources management as a tool for achieving other goals and implementing other programs of Sonora General Plan 2020.
- **Policy 9.B.8.** Recognize the importance of cultural resources management to the character and livability of the city's neighborhoods.



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3.5.2 Environmental Setting

The following section describes the regional and local cultural setting for the proposed Project. The section includes the methodology used for establishing the contextual setting along with a summary of the natural environment, prehistoric, ethnographic, and historic context.

Methodology for Establishing Setting

Records Search

A records search of the California Historical Resources Information System at the Central California Information Center (CCIC) was completed for the proposed Project on January 12, 2018. The records search consisted of the proposed Project area and surrounding areas within 1/2-mile of the proposed Project area. Previous surveys, studies, and cultural resource site records were reviewed. Records were also examined in the Historic Property Data File for Tuolumne County, which contains information on locations of recognized historical significance, including those evaluated for listing in the NRHP, the CRHR, the California Inventory of Historic Resources, California Historic Landmarks, and California Points of Historical Interest. The purpose of the records search was to: 1) determine whether known cultural resources have been recorded within or adjacent to the proposed Project area; 2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and, 3) develop a context for the identification and evaluation of cultural resources.

The records at the CCIC indicate that 13 cultural resources studies have been previously completed within the records search area. However, no studies have been completed within the proposed Project area. Eight cultural resources were identified within the records search area; however, none are within the proposed Project area.

AB 52 Native American Consultation

Pursuant to the California PRC Section 5097.9, State and local agencies cooperate with and assist the NAHC in its efforts to preserve and protect locations of sacred or special cultural and spiritual significance to Native Americans. Stantec contacted those individuals and/or tribes listed by the NAHC on the Sacred Lands Search (SLS) response or those who requested consultation, to determine whether they have information on sacred or special sites in the proposed Project area. Those included on the list were contacted by letter, telephone, and e-mail to request information about the proposed Project area on April 13, 2018 and May 3, 2018. As of May 22, 2018, no tribes have responded to the outreach or have contacted the District requesting to be consulted under AB 52.

Field Survey

A Stantec archaeologist completed a pedestrian survey of the entire SRWWTF Project area including unpaved access roads and staging areas (identified by the District) on February 7, 2018 and October 7, 2019. The survey did not identify any cultural resources within the proposed Project area.



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The proposed Project area consists of a gently sloping terrain (west to east). Periodic trowel and boot scrapings were employed to clear small patches of vegetation in areas with poor ground visibility; the survey areas exhibited a two to 50-percent ground visibility. This is due to the proposed Project area being predominantly covered with gravel, paving, existing infrastructure, or covered with vegetation. Additionally, it should be noted that Staging area 2 is developed on fill and is an existing staging area for the SRWWTF.

During the field survey rodent burrows, recent ground disturbance, and all accessible areas were examined closely for color and texture changes that would indicate buried deposits. The archaeologist did not observe any evidence of prehistoric archaeological site indicators such as obsidian or chert flakes; grinding and mashing implements (such as groundstone, mortars, pestles, handstones, and milling slicks); bone, and discolored soils (which could contain lithics, bone, shell, other organics, and/or fire-affected rocks). All areas were also examined closely for evidence of historic period-site indicators such as glass and ceramic fragments; metal objects; milled and split lumber, and structure or feature remains such as building foundations, fence posts, and discrete trash deposits such as wells, privy pits, or dumps.

Digital photographs were taken of the survey area, visible ground surface, and all observations were recorded in the field. A Geographic Positioning System (GPS) unit with sub-meter accuracy was used by the surveyor to record artifacts, site features, site boundaries, and areas of site disturbance. The survey consisted of walking parallel 15-meter-wide transects, oriented to a bearing that followed the long axis of each proposed Project area footprint. Weather was consistently sunny with clear skies.

During the survey no historic or prehistoric archaeological sites or resources were identified on the surface of the proposed Project area. Additionally, the proposed Project area lacked key indicators for buried cultural deposits.

Natural Environment

A brief overview of the natural environment setting is provided in Section 3.4, Biological Resources environmental setting, and provides context within which to interpret the cultural resources identified in the proposed Project area.

Assessing the sensitivity for the proposed Project area to contain buried archaeological sites requires a review of the natural environment and takes into consideration the factors that support human occupations such as access to food resources, fresh water, slope, and the underlying geomorphology. Generally speaking, a large proportion of archaeological sites are located within 150 meters of a fresh water source and on relatively level ground (slope of less than five percent). Portions of the proposed Project that occur within these parameters have an increased potential to contain buried cultural resources and buried stable land surfaces that may have supported life prehistorically and/or historically.

The geologic age of deposition in the proposed Project area is classified as 'mv' rock types which are generally metavolcanic rocks (volcanic, mafic, and felsic) of Paleozoic to Mesozoic in age (Rogers 1966; United States Department of Agriculture Natural Resources Conservation Service 2018) which would indicate a lowered potential for buried prehistoric resources. Additionally, soils within the City of Sonora



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are generally shallow with limestone found throughout the northern boundary of the City of Sonora and extends down through portions of North Washington Street and adjacent areas, near the proposed Project area (University of California, Davis 2012 California Soil Resource Laboratory 2018). However, Woods Creek is the closest water source within 100 feet of the proposed Project area indicating potential for resources. The slope of the proposed Project area is less than one percent. Although, the proposed Project area is level and within 150 meters of fresh water sources the Area of Potential Effects (APE) appears to have a moderate potential for buried archaeological resources based on a review of geologic age and the soils.

Prehistoric Context

Interest in the archaeology and prehistory of the Sierra Nevada region of California began during the 1840s Gold Rush, as previously undisturbed gravel and mineral deposits were subject to increased exploitation (Moratto 1984). Scholarly archaeological investigations throughout the region began in the 1870s, including at a burial site along the Stanislaus River in 1877 (Powers 1877), within Yosemite National Park (Beatty 1933; Harden 1908), at petroglyph sites throughout the region (Steward 1929), and at high altitude lithic scatters north of Lake Tahoe (Avery 1873; Hull 2007). Archaeological work during the 1940s and 1950s included large scale archaeological river basin surveys conducted by the Smithsonian Institution (Fenenga 1947; Fredrickson 1949) and comprehensive archaeological surveys, conducted by University of California Berkeley (Heizer 1948).

As archaeological surveys and excavations within the region continued into the 1950s, more specific questions related to lifeways and subsistence practices began to be investigated. However, over 50 years later many questions remain regarding basic research issues including subsistence strategies and cultural chronology (Hull 2007). Chronological sequences were based primarily on the archaeological resources encountered (e.g., projectile points, milling tools, ground stone, and other lithic material) rather than absolute dating methods due to a lack of well-preserved radiocarbon-datable features (Hull 2007).

The northern Sierra prehistoric chronology was developed in part by Heizer and Elsasser (1953) and can be observed in two distinct material cultures: Martis (4,000 – 2,000 years BP) and Kings Beach (AD 1,000-Historic Period) (Heizer and Elsasser 1953). The northwestern slope the Sierra Nevada was settled by 1,000 BP and exhibited both Martis and Central Valley material culture traits (Moratto 1984). Natural cave burials identified in the Central Sierra were conducted between 1,000 BP and AD 500 and some of the cave deposits were potentially left by the Windmill Culture from the Central Valley (Moratto 1984) highlighting the mixed cultural influences that occurred in the Central Sierra. The Stanislaus River Region of the Central Sierra approximate chronology consists of seven phases: 1) Early to Late Clarks Flat (7,500 BC – 4,500 CC); 2) Stanislaus (4,500 – 4,250 BC); 3) undesignated/Texas Charley (4,250 – 3,500 BC); 4) Calaveras (3,500 – 1,000 BC); 5) Sierra (1,000 BC – AD 500); 6) Redbud (AD 500 – 1,750), and 7) Horseshoe (1,750 AD – Historic Period) (Hull 2007; Moratto 1984).

In the 1980s and 1990s, investigations started turning towards technology, gender, exchanges, and population studies and developing regional research designs (Hull 2007). Additionally, cultural resources management investigations started contributing to the archaeology of the Sierra Nevada area by conducting large scale efforts such as the New Melones project (Moratto et al. 1988) near the proposed



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Project area. These large-scale survey and excavation projects produced reports and research opportunities not presented before and identified features which contribute to the overall understanding of the prehistory of the Sierra Nevada region (e.g., rock ring dwellings, stone game drive features located in central and southern Sierras, and stone-lined vegetable processing features, identified in the northern Sierra Nevada) (Bloomer et al. 2002; Waechter and Andolina 2005). New research methods being employed such as Obsidian Hydration (Waechter and Bloomer 2009) add to the cultural chronology by providing absolute dating methods. As an example, in recent studies based on isolated projectile points and modest assemblages found in the higher elevations, within the Stanislaus River watershed, and throughout the northeastern portion of the Sierra, indicate initial use of lower and upper elevations occurred earlier (ca. 8,000 BP) than first assumed (Hull 2007; Peak and Neuenschwander 1991).

Ethnographic Context

The proposed Project area is located within the ancestral territory of the Central Sierra Miwok ('mē,wuk or 'mē,wāk) (Kroeber 1976; Levy 1978:398-413), within a region known as *Ko-tup'-plan-hah*, (Levy 1978). The Central Sierra Miwok ethnographic territory included the foothill and mountain portions of the Stanislaus and Tuolumne drainages (Levy 1978), but their trade networks extended beyond this area, as far west as the San Francisco Bay area and east to the Great Basin (Levy 1978; Moratto 1984).

The Central Sierra Miwok were politically formed in tribelets (ranging from 100 to 300 individuals) that were independent and sovereign nations which consisted of lineage settlements, of approximately 25 individuals on average (Levy 1978). Village communities were typically near fresh water sources, such as streams (Moratto 1984). A typical village community would include family dwellings, acorn granaries, bedrock mortars (including a grinding house built over bedrock mortars), sweathouses, headman's house, and possibly a large communal dance/assembly house (Levy 1978; Moratto 1984). The Central Sierra Miwok inhabited conical houses constructed from tule matting that had a central hearth, earthen oven, and the floor was covered with California foothill pine or Ponderosa/western yellow pine (*Pinus ponderosa*) needles (Levy 1978). The Central Sierra Miwok were hunter-gatherers and would travel to higher or lower elevations during various seasons to obtain foods not found near their permanent settlements (Levy 1978).

Plant gathering varied based on the season and locality. In the spring greens (e.g., columbine, milkweed, white goosefoot, and others) were gathered to supplement the diet of acorns collected during the fall. From May to fall seeds (e.g., wild oats, balsam root, evening primrose, ripgut grass, painted cup, and redmaids), roots (e.g., ookow, Brodiaea [harvest, white, and golden], white mariposa lily, squawroot, anise, eulopus, and others), and berries (e.g., nine-bark berries, wild plums, wild Sierra currants, gooseberries, and wild grapes) were gathered and were a major staple during this time of year (Levy 1978). From fall to winter acorns and nuts (e.g., buckeye, laurel, hazelnut, California foothill pine, sugar pine, and pine nuts) were gathered for consumption (Levy 1978). The most complex food preparation was that of the acorn (Levy 1978). The shells of nuts were cracked utilizing an anvil and hammerstone (mano and metate), then ground using a bedrock mortar with a cobblestone pestle, and either eaten plain, or ground into a flour for bread or a pine nut soup (Levy 1978).



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During winter, meat consumption increased due to the lack of plant foods (Levy 1978). The Central Sierra Miwok exploited a wide variety of resources, including game, fish, birds, and insects. Mule deer, black bear, grizzly bear, black-tailed jackrabbits, cottontails, beaver, gray squirrels, ground squirrels, and woodrats were resources (Levy 1978). The Central Sierra Miwok also caught or ensnared birds, such as the valley and mountain quail. Insects were also gathered, including grasshoppers and yellow jacket larvae. Additionally, freshwater clams, river mussels, fish, and land snails were consumed.

Historic Context

Located in the Sierra Nevada foothills and stretching up into the mountains, Tuolumne County was originally inhabited by Miwok Indians. The first European explorers to reach the area were led by Spaniard Gabriel Moraga in 1806. Since mountainous terrain covered most of Tuolumne County, new settlers to the area were scarce after the 1806 expedition and most of California's earliest settlements were established in more accessible locations along the coast and in larger valleys. Eventually, a pass through the Sierra Nevada was discovered in 1841. The Bartleson-Bidwell party was the first overland group of settlers to cross the Sierra Nevada into California and they descended from the mountains into what would become Tuolumne County (Kyle 2002: 548-549). While most of them continued onto Sutter's Fort and the Sacramento Valley, new trails were forged, and more settlers began streaming into the area in the 1840s and 1850s. After the territory was received into statehood, Tuolumne County was officially created in 1850 as one of the original 27 counties of California (Kyle 2002: 548-549).

After the discovery of gold in Coloma on the American River in 1848, gold was also found in Tuolumne County; the first discovery of gold was at Woods' Crossing on Woods Creek southwest of Jamestown and Sonora (Kyle 2002: 548-549). Immigrants from all over the world flocked to California to strike it rich and many ended up in what would come to be known as the "Mother Lode Country," which encompassed much of Tuolumne County (Alley 1882: 9). Gold and quartz were discovered along the creeks in Tuolumne County, as well as the Stanislaus and Tuolumne Rivers, but diggings were not limited to the local watersheds. Gold was also discovered in the foothills and beneath Table Mountain, and camps like Jamestown and Sonora were established to support miners (Marvin and Brejla 2010: 15). Different mining techniques were utilized throughout Tuolumne County and many ditches were created by miners participating in hydraulic mining. These ditches created more waterways between Jamestown and Sonora and as miners exhausted one area, they would lengthen the ditches and continue their mining operations (Marvin and Brejla 2010: 22). By the mid-1850s, individual miners exhausted the supply of easily mined gold found in the waterways and by the 1860s, large mining companies settled in the area to launch extensive drilling in the foothills. Gold was still being discovered in 1879, deep underground within the Mother Lode vein, but the majority of the mining companies were focused on quartz and gravel operations (Marvin and Brejla 2010: 27).

Although the Gold Rush was a short period of time, mining in Tuolumne County stayed constant. By 1897, the Sierra Railroad constructed a track to reach Jamestown and Sonora and they became the trade epicenter of the foothills. As mining operations grew, so did the effect on the environment, particularly the water supply in Tuolumne County. Jamestown and Sonora were both located on Woods Creek which was heavily mined and diverted into mining ditches in the late 19th century (Kyle 2002: 552-553; USGS 1893, 1896, 1897, 1948, 1973, and 1987). Water was already a contested resource in the area, since the



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Turlock and Modesto irrigation districts claimed the Tuolumne River for themselves in 1887 (Oakland Tribune, 23 August 1924). It became a larger issue in 1907, when the City of San Francisco launched a campaign to dam the Tuolumne River and inundate the Hetch Hetchy Valley for their own use (San Francisco Chronicle, 30 November 1907). Congress passed the Raker Act in 1913, allowing for the creation of a water supply for the Bay Area, but it left the foothills squabbling over water rights (San Francisco Chronicle, 20 December 1913).

Tuolumne County received most of their early water supply from the Stanislaus River. As the fight over water rights grew, the county turned to the old mining ditches as a source of irrigable and potable water for the population. In the early 1900s, the Tuolumne Water System was created, and the mining ditches were organized to control water throughout the county (Tuolumne County Historical Society 2018). Operated by Pacific Gas and Electric Company (PG&E), the ditch system added to PG&E's hydroelectric power source and provided Tuolumne County with a source for electricity (Coleman 1952: 282). PG&E also created the first wastewater treatment (coagulation) plant in Sonora in 1928, to reuse and recycle wastewater (Modesto News-Herald, 21 March 1928). Struggles over access to water continued through the mid-twentieth century, until a series of dams and hydroelectric facilities were constructed on the Stanislaus River in 1957. The Tri-Dam Project relieved some of the burden on Tuolumne County, but did not fix all the water issues (Oakland Tribune, 16 June 1957). Increased mining activity and construction of these large-scale hydroelectric projects cause the population of Tuolumne County to swell in the 1950s and 1960s and in 1976, the Tuolumne County Water District No. 2 proposed the construction of a new wastewater treatment plant. It was disputed by some locals because the holding ponds would potentially flood their nearby mines, but the county approved the plan (The Bakersfield Californian, 26 October 1976). The new facility brought sewage from Sonora to three holding ponds, where it was treated and then transferred to Quartz Reservoir and reused for irrigation purposes (The Union Democrat, 23 August 2015). In 1992, the voters of Tuolumne County combined the Tuolumne County Water District No. 2 and the Tuolumne Water System to create the Tuolumne Utilities District, which operates the SRWWTF (Tuolumne Utilities District 2018).

3.5.3 Impact Analysis

V. CULTURAL and TRIBAL CULTURAL RESOURCES Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐



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V. CULTURAL and TRIBAL CULTURAL RESOURCES Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐
d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size, or object with cultural value to the California Native American tribe and that is 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).	☐	☒	☐	☐
e) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size, or object with cultural value to the California Native American tribe and that is 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.	☐	☒	☐	☐

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

Finding: Less than Significant with Mitigation Incorporated

The proposed Project will not change the significance of a historical resource as identified in Section 15064.5 because no cultural resources were identified within or adjacent to the proposed Project area. However, given the moderate sensitivity for buried cultural resources in the proposed Project area, there is the potential during ground disturbing construction activities associated with the proposed Project to unearth potentially significant historical resources. To reduce the potential for construction activities to cause a substantial adverse change to any undiscovered resources the following mitigation measures would be implemented:



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- MM CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources

With the implementation of MM CUL-1, the District and their contractor would have a process should an inadvertent discovery of a cultural or tribal cultural resource be encountered during construction.

Measures would be in place to appropriately evaluate and if necessary, avoid, record, and/or treat any resources identified during construction, reducing the potential to inadvertently impact resources during construction. MM CUL-1 provides construction crews and the District procedures to follow to stop work and conduct appropriate assessment and treatment of the inadvertent find which would include the evaluation of the resource to assess its potential historical significance in relevance to PRC section 15064.5; thereby reducing any potential to significantly impact the resource since mitigation and treatment would be developed in accordance with professional standards specific to the discovered resource. Therefore, the potential to cause a substantial adverse change to the significance of historical resources is less than significant with mitigation incorporated.

b) Would the Project cause a substantial adverse change in the significance of an archaeological resource as identified in Section 15064.5?

Finding: Less than Significant with Mitigation Incorporated

No archaeological resources were identified within the proposed Project area based on the records search and the field survey results. The records search did identify one archaeological resource within 0.5 mile of the proposed Project area. No impacts will occur at this site.

However, given moderate sensitivity for subsurface prehistoric cultural resources in the proposed Project area, there is potential for construction activities associated with the proposed Project to unearth potentially significant archaeological resources. In order to prevent the construction activities from causing a substantial adverse change to any undiscovered resources the following mitigation measures would be implemented:

- MM CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources; and
- MM CUL-2: Unanticipated Discovery of Human Remains

With the implementation of MM CUL-1 and MM CUL-2 the District and their contractor would have a process should an inadvertent discovery of a cultural or tribal cultural resource or human remains be encountered during construction reducing the potential to inadvertently impact resources during construction. Therefore, the potential to substantially cause an adverse change in the significance of archaeological resources is less than significant with mitigation incorporated.

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

Finding: Less than Significant with Mitigation Incorporated

There are no known human burials or remains within the proposed Project area. However, there is potential for inadvertent discoveries of human remains. In the event that human remains are encountered



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during construction of the proposed Project, MM CUL-2: Unanticipated Discovery of Human Remains, would be implemented to educate construction staff of human remains and burial site features and to provide a procedure for stopping work and contacting the county coroner that would reduce any potential for impact to a less than significant level. Therefore, the potential to disturb any human remains would be less than significant with mitigation incorporated.

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

Finding: Less than Significant with Mitigation Incorporated

All Native American individuals and groups contacted regarding the proposed Project did not respond and no tribes have contacted the District requesting to be consulted under AB 52. AB 52 tribal consultations did not identify any tribal cultural resources and no further consultation was requested.

Past tribal uses in the surrounding valley and nearby areas, indicate there is the potential for construction activities associated with the proposed Project to unearth potentially significant tribal cultural resources. In order to prevent the construction activities from causing a substantial adverse change to any undiscovered resources the following mitigation measures would be implemented:

- MM CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources; and
- MM CUL-2: Unanticipated Discovery of Human Remains

With the implementation of MM CUL-1 and MM CUL-2 construction crews would be educated on potential tribal cultural resources that may be encountered during ground disturbing activities. The mitigation measures would provide construction crews and the District the appropriate procedures for stopping work and conducting appropriate assessment and treatment of the inadvertent find which would include the evaluation of the resource to assess its potential tribal cultural resource significance in relevance to PRC section 21074 or its eligibility for listing as defined in PRC section 5020.1(k); thereby reducing any potential to significantly impact. Therefore, the potential for the proposed Project to cause a substantial adverse change to the significance of tribal cultural resources is considered less than significant with mitigation incorporated.

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



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Finding: Less than Significant with Mitigation Incorporated

As described in impact 'e' above, all Native American individuals and groups contacted regarding the proposed Project did not respond and no tribes have contacted the District requesting to be consulted under AB 52. Tribal cultural resources have not been identified within the proposed Project footprint; however, given past California Native American tribal uses in the surrounding valley and nearby areas there would be the potential for construction activities associated with the proposed Project to unearth potentially significant California Native American tribal cultural resources. In order to prevent the construction activities from causing a substantial adverse change to any undiscovered resources the following mitigation measures would be implemented:

- MM CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources; and
- MM CUL-2: Unanticipated Discovery of Human Remains

With the implementation of MM CUL-1 and MM CUL-2 construction crews would be educated on potential California Native American tribal cultural resources that may be encountered. Construction crews and the District would have procedures to follow to stop work and conduct appropriate assessment and treatment of the inadvertent find which would include the evaluation of the resource to assess its potential California Native American tribal significance in relevance to PRC sections 21074 and 5024.1 and if significant, treatment and measures for protecting or preserving the significance; thereby reducing any potential to significantly impact. Therefore, the potential for impact to significant California Native American tribal cultural resources is less than significant with mitigation incorporated.

3.5.4 Mitigation Measures

Mitigation Measure CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources

The District shall ensure that all construction personnel involved in any ground disturbing construction activity for the entire duration of the proposed Project are informed of the possibility of encountering subsurface prehistoric or historical cultural resources and/or human remains within the proposed Project area and the protocol to be followed if a cultural or tribal cultural resource or human remains are encountered as detailed below and with MM CUL-2.

Sensitive cultural resources the construction personnel should be made aware of include:

Archaeological and/or Tribal Materials – May include, but are not limited to, flaked stone tools (projectile point, biface, scraper, etc.) and debitage (flakes) made of chert, obsidian, etc.; groundstone milling tools and fragments (mortar, pestle, handstone, millstone, etc.); faunal bones; fire-affected rock; dark middens; house pit depressions; and human interments.

Tribal Cultural Resources – A site feature, place, cultural landscape, sacred place, or object, which is of cultural value to a tribe – and is either: on or eligible for the CRHR or a local historic register, – or the CEQA Lead Agency, at its discretion, chooses to treat the resource as a tribal cultural resource – See: PRC 21074 (a)(1)(A)-(B).



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Historic-era Resources – May include, but are not limited to, small cemeteries or burial plots, bones, cut (square) nails, containers or miscellaneous hardware, glass fragments, cans with soldered seams or tops, ceramic or stoneware objects or fragments, milled or split lumber, earthworks, feature or structure remains and trash dumps.

In the event of the discovery of cultural or tribal cultural resources during construction activities the following steps outlining the proper handling, evaluation, and treatment of cultural or tribal cultural resources shall be undertaken to ensure protection of potentially significant historically, archaeologically, or tribally significant resources.

Proper Handling:

If subsurface cultural or tribal cultural resources are inadvertently uncovered during proposed Project ground disturbing activities, the District's contractor shall adhere to the following procedures and methods:

- Immediately stop all work within 100 feet of the discovery;
- Immediately contact the District Project Manager or representative;
- Do not harass, damage, touch, or remove any cultural or tribal cultural resources materials once resource is identified;
- Leave all spoils in their current location unless directed by District representatives;
- Record the location and keep notes of all calls and events providing them to the District representative daily, or as requested;
- Secure the discovery location with flagging, plywood, or other appropriate material around the exposed site or a person watching the site as directed by the District representative, until cleared by the District representative and qualified archaeologist;
- Treat the find as confidential. Do not publicly disclose the location. Only authorized personnel, or individuals with the permission of the District representative (or the landowner) shall be allowed on the site;
- Upon approval of District, work may resume within no less than 100 feet of the discovery; and
- Upon clearance of the District, work may resume in the location where cultural resources were discovered after evaluation and clearance by the District qualified archaeologist.

Upon notification by the contractor, the District shall adhere to the following procedures and methods:

- Record the location and keep notes of all calls and events;
- Consult with the on-call qualified archaeologist who shall facilitate evaluation and treatment procedures;



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- Maintain communications with the archaeologist, documenting and recording evaluation, protection, treatment, and avoidance steps taken;
- Relocate work no less than 100 feet from the discovery or as otherwise directed by the archaeologist; and
- Treat the find as confidential. Do not publicly disclose the location. Only authorized personnel, or individuals with the permission of the District (or the landowner) shall be allowed on the archaeological site.

Upon notification by the District, the retained qualified archaeologist shall adhere to professional standards regarding the evaluation and treatment of the discovered cultural or tribal cultural resources and shall implement the following avoidance, evaluation, and/or treatment procedures and methods:

- Examine the site to confirm that no additional cultural or tribal resources are in the disturbed area where the resource was found;
- Recommend the appropriate discovery securing measures such as flagging, plywood, other material, or monitor around the exposed site until the evaluation is complete;
- Coordinate with District to determine if design modifications are feasible to avoid the resource. If the resource can be avoided appropriate security measures such as flagging or other exclusion fencing shall be placed around the resource until construction activities within 250 feet of the resource are complete; and
- If the resource cannot be avoided, an evaluation of the find shall be conducted to determine the historical, archaeological, or tribal significance of the resource shall be undertaken by a qualified archaeologist. If evaluation results in the determination that a resource is historically, archaeologically, or tribally significant, mitigation as recommended by the archaeologist/tribal representative and agreed upon by the District would be implemented and the resource would be recorded for documentation in accordance with Office of Historic Preservation Standards, tribal, and industry standards. If the resource is not found significant, construction may resume.

Mitigation Measure CUL-1 Implementation

Responsible Party: The District, representatives, and contractor

Timing: During all ground disturbing activities.

Monitoring and Reporting Program: If any find is determined to be significant, representatives of the District shall document consultation with the qualified archaeologist (and tribal representative if a tribal cultural resource) and determination of recommended protection and/or avoidance measures or other appropriate mitigation. The District shall prepare a memorandum incorporating notes and records from the contractor and qualified archaeologist to document steps taken to comply with the avoidance



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measures or other appropriate mitigation. The memorandum shall be saved as a file copy by the District and submitted to the Central California Information Center.

Standards of Success: The evaluation and recording of any newly identified cultural or tribal cultural resources and treatment by avoidance, protection, or documentation of any discovered resources that qualify as historically, archaeologically, or tribally significant.

Mitigation Measure CUL-2: Unanticipated Discovery of Human Remains

Section 7050 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial site. If human remains are encountered (or are suspected) during any project-related activity, the District, District's representatives, and District's contractor shall complete the following steps:

- Immediately stop all work;
- Immediately contact the District Project Manager or representative;
- Contact a qualified archaeologist (someone who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology) who shall then notify the County Coroner immediately pursuant to PRC Section 7050.5. The County Coroner may assess the human remains. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of such identification. The NAHC shall identify the most likely descendant (MLD);
- Once given the permission by the District (and the landowner), the MLD shall be allowed onsite. The MLD shall complete their inspection and make their recommendation to the District for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. MLD recommendations must be made within 48 hours of the NAHC notification to the MLD;
- Relocate work under direction of the District within no less than 150 feet of the discovery or as otherwise directed by the District qualified archaeologist;
- Consult with the onsite qualified archaeological monitor to confirm that no additional human remains are in the area;
- No additional work shall take place within the immediate vicinity of the find until the District's qualified archaeologist gives approval to resume work in that area;
- Once work resumes in a location where human remains have been discovered and cleared, the onsite monitor shall observe further ground-disturbing construction activities closely for evidence of additional human remains;
- Do not touch, damage, remove any human remains, associated materials, or associated spoils;
- Record the location of the discovered remains and keep notes of all calls, site visits and events; and



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- Treat the find as confidential and do not publicly disclose the location. The District shall provide security to the area as needed. Only authorized personnel, or individuals with the permission of the District (and the landowner) shall be allowed onsite.

Mitigation Measure CUL-2 Implementation

Responsible Party: The District, representatives, and contractor.

Timing: During all ground disturbing activities.

Monitoring and Reporting Program: The find shall be immediately reported to the County Coroner. The recording and evaluation of any newly identified human remains shall be conducted by qualified professional archaeologist in conjunction with the County Coroner and a report detailing the recording, location, evaluation, and treatment of human remains, shall be kept on file at the District, and submitted to the CCIC.

Standards of Success: The proper recording, evaluation, and treatment of any newly identified human remains.

3.6 ENERGY

3.6.1 Regulatory Setting

Federal

Code of Federal Regulations, Title 10

Title 10 of the Code of Federal Regulations (CFR) addresses energy consumption and the establishment of the Department of Energy. Title 10 addresses:

- State energy programs;
- Energy conservation programs;
- Energy efficiency of industrial and commercial products;
- Alternative fueled vehicles;
- Power plant regulations;
- Department of Energy provisions; and
- Nuclear Regulatory Commission and nuclear facilities.

Code of Federal Regulations, Title 18

Title 18 of the CFR addresses the Federal Energy Regulatory Commission (FERC), which handles issues related to electricity, natural gas and oil transportation, provisions, and tariffs.

Federal Corporate Average Fuel Economy Standards

First established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National



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Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy (National Highway Transportation Safety Administration 2019).

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (US EPA 2011). The USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA 2016b).

State

Assembly Bill 32/California Global Warming Solutions Act

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. Under HSC Division 25.5, the California Air Resources Board (CARB) has the primary responsibility for reducing the State’s GHG emissions, however, it also tasked CEC and the CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197; both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure that the benefits of state climate policies reach into disadvantaged communities.

Senate Bill 350/Clean Energy and Pollution Reduction Act of 2015

SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of Executive Order B-30-15, issued in April 2015, which established a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. The objectives of SB 350 are 1) to increase the procurement of our electricity from renewable sources from 33 percent to 50 percent; and 2) to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation by 2030.

Senate Bill 100/100 Percent Clean Energy Act of 2018

SB 100, signed September 10, 2018, is the 100 Percent Clean Energy Act of 2018. SB 100 updates the goals of California’s RPS and SB 350, discussed above, in the following ways: 1) achieve the 50 percent renewable resources target by December 31, 2026, and 2) achieve a 60 percent target by December 31,



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2030. SB 100 also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Assembly Bill 1493/Pavley Regulations

AB 1493 (commonly referred to as CARB's Pavley Regulations) was the first legislation to regulate GHG emissions from new passenger vehicles. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks) for model years 2009–2016 and model years 2017-2025.

California Air Resources Board

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, the CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

In addition to limiting exhaust from idling trucks, CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

Local

City of Sonora General Plan 2020

Goal 4.B: Conserve energy resources in a manner which maintains or enhances air quality, water quality, scenic values and other natural resources.

Policy 4.B.1: Reduce the consumption of energy, products and resources through increased recycling, reuse and alternative use of products.



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Policy 4.B.3: Increase the use of non-motorized and public transit to reduce air pollution and energy consumption.

3.6.2 Environmental Setting

PG&E is the electrical service provider for the City of Sonora and surrounding Tuolumne County.

3.6.3 Impact Analysis

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

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

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

Finding: Less than Significant

a-b) PG&E is the electrical service provider for the City of Sonora. PG&E maintains a number of distribution lines and substation facilities in the area. Resources that would be consumed as a result of the proposed Project include water, electricity, and fossil fuels during construction, operation, and maintenance. Construction would require the manufacture of new materials, some of which may not be recyclable at the end of the proposed Project's lifetime. The energy required for the production of these materials would also result in an irretrievable commitment of natural resources. The proposed Project would not result in potentially significant impacts due to wasteful, inefficient or unnecessary consumption of energy resources. Improvements to the existing wastewater treatment facility would serve the same purpose and will not change the location or increase the need for wastewater treatment. Construction of the project would require consumption of fuel to run construction vehicles and equipment. However, proposed Project construction would be temporary (18-24 months). Compliance with all applicable building codes, State of California, and City and County policies would ensure that all natural resources



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are conserved to the maximum extent possible and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, impacts would be less than significant

3.6.4 Mitigation Measures

No mitigation is required.

3.7 GEOLOGY AND SOILS

3.7.1 Regulatory Setting

Federal

Clean Water Act

The CWA (CWA, 33 USC 1344) focuses primarily on waters of the United States and is further described in Section 3.4 (Biological Resources) and Section 3.8 (Hydrology and Water Quality). However, the CWA focuses on sediment control in two aspects. First, the USACE administers Section 404, which regulates the discharge of fill into waters of the United States. Second, Section 401 and 402 of the CWA administered by the SWRCB or the RWQCB under terms of a State General Construction Stormwater Permit apply to non-point source discharges, where erosion control is an integral part of achieving permit compliance.

Earthquake Hazards Reduction Act of 1977

The Earthquake Hazards Reduction Act of 1977 established the National Earthquake Hazards Reduction Program (NEHRP), “to reduce the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program.” The four principal goals of the NEHRP are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation;
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems;
- Improve earthquake hazards identification and risk assessment methods, and their use; and
- Improve the understanding of earthquakes and their effects.

Many of the tools used to assess, as well as mitigate, earthquake hazards and impacts were developed under the NEHRP.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act requires the mapping of zones around active faults in California, in an effort to prohibit the construction of structures for human occupancy on active faults and minimize damage due to rupture of a fault. Active faults are those that have ruptured within the past



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11,000 years. Where the act identifies an Earthquake Fault Zone, a geologic investigation and report is necessary to prevent siting of buildings on active fault traces.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act is intended to delineate zones where earthquakes could cause hazardous ground shaking and ground failure, including liquefaction and landslides. Currently, zones near the San Andreas Fault in the urban centers of the Greater San Francisco Bay Area and Los Angeles have been delineated. Local cities and counties within these zones regulate construction in order to minimize loss associated with these seismic hazards.

Local

City of Sonora General Plan 2020

The following goal and policies from the Safety Element related to geology and soils are relevant to the proposed Project and are discussed in the impact analysis below. (City of Sonora 2007)

- **Goal 6.A:** Protect persons and property from geologic hazards.
- **Policy 6.A.1.** Assess and keep apprised of the potential risks to persons and property from geological hazards within or with the potential to affect the city.
- **Policy 6.A.2.** Reduce exposure to risks in hazardous areas by directing development away from these areas.

3.7.2 Environmental Setting

General Geologic Setting

The proposed Project is characterized by a gently sloping developed property on the SRWWTF and surrounding foothills of the Sierra Nevada Mountain Range. Tuolumne County is located primarily within the Sierra Nevada geomorphic province. The proposed Project area ranges from approximately 1,600 feet to 1,700 feet in elevation above mean sea level, depending on the location within the SRWWTF. Bedrock geology in this part of the Sierra Nevada foothills in Tuolumne County is characterized by the metamorphic bedrock containing gold-bearing veins in the northwest trending Mother Lode.

Earthquake Potential

Tuolumne County is classified as a very low-severity earthquake zone and contains relatively inactive faults. Geologic hazards in Tuolumne County are primarily associated with potential seismic activity along the Foothills fault zone and associated ground shaking. There is a Pre-Quaternary fault that runs through Sonora and is the closest fault to the proposed Project area, approximately 0.5-miles to the east. There is a Late Quaternary fault that runs through the town of Jamestown, located 2.5 miles southwest of the proposed Project area. These faults are part of the Melones Fault Zone (California Department of Conservation 2010). The Melones Fault zone is one of the major tectonic features of the western Sierra



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Nevada, where it is delineated by aligned alpine type serpentinite bodies. The Fales Hot Spring Fault Zone, located approximately 60 miles northeast of the proposed Project area, is the nearest principal fault identified and mapped pursuant to the Alquist-Priolo Earthquake Zoning Act (California Department of Conservation 2015).

In the Sierra Nevada Range, there is relatively shallow weathered material underlain by dense bedrock, which lessens the seismic risk. Igneous and metamorphic bedrock provide the least amount of seismic hazard due to ground shaking.

Soil Characteristics

Soils within the City of Sonora are generally shallow. Limestone is found throughout the northern boundary of the City of Sonora and extends down through portions of North Washington Street and adjacent areas, near the proposed Project area. Limestone (i.e., carbonate bedrock) is subject to solution cavities when limestone is dissolved by groundwater.

Liquefaction Potential

Liquefaction, a process in which the soil behaves like a liquid, can damage buildings, roads, and pipelines through loss of structural support capabilities and uneven settlement of the soil. Recently saturated loose, granular sediment and strong ground shaking are requirements for liquefaction to occur (USGS 2017). The low potential of ground shaking, lack of liquefaction-prone soils, and the existing use of the site with no past occurrences of liquefaction of the proposed Project area result in low potential for liquefaction.

Landslide Potential

The risk of landslides in Tuolumne County is generally low, and moderate at worst, due to the prevalence of igneous and metamorphic bedrock overlain by relatively shallow cohesive soils. Most soils within Tuolumne County are underlain with dense bedrock, resulting in “low risk” landslide ratings. Additionally, the proposed Project area is located at the existing SRWWTF that has not had landslides in the past.

Paleontological Context

The paleontological database at the University of California Museum of Paleontology (UCMP) (2018) and geological mapping (Wagner et al. 1991) were reviewed to determine the potential for paleontological resources in Tuolumne County. The proposed Project area lies within the Central Sierra region of the Sierra Nevada foothills of California. It is underlain by metavolcanic strata (Wagner et al. 1991), meaning that the rocks were originally volcanic (i.e., igneous extrusive rocks such as tephra, basalt, rhyolite) but have been altered by low grade heat and/or pressure. The rocks are Jurassic in age, ranging between 145 and 200 million years old. Woods Creek, a small watercourse, borders the proposed Project area to the west but is not mapped as having any substantial sedimentary deposits.

A search of the UCMP (UCMP 2018) database found 72 fossil localities recorded in Tuolumne County, although the exact location of the localities is not disclosed. Nine of these localities are Jurassic in age,



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with eight containing invertebrate fossils and 1 containing plant fossils. Several localities are assigned to particular formations, including the Mariposa and Cosumnes formations, neither of which is mapped in the proposed Project area. Given that the strata within the proposed Project area consist of metavolcanic rocks, it is unlikely that any fossil localities occur in the area.

3.7.3 Impact Analysis

VII. GEOLOGY AND SOILS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on strata or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒



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VII. GEOLOGY AND SOILS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

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

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

Finding: Less than Significant

The proposed Project area is not identified as being located in an Alquist-Priolo Fault Zone (California Geological Survey 2015). Tuolumne County is classified as a low-severity earthquake zone and contains both active and inactive faults. The Melones fault zone (which is the fault zone east of the broader Foothills Fault system) is classified as “active” (has demonstrated displacement within the last 100,000 years). A total of four historical earthquake events with recorded magnitudes of 3.5 or greater occurred in or near Tuolumne County this past century (Tuolumne County 2012). The proposed Project does not include construction of structures for human occupancy and would not subject people or structures to adverse effects due to rupture of a known fault because there are no known active faults in the proposed Project area. The proposed Project is not subject to significant risk of loss, injury, or death from an earthquake fault since there are no major fault zones in the proposed Project area, therefore, potential fault-related impacts are considered less than significant.

ii) Strong seismic ground shaking.

Finding: Less than Significant

Tuolumne County is classified as a low-severity earthquake zone and contains both active and inactive faults. Geologic hazards in Tuolumne County are primarily associated with potential seismic activity along the Foothills fault zone and associated ground shaking. The proposed Project area is located to the east of the Foothills fault system. The Melones fault zone (which is the fault zone east of the broader Foothills



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Fault system) is classified as “active”. A total of 4 historical earthquake events with recorded magnitudes of 3.5 or greater occurred in or near Tuolumne County this past century (Tuolumne County 2012). The low-severity zone designation and relative inactivity of the faults within the area indicates there is a limited potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death, resulting from strong seismic ground shaking. Therefore, the potential for impact is considered less than significant.

iii) Seismic related ground failure, including liquefaction.

Finding: Less than Significant

As discussed in the seismic ground shaking discussion above and the environmental setting (Section 3.6.2), the low potential of ground shaking, lack of liquefaction-prone soils, and the existing use of the site with no past occurrences of liquefaction of the proposed Project area result in low potential for liquefaction. Therefore, the potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving seismic related ground failure, including liquefaction, is considered less than significant.

iv) Landslides

Finding: Less than Significant

The proposed Project area is located in an area of low topographical relief and competent rocks with bedding and composition that do not have an elevated landslide potential. Due to the absence of permanently elevated groundwater table and the relatively low seismicity, the potential for seismically induced slope instability is considered negligible. Potential for landslides is also low, and thus associated impacts are considered less than significant.

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

Finding: Less than Significant with Mitigation Incorporated

Grading, excavation, removal of vegetation cover, and loading activities associated with construction could temporarily increase erosion, runoff, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at the construction sites and staging areas. The proposed Project area has some topographic relief, and these areas with sloping topography create the potential for erosion to occur.

The proposed Project design would incorporate MM GEO-1: Sedimentation and Erosion Control Measures, which includes drainage control and the installation and implementation of BMPs in areas of bare soil, and in drainages near all areas of disturbance during construction of the proposed Project and would therefore reduce potential impacts to less than significant. The requirements of the State General Construction Stormwater Permit issued by the RWQCB will require a Stormwater Pollution Prevention Program (SWPPP) because area of impact would be greater than one acre. With the incorporation of MM GEO-1, which includes the above requirements, potential erosion and sedimentation impacts are considered less than significant.



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c) Would the Project be located on strata or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Finding: Less than Significant

The proposed Project is located on relatively shallow, well-drained gravelly clay loam layers underlain by dense bedrock, which lessens the seismic risk. Igneous and metamorphic bedrock provide the least amount of seismic hazard due to ground shaking. These soils, as well as the bedrock, are inherently stable, generally not susceptible to landslide or lateral spreading, and are not likely susceptible to subsidence or liquefaction (NRCS 1964). As a result, hazard potentials related to seismic ground failure, including liquefaction are considered low. Therefore, the impacts are considered to be less than significant.

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

Finding: No Impact

The proposed Project does not involve the construction of structures, for human habitation or for public gathering places. Modifications to the existing SRWWTF will be located in the same location or within the immediate vicinity of existing structures and on previously disturbed or graded areas. The proposed SRWWTF facilities will be constructed in compliance with applicable regulations and other County and State requirements. Therefore, no impact would result from development of the proposed Project.

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

Finding: Less than Significant

The proposed Project provides replacement of existing polishing ponds with a new activated sludge treatment facility including headworks primary screening and grit removal, new activated sludge/extended aeration, secondary treatment processing, new secondary clarifiers, new chlorine disinfection facilities, renovated sludge digestion to aerated digestion, and new sludge dewatering facilities. No septic tanks are proposed for the proposed Project. The proposed Project is being designed to comply with the CWA, and therefore, impacts would be considered less than significant.

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

Finding: Less than Significant

The Society of Vertebrate Paleontology (SVP) has identified two steps for assessment of paleontological resources (i.e., fossils): 1) assess the potential that nonrenewable paleontological resources could be



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directly or indirectly impacted or destroyed by the proposed Project activities, and 2) generate and implement measures to mitigate any potential impacts from proposed Project activities.

The SVP classifies the potential for paleontological resources within rock units as units having high, undetermined, low, or no potential for containing paleontological resources.

High potential is characterized as “rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered, including but not limited to sedimentary formations, some volcanoclastic formations, some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, sedimentary rock units temporally or lithologically suitable for the preservation of fossils, rock units which contain potentially datable organic remains older than late Holocene and rock units which may contain new vertebrate deposits, traces, or trackways” (SVP 2010).

The SVP classifies underdetermined potential as “rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment” (SVP 2010). Low potential is described as “poorly represented by fossil specimens in institutional collections, or where fossils are only preserved in rare circumstances” (SVP 2010). Rock units with no potential to contain paleontological resources include high-grade metamorphic rock (gneisses, schists) and plutonic igneous rocks (granites, diorite) (SVP 2010).

The proposed Project area is underlain by metavolcanic strata (Wagner et al. 1991). These rocks fall within the SVP Impact Mitigation Guidelines Revision Committee (SVP 2010) category of “low potential” as fossils in metavolcanics rocks would only be preserved in rare circumstances. Based on the geological mapping (Wagner et al. 1991), there is minimal accumulation of surficial sediments overlying the metavolcanics rocks within the proposed Project area or the adjacent Wood Creek valley. New proposed Project components will also be constructed in an area that has been previously disturbed. Therefore, the proposed Project is not anticipated to directly or indirectly destroy a unique paleontological resource site, or unique geologic feature and impacts are considered less than significant.

3.7.4 Mitigation Measures

Mitigation Measure GEO-1: Sedimentation and Erosion Control Measures

In compliance with the requirements of the State General Construction Activity Stormwater Permit, the District shall obtain coverage under the current Construction General Permit (2009-0009-DWQ) and prepare a SWPPP that incorporates measures or comparable BMPs which describes the site, erosion and sediment controls, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls. The District shall require all construction contractors to retain a copy of the approved SWPPP at the proposed Project area and implement the SWPPP. Additionally, the SWPPP shall ensure that all stormwater discharges are in compliance with all current requirements of the Construction General Permit (2009-009-DWQ).



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Mitigation Measure GEO-1 Implementation:

Responsible Party: The District shall obtain coverage under the current Construction General Permit (2009-0009-DWQ) and prepare a SWPPP. The District will also obtain a Grading Permit. This mitigation measure will be referenced in the plans and specifications bid for the proposed Project.

Timing: During construction activities and until the site is stabilized.

Monitoring and Reporting Program: The recording and evaluation of the SWPPP and erosion control practices shall be conducted by the District and the contractor and kept on file at the District office and at the proposed Project area.

Standards of Success: Minimize on- and off-site erosion and prevent introduction of significant amounts of sediment into any stream or drainage. Ensure that all stormwater discharges are in compliance with all current requirements of the Construction General Permit.

3.8 GREENHOUSE GASSES

3.8.1 Regulatory Setting

Federal

United States Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases (GHGs) are air pollutants covered by the FCAA. The Court held that the USEPA must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the USEPA was required to follow the language of Section 202(a) of the FCAA. This is because the Supreme Court decision resulted from a petition for rulemaking under Section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations.

On April 17, 2009, the USEPA Administrator signed proposed “endangerment and cause or contributes findings” for GHGs under Section 202(a) of the FCAA. Finding that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The USEPA also found that the combined emissions of these GHGs from new motor vehicle engines contribute to the greenhouse as air pollution that endangers public health and welfare under FCAA section 202(a). These Findings were based on careful consideration of the full weight of scientific evidence and a thorough review of the numerous public comments received. These Findings went into effect on January 14, 2010 (USEPA 2017).



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State

There are a variety of statewide rules and regulations which have been implemented or are in development in California which mandates the quantification or reduction of GHGs. Under CEQA, an analysis and mitigation of emissions of GHGs and climate change in relation to a proposed project is required where it has been determined that a project would result in a significant addition of GHGs. Certain Air Pollution Control Districts (APCDs) have proposed their own levels of significance. The TCAPCD, which has regulatory authority over the air emissions from this proposed Project, has not established a significance threshold for GHG emissions.

Executive Order S-3-05: Executive Order S-3-05 was established by Governor Arnold Schwarzenegger in June 2006 and establishes the following Statewide emission reduction targets through the year 2050:

- by 2010, reduce GHG emissions to 2000 levels;
- by 2020, reduce GHG emissions to 1990 levels; and
- by 2050, reduce GHG emissions to 80 percent below 1990 levels.

This Executive Order does not include any specific requirements that would pertain directly to the proposed Project. However, actions taken by the State to implement these goals may affect the proposed Project, depending on the specific implementation measures that are developed (Executive Order S-3-05 2005).

Assembly Bill 32: AB 32, also known as the California Global Warming Solutions Act of 2006, was established in 2006 to mandate the quantification and reduction of GHGs to 1990 levels by 2020. The law establishes periodic targets for reductions and requires certain facilities to report emissions of GHGs annually. The bill also reserves the ability to reduce emissions targets lower than those proposed in certain sectors which contribute the most to emissions of GHGs, including transportation. Additionally, the bill requires:

- GHG emission standards to be implemented by 2012; and
- CARB to develop an implementation program and adopt GHG control measures “to achieve the maximum technologically feasible and cost-effective GHG emission reductions from sources or categories of sources.” CARB issued a draft Climate Change Scoping Plan in December 2008.

The Assembly Bill 32 Scoping Plan contains the main strategies California will use to reduce the GHGs that cause climate change. The scoping plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 cost of implementation fee regulation to fund the program (CARB 2014).

Local

There are no applicable City of Sonoma General Plan goals or policies related greenhouse gasses for the proposed Project.



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3.8.2 Environmental Setting

Many chemical compounds found in the Earth's atmosphere act as GHGs, which allow sunlight to enter the atmosphere freely. When sunlight strikes the Earth's surface, some of it is reflected back towards space as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to the Earth's surface should be about the same as the amount of energy radiated back into space, leaving the temperature of the Earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (water vapor, carbon dioxide, methane, and nitrous oxide), while others are exclusively manmade (like gases used for aerosols).

The principal climate change gases resulting from human activity that enter and accumulate in the atmosphere are listed below:

- Carbon Dioxide (CO₂): CO₂ enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and chemical reactions (e.g., the manufacture of cement). CO₂ is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- Methane (CH₄): CH₄ is emitted during the production and transport of coal, natural gas, and oil. CH₄ emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.
- Nitrous Oxide (N₂O): N₂O is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.
- Fluorinated Gases: HFCs, PFCs, and SF₆ are synthetic, powerful climate-change gases that are emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in smaller quantities, but because they are potent climate-change gases, they are sometimes referred to as high Global Warming Potential (GWP) gases.

3.8.3 Impact Analysis

VIII. GREENHOUSE GAS EMISSIONS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐



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VIII. GREENHOUSE GAS EMISSIONS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

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

Finding: Less than Significant

The proposed Project could contribute to climate change impacts through its contribution of GHGs. The proposed Project would generate a variety of GHGs during construction, including several defined by AB 32, such as CO₂, CH₄, and N₂O from the exhaust of equipment and the exhaust of construction hauling trips and worker commuter trips. The TCAPCD has not established GHG significance thresholds; therefore, the proposed Project construction emissions were compared to the CARB's recommended threshold of significance of 7,000 metric tons of CO_{2e} (carbon dioxide equivalent) per year.

Construction emissions were computed for the proposed Project using the CalEEMod model. The predicted proposed Project emissions are well below the CARB's significance thresholds for CO_{2e} emission levels (Table 3.3-4, CalEEMod 2019). It is not anticipated that the proposed Project would generate GHG emissions levels that either directly or indirectly have significant impacts on the environment due to the low proposed Project CO_{2e} emission estimates, see Table 3.3-4. Therefore, since the total proposed Project CO_{2e} emission estimates would be well below the CARB thresholds, potential GHG emission impacts would be considered less than significant.

Table 3.8-1 CalEEMod Predicted CO_{2e} Emissions Estimates

Total Construction Source CO _{2e} Emission Estimates (metric tons/year unmitigated)	333
CARB CO_{2e} GHG Screening Threshold (metric tons/year)	7,000

The primary sources of proposed Project-related GHG emissions are anticipated to be combustion of fossil fuels from the operation of internal combustion engines used during proposed Project construction (portable equipment, off road equipment, and vehicles). CO_{2e} emissions during proposed Project operation are expected to be low to nil. Operations emissions would be similar to existing operations and would not result in a substantial amount of GHG emissions.

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

Finding: Less than Significant



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The proposed Project would not generate additional GHG emissions that would conflict with an applicable plan, policy or regulation for the purposes of reducing the emissions of GHG. Total CO_{2e} levels predicted to be emitted from construction totaled 333 metric tons/year. This CO_{2e} estimate is well below the CARB Screening Threshold of 7,000 metric tons of CO_{2e} per year. Therefore, with the total proposed Project CO_{2e} emission estimates well below the CARB CO_{2e} thresholds, potential GHG emission impacts would be considered less than significant.

3.8.4 Mitigation Measures

No mitigation is required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

3.9.1 Regulatory Setting

A hazardous material is defined by the California Environmental Protection Agency (CalEPA) and the Department of Toxic Substances Control (DTSC) as a material that poses a significant present or potential hazard to human health and safety or the environment if released because of its quantity, concentration, or physical or chemical characteristics (26 California Code of Regulations 25501). For the purposes of this analysis, hazardous materials include raw materials and material remaining on-site as a result of past activities. Applicable regulations and policies considered relevant to the proposed Project are summarized below.

Federal

The principal federal regulatory agency responsible for the safe use and handling of hazardous materials is the USEPA. Two key federal regulations pertaining to hazardous wastes are described below. Other applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the Code of Federal Regulations.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act enables the USEPA to administer a regulatory program that extends from the manufacture of hazardous materials to their disposal, thus regulating the generation, transport, treatment, storage, and disposal of hazardous waste at all facilities and sites in the nation (USEPA 2017a).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, was passed to facilitate the cleanup of the nation's toxic waste sites. In 1986, the Superfund was amended through the Superfund Amendment and Reauthorization Act Title III (community right-to-know laws). Title III states that past and present owners of land contaminated with hazardous



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substances can be held liable for the entire cost of the cleanup, even if the material was dumped illegally when the property was under different ownership (USEPA 2017b).

State

California regulations are equal to, or more stringent than, federal regulations. The USEPA has granted the State of California primary oversight responsibility to administer and enforce hazardous waste management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human health and the environment. Several key laws pertaining to hazardous wastes are discussed below.

Hazardous Waste Control Act

The Hazardous Waste Control Act created the State hazardous waste management program, which is similar to, but more stringent than, the federal Resource Conservation and Recovery Act program. The act is implemented by regulations contained in Title 26 of the California Code of Regulations, which describes the following required aspects for the proper management of hazardous waste:

- Identification and classification;
- Generation and transport;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of them. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from the generator to the transporter to the ultimate disposal location.

Emergency Services Act

Under the Emergency Services Act, the State developed an emergency response plan to coordinate emergency services provided by Federal, State, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an important part of the plan, which is administered by the California Office of Emergency Services (OES). The office coordinates the responses of other agencies, including the USEPA, the California Highway Patrol, Regional Water Quality Control Boards, air quality management districts, and county disaster response offices (California Legislative Information 2015).

Other Laws, Regulations, and Programs

Various other State regulations have been enacted that affect hazardous waste management, including:

- Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), which requires labeling of a substance known or suspected by the State to cause cancer; and



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- California Government Code Section 65962.5, which requires the Office of Permit Assistance to compile a list of possible contaminate sites in the State.

State and Federal regulations also require that hazardous materials sites be identified and listed in public records. These lists are:

- Comprehensive Environmental Response, Compensation, and Liability Information System;
- National Priorities List for Uncontrolled Hazardous Waste Sites;
- Resource Conservation and Recovery Act;
- California Superfund List of Active Annual Workplan Sites; and
- Lists of State-registered underground and leaking underground storage tanks.

Local

City of Sonora General Plan 2020

The following goals from the Safety Element related to hazards and hazardous materials are relevant to the proposed Project (City of Sonora 2007). Those goals and policies that directly pertain to the proposed Project are discussed in the impact analysis below.

- **Goal 6.C** Protect persons and property from the hazards of urban and wildland fires.
- **Goal 6.F.** Protect people and property from risks associated with the use, transport, treatment and disposal of hazardous materials and wastes.

Emergency Operations Plan

The City of Sonora adopted an Emergency Operations Plan (EOP) in 1990 in order to provide guidance and producers to follow in the event of an emergency within the City of Sonora. The City of Sonora is also a part of the Tuolumne County Operational Area Emergency Services Plan which includes emergency plans for the whole county. Highway 120, 49, and SR 108 are the major transportation routes in Tuolumne county and would likely be used in the event of an emergency (Tuolumne County 2012).

3.9.2 Environmental Setting

No schools exist within one-quarter mile of the proposed Project area and the proposed Project area is not included on any list of hazardous materials sites (DTSC 2018, SWRCB 2018). Additionally, there are no public or private use airports within 2 miles of the proposed Project area.

The proposed Project area also falls within a Local Responsibility Area (LRA) and California Department of Forestry and Fire Protection (Cal Fire) places the entire area into a very high fire hazard severity zone (Cal Fire 2008). Fire protection in this area is primarily provided through the joint effort of the City of Sonora Fire Department, Tuolumne County Fire Department, and Cal Fire. Additionally, emergency access through the City of Sonora would likely include Highway 49 and SR 108.



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3.9.3 Impact Analysis

IX. HAZARDS AND HAZARDOUS MATERIALS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

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

Finding: Less than Significant



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Temporary construction activities associated with the proposed Project would involve the transport and use of limited quantities of miscellaneous hazardous substances including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. These chemicals would be brought to the proposed Project area, as well as transported along the roadways. Federal and State laws regulate the handling, storage, and transport of these and other hazardous materials, as well as the mechanisms to respond and clean up any spills along local and regional roadways. Chemicals present on site or used for the proposed Project would be handled in accordance with applicable Federal, State, and local regulations (including those laws mentioned in the regulatory setting above) for hazardous substances. Therefore, the potential for impacts related to hazardous materials transport, use, or disposal would be considered less than significant.

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

Finding: Less than Significant with Mitigation Incorporated

Temporary construction activities associated with the proposed Project would involve the transport and use of limited quantities of hazardous materials including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. Chemicals present on site during proposed Project construction would be handled by the contractor in accordance with applicable Federal, State, and local regulations for hazardous substances, and any spills would be immediately cleaned up and disposed of in the appropriate manner. The proposed Project area is not listed by any Federal or State database that identifies known hazardous materials sites (DTSC 2018, SWRCB 2018). To ensure hazardous materials are not released into the environment during construction, MM HAZ-1 would be implemented and involves the development and implementation of a Spill Prevention Control and Countermeasure Plan reducing the potential for a spill to create a significant hazard to the public or environment by quickly and efficiently having materials on-site to treat and clean up any potential spill. Therefore, with the incorporation of MM HAZ-1 impacts would be reduced to a less than significant level.

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

Finding: No Impact

The proposed Project is not expected to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The closest school to the proposed Project area is Cassina High School, located approximately 1.15 miles northeast of the proposed Project area. Therefore, no impacts would occur.

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

Finding: No Impact



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A review of the DTSC and SWRCB hazardous materials sites databases did not identify the proposed Project area as a known hazardous materials site (DTSC 2018, SWRCB 2018). The SRWWTF has one case closed leaking underground storage site, however this site was designated as case closed on November 24, 2015 and would not have an impact to the proposed Project. Therefore, no impacts would occur.

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?

Finding: No Impact

The proposed Project is not located within an airport land use plan, or within two miles of a public or private airport. The nearest airport to the proposed Project area is the Columbia Airport which is located approximately 4.5 miles to the north of the proposed Project area in Columbia, California. The proposed Project involves improvements to the existing wastewater treatment facility and will not result in a safety hazard or excessive noise for people residing or working in the project area and no impact would occur.

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

Finding: Less than Significant

The proposed Project would not result in any physical features that would impair implementation of, or physically interfere with, emergency evacuations. Additionally, access for all fire and police emergency response vehicles would be maintained on SR 108, and Highway 49 throughout the construction period. The proposed Project improvements would occur within the existing footprint of the SRWWTF resulting in small amounts of construction traffic to the proposed Project area, however, this would be temporary and would not result in a significant impact to emergency services. Therefore, potential impacts to emergency, fire, and police response would be less than significant.

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

Finding: Less than Significant with Mitigation Incorporated

Although the proposed Project area (SRWWTF) has minimal vegetation, it is surrounded by vegetation, trees, and shrubs, in an oak woodland and chaparral setting where the risk of fire is high. Equipment used during construction activities may generate sparks that could ignite dry vegetation on or adjacent to the construction area and cause wildland fires in the area. The nearest fire station to the proposed Project area is approximately one mile to the north of the proposed Project area at the Sonora Fire Department, which is located at 201 South Shepherd Street, Sonora, California 95370. While the risk is minimal, to further reduce the risk of fire, MM HAZ-2, Fire Suppression and Control, would be incorporated into the proposed Project. This mitigation measure includes roles and responsibilities in the event of a fire, specific equipment to prevent and control fires, and coordination with the fire chief and/or the City of



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Sonora on specific fire suppression actions to be taken. This would reduce the potential for a fire that could be caused by sparks from construction activities by taking precautions outlined in MM HAZ-2, thus reducing the impact to a less than significant level. Therefore, the potential impact would be considered less than significant with MM HAZ-2 incorporated.

3.9.4 Mitigation Measures

Mitigation Measure HAZ-1: Develop or use current Spill Prevention Control and Countermeasure Plan

The District, or its contractor shall develop and implement a Spill Prevention Control and Countermeasure Plan (SPCCP) in accordance with Federal and State requirements to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The SPCCP shall include the following measures:

- Materials shall be stored in appropriate containers and contents labeled;
- Material volume shall be restricted to the volume that can be addressed by available spill kits and supplies;
- Used containers shall be disposed of at an appropriate landfill or other legal disposal or recycling facility;
- Bulk storage tanks shall have secondary containment systems. Secondary containment shall be at least 110 percent of storage tank capacity or more if the area is uncovered to account for storm events;
- Spill cleanup shall occur immediately, and notification shall be given to the California Department of Fish and Wildlife, USFWS, RWQCB;
- Workers shall be trained to properly handle hazardous materials, cleanup spills, and report spills. Construction workers shall be trained to identify indicators of contaminated soils such as soil discoloration, odors, differences in soil properties, and buried debris. Construction workers shall be trained to be aware of proper handling techniques and appropriate responses and actions to be taken if hazardous materials are accidentally released, with special emphasis on those hazardous materials with the greatest potential to occur at the proposed Project area;
- Soils contaminated with fuels or chemicals shall be disposed of in a suitable location to prevent discharge to surface waters and in accordance with the rules and regulations of the U.S. Department of Transportation, the USEPA, the RWQCB, and other agencies including but not limited to CalEPA;
- Excess or unused quantities of hazardous materials shall be removed upon proposed Project completion. Although hazardous waste generation is not anticipated, any such wastes produced during construction shall be properly containerized, labeled, and transported to an approved hazardous waste disposal facility; and



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- All nonhazardous waste materials including construction refuse, garbage, and sanitary waste, shall be disposed of by removal from the work area to an approved disposal facility. All nonhazardous waste containers shall be covered when not in use and/or at the end of each shift or before a rain event.

A fueling plan shall be prepared separately or as a part of the SPCCP. The fueling plan shall include the following measures:

- Vehicles shall be monitored for fluid leaks and shall be maintained regularly to reduce the chance of leakage. If any leaks are detected, the vehicle shall be taken to a special paved area designated for vehicle repair and equipped with management controls for leaked materials or if it cannot be repaired removed from service and site and obtain replacement;
- Vehicles refueling shall only occur on flat level ground where there is little chance of a spilled substance reaching a stream or waterway over an impermeable surface. A spill kit shall be available as appropriate for the activity;
- Refueling and vehicle maintenance shall be performed at least 100 feet from receiving waters;
- All fueling materials shall be properly labeled; and
- Oil, antifreeze, solvents, and other materials related to equipment maintenance shall be disposed of or recycled appropriately offsite. If these materials have to be stored before disposal/recycling, they shall be stored in covered areas in containers with 110 percent capacity with berms and lined with impermeable material to contain any spills. The impermeable material should be maintained free of holes, etc. that would permit leaks to contact the ground surface or otherwise leave the containment area.

The District shall review and approve the SPCCP before onset of construction activities. The District shall routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The District shall notify its contractors immediately if there is a noncompliance issue and shall require compliance.

The Federal reportable spill quantity for petroleum products, as defined in the EPA's CFR (40 CFR 110) is any oil spill that (1) violates applicable water quality standards, (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.

If a spill is reportable, the District or the contractor would take action to contact the appropriate safety and clean-up crews to ensure the SPCCP is followed. A written description of reportable releases must be submitted to the RWQCB. The submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases would be documented on a spill report form.



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Mitigation Measure HAZ-1 Implementation

Responsible Party: The District or its contractor shall develop and implement a SPCCP to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors.

Timing: The SPCCP shall be implemented prior to and during all phases of construction.

Monitoring and Reporting: Evaluation of SPCCP shall be conducted by the District. Reports on the SPCCP implementation shall be documented by the District and kept on file.

Standard of Success: Minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities in accordance with the requirements of this measure as well as State and Federal laws.

Mitigation Measure HAZ-2: Fire Suppression and Control

The District shall require the selected construction contractor to coordinate with the local fire chief and the City of Sonora to ensure fire control measures are in place to reduce the risk of fires during the proposed Project. The fire prevention and control measures shall include requirements for onsite extinguishers; roles and responsibilities of the District, and the contractor including what to do in the event of a fire; fire suppression equipment and critical fire prevention and suppression items, and any other items or awareness measures recommended by the fire chief and/or the City of Sonora.

Mitigation Measure HAZ-2 Implementation

Responsible Party: The District's contractor shall coordinate with the local fire chief and the City of Sonora to ensure fire control measures including but not limited to fire suppression and management measures are in place and on site and readily accessible during construction in the event of an unintended fire.

Timing: Coordination with the local fire chief and the City of Sonora shall take place prior to construction and implementation of fire suppression and control measures shall be implemented during all phases of construction.

Monitoring and Reporting: Evaluation of the fire suppression and control measures shall be conducted by the District. The District inspector or other District personnel shall verify that coordination with the fire chief and the City of Sonora took place and that proper responsibilities and fire suppression and control equipment/items are available on-site during construction. Documentation shall be kept on file at District offices.

Standard of Success: Preparedness for and minimization of the start and spread of wildfire during construction activities for all contractors.



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3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Regulatory Setting

Federal

Clean Water Act

The CWA (33 U.S.C. Section 1251 et seq.), formerly the Federal Water Pollution Control Act of 1972, was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. National Flood Insurance Act.

The Federal Emergency Management Agency (FEMA) is responsible for managing the National Flood Insurance Program (NFIP), which makes federally backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage.

The NFIP, established in 1968 under the National Flood Insurance Act, requires that participating communities adopt certain minimum floodplain management standards, including restrictions on new development in designated floodways, a requirement that new structures in the 100-year flood zone be elevated to or above the 100-year flood level (known as base flood elevation). To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps (FIRMs) that can be used for planning purposes, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements.

State

Porter Cologne Water Quality Control Act

The State of California established the SWRCB, which oversees the nine RWQCBs, through the Porter-Cologne Act. Through the enforcement of the Porter Cologne Act, the SWRCB determines the beneficial uses of the waters (surface and groundwater) of the State, establishes narrative and/or numerical water quality standards, and initiates policies relating to water quality. The SWRCB and, more specifically, the RWQCB, is authorized to prescribe WDRs for the discharge of waste, which may impact waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by Porter-Cologne Act to protect water quality.

The SWRCB issues both General Construction Permits and individual permits under the provisions of the federal National Pollutant Discharge Elimination System (NPDES) program. Projects disturbing more than one acre of land during construction are required to file a Notice of Intent (NOI) with the SWRCB to be covered under the State NPDES General Construction Permit for discharges of storm water associated with construction activity. Construction activities that are subject to this General Permit includes clearing, grading, disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre of total land area. The District must implement control measures that are consistent with



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the State General Permit. A SWPPP must be developed and implemented for each site covered by the General Permit. A SWPPP describes BMPs the discharger will use to protect storm water runoff and reduce potential impacts to surface water quality through the construction period. The SWPPP must contain the following: 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 (SWRCB 2018).

Local

Tuolumne County Ordinance Code

Title 15 Buildings and Construction - Chapter 15.24 Flood Damage Prevention

This ordinance designates FEMA Zone A areas as, “special flood hazard areas” and requires a permit before building. The ordinance requirements are overseen by the County’s Floodplain Administrator who is located in the Community Development Department. The permit is issued after the Conditional Letter of Map Revision/ Letter of Map Revision (CLOMR/LOMR) process is completed and approved by FEMA.

City of Sonora General Plan 2020

The following goal and policies from the Conservation and Open Space Element related to hydrology and water quality are relevant to the proposed Project and are discussed in the impact analysis below (City of Sonora 2007).

- **Goal 4.E:** Conserve the quality and quantity of the city’s and county’s water resources.
- **Policy 4.E.1** Reduce non-point source pollution from urban, residential and other land uses.
- **Policy 4.E.2** Reduce erosion and sedimentation in water ways.
- **Policy 4.E.3** Maintain and enhance the water quality of Sonora Creek, Woods Creek and Dragoon Gulch.
- **Policy 4.E.6** Support efforts to increase Tuolumne Utilities District’s (District) water supply.
- **Policy 4.E.7** Support efforts to improve the capacity of the city’s and county’s sewage treatment facilities.

3.10.2 Environmental Setting

Tuolumne County contains an abundance of water resources including surface water resources, such as rivers, streams, and lakes, as well as groundwater reserves. The proposed Project area (Hydrologic Unit Code [HUC] 18040009) is in the Sierra Nevada Foothills approximately five miles east of New Melones Lake. The hydrology in this region is on the north edge of the Upper Tuolumne Watershed. The Upper Tuolumne watershed is 1,900 square miles.



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Generally, the drainage from the proposed Project area flows southwest into drainages flowing into Woods Creek. Woods Creek flows southwest through the community of Sonora, ultimately flowing into the Don Pedro Reservoir. The proposed Project will provide additional compliance security in the form of improved effluent quality. Other concerns such as flooding, odors, and the degradation or pollution of localized surface waters and shallow groundwater will also be alleviated by the proposed Project as described in the Impacts Analysis section.

3.10.3 Impact Analysis

X. HYDROLOGY AND WATER QUALITY Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
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 erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or 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.	☐	☒	☐	☐
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?	☐	☒	☐	☐



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

Finding: Less than Significant with Mitigation Incorporated

There is a potential for pollutants to enter the Upper Tuolumne Watershed during project construction. Activities related to the construction of the proposed Project would create the potential for soil erosion and possibly increase sedimentation, both onsite and downstream of the proposed Project area. Construction activities also increase the potential for accidental release of pollutants that could affect not only surface waters, but the beneficial uses associated with them. Such pollutants include oil and gas from machinery, chemicals associated with construction, and waste material. Many construction-related pollutants have the potential to degrade water quality by increasing constituent levels in surface waters and could lead to an exceedance of water quality standards. Proposed construction activities could violate these standards if mitigation measures are not implemented and could cause harm to surrounding habitats and their associated plant and animal life. Construction would require special consideration to prevent significant impacts to the surface waters, especially in the vicinity of Woods Creek.

Grading and the removal of vegetation during proposed Project construction could expose site soils to rain, sheet flows, and potential erosion prior to successful revegetation or completion of improvements. The potential for erosion hazards within the proposed Project area is low, however, sections of the proposed Project may exist in areas with sloping topography, which create the potential for erosion to occur during earth-disturbing construction activities. Rainfall and associated stormwater runoff could result in periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials could cause sedimentation and blockage of drainage channels. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion. Stormwater runoff could also wash construction materials into receiving water bodies that discharge outside of the proposed Project area and could negatively affect water quality. Non-stormwater discharges could result from activities such as discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials.

Because implementation of the proposed Project could result in the introduction of sediment and other non-point source pollutants into onsite drainage channels and ultimately offsite drainage channels as a result of temporary construction activities, short-term, construction-related water quality degradation would be considered a significant impact. In compliance with the requirements of the State General Construction Activity Stormwater Permit, coverage under the current Construction General Permit (2009-0009-DWQ) would be obtained as detailed in MM GEO-1 which includes sedimentation and erosion control measures. The General Permit requires the District and/or its contractor to develop and implement a SWPPP. These mitigation measures would include BMPs to prevent sediment from leaving the site and ensure that water quality standards are achieved, and thus reduce any impacts to a less than significant level.

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



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Finding: Less than Significant

The proposed Project construction would not deplete groundwater supplies as neither the construction activities nor ongoing operation of the proposed Project would use groundwater. No new wells that could place additional water supply demands on the local aquifer are proposed as part of the proposed Project. It is expected that water demands needed to operate the increased inflow to the existing SRWWTF would be similar to existing conditions and would not place additional stress on the local groundwater table. Thus, the proposed Project's impacts to groundwater resources would be considered less than significant.

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

- i) result in substantial erosion or siltation on- or off-site;**
- ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or 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.**

Finding: Less than Significant with Mitigation Incorporated

Construction of the proposed Project would involve grading, trenching, and other earth movement that would result in soil disturbance that could alter drainage patterns and flood channel conveyance capacity, and increase hazard of erosion and sedimentation. The District would go through the required County Ordinance 15.24 permit process which includes going through the required FEMA CLOMR/LOMR process prior to issuance of a permit to ensure no on- or offsite flooding.

The proposed Project would not significantly increase impervious areas or generate increased stormwater flows. Implementation of MM GEO-1 and MM HYDRO-1 would minimize the potential for the proposed Project to substantially alter the existing drainage pattern of the site or area, reducing impacts to less than significant with mitigation incorporated.

The construction of the proposed Project could temporarily alter drainage patterns during grading activities; however, all disturbed areas will be restored to pre-existing conditions to the extent feasible. MM GEO-1 would minimize the potential to alter the existing drainage pattern while soils are exposed during trenching and grading. The construction of the SRWWTF improvements would permanently alter the drainage pattern of the site; however, drainage around the new structures would tie-in to the existing stormwater drainage system and therefore would not impact surface runoff. Therefore, the potential for the proposed Project to substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site is considered less than significant with mitigation incorporated.

The proposed Project's construction activities and associated runoff would take place within the proposed Project area and any runoff would be contained within the SRWWTF boundaries. Accordingly, the



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proposed Project would not contribute to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. If spills were to occur, MM HAZ-1 for spill prevention and containment would be implemented to minimize the potential for polluted runoff reducing impacts to less than significant with mitigation incorporated.

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

Finding: Less Than Significant

According to the FEMA Flood Insurance Rate Map (FEMA 2009), the western portion of the existing SRWWTF (existing treatment ponds) is located in an area designated as Zone A by the FEMA, which are areas subject to the 1% annual chance flood (100-year flood), with an undetermined base flood elevation (BFE). The eastern portion of the SRWWTF is located in an area designated as Zone X by the FEMA, which are areas determined to be outside the 500-year floodplain. Portions of the proposed Project include construction within Zone A, which is currently developed and consists of existing treatment ponds. The TUD will comply with all local, state, and federal regulations to avoid release of pollutants due to Project inundation. More specifically, the District would go through the required County Ordinance 15.24 permit process which includes going through the required FEMA CLOMR/LOMR process prior to issuance of a permit to ensure no on- or offsite flooding. The proposed Project's construction activities and associated runoff would take place within the proposed Project area and any runoff would be contained within the SRWWTF boundaries. Accordingly, the proposed Project would not contribute to runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. If spills were to occur, MM HAZ-1 for spill prevention and containment would be implemented to minimize the potential for polluted runoff reducing impacts to less than significant with mitigation incorporated.

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

Finding: Less than Significant with Mitigation

The proposed Project would not conflict with or obstruct implementation of a water quality control plan. In compliance with the requirements of the State General Construction Activity Stormwater Permit, coverage under the current Construction General Permit (2009-0009-DWQ) would be obtained as detailed in MM GEO-1 which includes sedimentation and erosion control measures. The General Permit requires the District and/or its contractor to develop and implement a SWPPP. These mitigation measures would include BMPs to prevent sediment from leaving the site and ensure that water quality standards are achieved, and thus reduce any impacts to a less than significant level. The proposed Project construction would not deplete groundwater supplies and would not obstruct sustainable groundwater management plan. The proposed Project construction and operation would not use groundwater. Thus, the proposed Project's impacts to groundwater resources would be considered less than significant. Impacts are considered less than significant with mitigation.



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3.10.4 Mitigation Measures

Mitigation Measure GEO-1: Sedimentation and Erosion Control Measures

See MM GEO-1, Section 3.7

Mitigation Measure HAZ-1: Develop or use current Spill Prevention Control and Countermeasure Plan

See MM HAZ-1, Section 3.9

3.11 LAND USE AND PLANNING

3.11.1 Regulatory Settings

There are no Federal or State requirements related to land use that are applicable to the proposed Project.

Local

City of Sonora General Plan 2020

The following goal and policies from the Land Use Element related to land use and planning are relevant to the proposed Project and discussed in the impact analysis below (City of Sonora 2007).

- **Goal 1.F** Provide for a wide variety of services, while protecting industrial development from incompatible uses.
- **Policy 1.F.2** Minimize the visibility of industrial areas from public transportation routes.
- **Policy 1.F.3.** Enhance the appearance of existing industrial establishments with extensive outdoor storage visible from public transportation routes.

Additionally, the General Plan Land Use designation for the proposed Project area consists of P and LM lands.

City of Sonora Zoning Ordinance

The proposed Project area is zoned as ML and according to the City of Sonora Zoning Ordinance for this designation:

“The ML zone is created in order to allow for workshops and other places of hobby, employment, and manufacturing which may create noise, odors, or other nuisances which would be detrimental to residential or business environments or to the historic character of the established portions of the city preexisting” (City of Sonora Zoning Ordinance 1967).



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Permitted uses within ML zoning designation includes any use that is permitted in other zoning districts except residential. Additionally, the maximum building height allowable in ML zoned areas is 35 feet.

3.11.2 Environmental Setting

The proposed Project has taken City of Sonora General Plan and Zoning goals, objectives, and regulations into consideration during the planning stages. The proposed Project would be located on land owned by the District.

The General Plan designated land use for the proposed Project area is partially P and LM lands. The P land use designation is intended for agencies which serve as their own Lead Agency when conducting environmental reviews, such as the District. The LM land use designation is intended for areas where manufacturing, processing, assembly, storage, distribution, and other business which may require outdoor storage (City of Sonora 2007).

The zoning designation for the proposed Project area is ML. According to the City of Sonora Zoning Ordinance, a wastewater treatment plant would be considered an acceptable use as long as no air or water pollution would occur, no billboards or other advertising signs are placed on the premises, and the maximum building height of any buildings located on the property does not exceed 35 feet (City of Sonora Zoning Ordinance 1967).

3.11.3 Impact Analysis

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

a) Would the Project physically divide an established community?

Finding: No Impact

The proposed project would involve improvements to the existing SRWWTF which would not physically divide an established community. There are no residences located on or immediately adjacent to the SRWWTF and the area is currently designated as P and LM lands under the City of Sonora General Plan with no incompatible development existing or planned for the area. Therefore, there would be no impact.



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

Finding: No Impact

The proposed Project would not conflict with any land use plans, policies, or regulations that are applicable to the proposed Project. No change in land use is proposed or required and none would result from the implementation of the proposed Project. The proposed Project area would continue to be designated as and would not conflict with the P and LM designation under the City of Sonora General Plan and the ML zoning designation under the City of Sonora Zoning Ordinance. The proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed Project. Therefore, there would be no impact.

3.11.4 Mitigation Measures

No mitigation is required.

3.12 MINERAL RESOURCES

3.12.1 Regulatory Setting

Federal

The Mining and Minerals Policy Act of 1970 (30 U.S.C 21(a))

The Mining and Minerals Policy Act of 1970 declared that it is in the national interest to foster and encourage private enterprise in the following ways:

- Development of economically sound and stable domestic mining and mineral related industries;
- Orderly and economic development of mineral resources to satisfy industrial, security, and environmental needs;
- Research to promote wise and efficient use of resources; and
- Research and development of mining and reclamation methods to lessen the impact of mining on the environment.

This act codified the importance of mining and mineral resources and recognized that public policy should evaluate these resources.



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State

Surface Mining and Reclamation Act (SMARA)

The State of California enacted the Surface Mining and Reclamation Act (SMARA) in 1975 in part to identify the location of and preserve access to significant mineral deposits. The State geologist is required by SMARA to prepare maps that identify Mineral Resource Zones (MRZ) including areas of presence or likely presence of significant mineral deposits, MRZ-2. Areas that may have mineral resources, but where the presence cannot be determined from available information are also identified as MRZ-3. Additionally, SMARA requires local governments to evaluate the presence of mineral resources in their General Plans and when making land use decisions.

Local

City of Sonora General Plan 2020

The following policies from the Conservation and Open Space Element related to mineral resources are relevant to the proposed Project (City of Sonora 2007). Those goals and policies that directly pertain to the proposed Project are discussed in the impact analysis below.

- **Policy 4.A.1** Identify significant mineral resource lands as designated by the State Geologist and the State Mining and Geology Board.
- **Policy 4.A.4** Protect mineral resources located in the county from future encroachment by city land uses and from conflicts with existing city land uses.

3.12.2 Environmental Setting

Mineral resources are generally finite and occur in sporadic deposits, which often create a relative scarcity and a need to protect access to supplies. Many mineral resources are important to global, National, State, and local economies. In 2015, California had approximately 717 active mines responsible for approximately 4.2 percent of the U.S. non-fuel mineral production (California Geological Survey 2015). The largest component of this production was derived from sand and gravel mining. The mineralogy of Tuolumne County has played an important historical role in local, regional, State, and National economics. According to the City of Sonora General Plan, those areas designated as MRZ-2 by the State Mining and Geology Board within the city limits which already have existing structures have not been designated as mineral reserve zones on the *Sonora General Plan 2020* land use maps because the mineral reserves as described in DMG Open-File Report 97-09 *Mineral Land Classification of a Portion of Tuolumne County, California for Precious Metals, Carbonate Rock, and Concrete-Grade Aggregate*, are no longer available because of encroachment by development (City of Sonora 2007). The proposed Project area is not located as a designated Mineral Rights land use area and there are no Mineral Rights land use areas directly surrounding the proposed Project area.



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3.12.3 Impact Analysis

XII. MINERAL RESOURCES Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist 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?	☐	☐	☐	☒

a) Would the Project result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the State?

Finding: No Impact

The proposed Project are does not fall within an area classified as MRZ-2 according to the Sonora General Plan (2007). The area to the northwest of the proposed Project area is classified as both MRZ-2b, however the proposed Project does not fall within these zones (CDC 1997; City of Sonora 2007). Therefore, the proposed Project would not result in the loss of availability of a known mineral resource classified MRZ-2 and therefore, no impact would occur.

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

Finding: No Impact

The proposed Project would not 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. According to the Sonora General Plan (2007), the proposed Project area is not located within or near an area of known important mineral resources. Therefore, no impact would occur.

3.12.4 Mitigation Measures

No mitigation is required.



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3.13 NOISE

3.13.1 Regulatory Setting

Federal

The federal Occupational Safety and Health Administration (OSHA) defines potentially harmful noise exposure (the level at which hearing loss may occur from long-term exposure) as exposure to greater than 90 decibels (dBA) averaged over eight hours. For noise greater than 90 dBA, the allowable exposure time is correspondingly shorter.

State

The State government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. Local general plans identify principles intended to guide and influence development plans.

The State of California General Plan Guidelines (Governor's OPR 2017) establishes guidelines for the preparation of local general plan noise elements, including a sound level/land use compatibility chart that categorizes, by land use, outdoor day-night average noise level (Ldn) ranges in four categories (normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable). For many land uses, the chart shows overlapping Ldn ranges for two or more compatibility categories.

The noise element guidelines identify the normally acceptable range of Ldn values for low-density residential uses as less than 60 decibels (dBA) and the conditionally acceptable range as 55–70 dBA. These overlapping Ldn ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations. When noise levels are in the conditionally acceptable range, new construction should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation requirements are included in the design.

Local

City of Sonora General Plan 2020

The following goal and policy from the Noise Element related to noise are relevant to the proposed Project and discussed in the impact analysis below (City of Sonora 2007).

- **Goal 5.A.** Maintain or reduce noise levels throughout the city as necessary to achieve noise compatibility between residential, commercial, public facility, and other surrounding land uses.
- **Policy 5.A.1.** Prevent the introduction of new noise-producing uses in noise-sensitive areas.



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The City of Sonora General Plan has a summary of the exterior ambient community noise exposure levels (CNELs) which is shown in Table 3.12-1 below. The proposed Project is within a utilities land use category.

Table 3.13-1 Exterior Community Noise Exposure for Industrial, Manufacturing, Utilities, and Agriculture

Land Use Category	50-55	55-60	60-65	65-70	70-75	75-80	80-85
Industrial, Manufacturing, Utilities, Agriculture							
KEY:							
	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements						
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.						
	Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						

(City of Sonora 2017)

3.13.2 Environmental Setting

Noise is commonly defined as unwanted sound in the environment. This definition reflects a subjective reaction to the characteristics of the physical phenomenon of noise. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Although elevated noise levels can result in physiological damage and hearing loss, excessive noise in the environment more commonly impairs general human well-being by contributing to psychological stress and irritation. Such health effects can result when noise interferes with everyday human activities such as sleep, talking, recreation, relaxation, and tasks requiring concentration. When noise is either disturbing or annoying, whether by its pitch or loudness, it may be considered objectionable.

The overall noise level associated with a given noise environment is called the “ambient” noise level. Ambient noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, trains, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Other contributing noise sources, often referred to as “background” sources, can include the sound of birds, people talking, occasional vehicles passing by, or televisions and radios.

Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in dBA. Environmental sound levels are usually measured in A-weighted



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decibels, or dBA, which is a method of taking into account the sensitivity of the human ear to various frequencies in the sound spectrum. In general, a difference of three decibels is barely perceptible to the human ear, while a difference of 10 decibels is perceived as a doubling of loudness. A common statistical tool used to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which is the sound level corresponding to a steady-state, A-weighted sound level containing the same total energy as a time-varying signal over a given period (usually one hour).

Factors that affect the transmission of noise between the noise source and the receptor include:

- Line of sight: Barriers, such as topography, sound walls and other structures, between a noise source and recipient can provide varying degrees of noise attenuation, particularly when placed near the noise source; and
- Distance: A reduction in noise level of roughly 6 dBA occurs with each doubling of distance from a noise source, depending on the hardness of intervening surfaces.

The existing noise environment in the vicinity of the proposed Project area is created by a mixture of industrial, residential, agricultural, and rural use. Manmade noise within the area is characterized by traffic traveling on SR 108, Highway 49, and local roads on the north and east sides of the proposed Project area. The nearest sensitive receptors include two residences approximately 0.11 and 0.13 miles just northeast of the proposed Project as well as a few scattered residences across SR 108 to the south of the proposed Project area. Trees and the gently sloping topography of the region block much of the views and sounds of the SRWWTF, however it is likely that the two closest residences can hear the existing operations at the SRWWTF. Additionally, passing motorists along SR 108 briefly pass by the SRWWTF, however, due to their relative speeds, they would not be affected by the noises at the SRWWTF.

3.13.3 Impact Analysis

XIII. NOISE Would the Project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐



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XIII. NOISE Would the Project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
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 of public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

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

Finding: Less than Significant

The construction of the proposed Project would entail the use of typical construction equipment including but not limited to a backhoe, dump truck, excavators, etc. for approximately 18–24 months. Noise impacts associated with the proposed Project construction would result in temporary or periodic increases in ambient noise levels. Construction noise would result from operation of machinery and equipment used in the construction process. Currently, the City of Sonora does not have an adopted noise ordinance, however, the City of Sonora General Plan goals and policies stated above would apply to the proposed Project.

Noise from construction typically attenuates at a rate of 6 dBA per doubling of distance. Additional attenuation of approximately 1-2 dBA per doubling of distance also occurs where the ground is acoustically absorptive, where vegetation covers the ground. Assuming a nominal worst-case construction noise-level of 88 dBA at 50 feet for several pieces of equipment operating simultaneously, construction noise can be expected to be as high as the following levels at 50 feet from the construction activity (Table 3.12-2):

Although there are two residences within earshot of the SRWWTF, they would likely be unaffected or minimally affected by the construction-related noise levels at the SRWWTF because these noise levels would be similar to the current operations of the SRWWTF. Additionally, these residences are partially blocked by vegetation and the gently sloping topography of the area which would further reduce construction related noise. Operational noise resulting from the proposed Project includes blowers located in the south part of Building A. However, the blowers will be sound attenuated and therefore, the noise level at the property line will be comparable to that of current operations at the SRWWTF. Thus, the proposed Project would not cause a substantial change to the noise levels in the area or conflict with the goals and policies of the City of Sonora General Plan. Therefore, the potential for the proposed Project to result in exposure of persons to or generation of noise levels in excess of standards established in the



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local general plan or noise ordinance, or applicable standards of other agencies, would be considered less than significant.

Table 3.12-2 FTA Construction Equipment Noise Emission Levels.

Equipment	Typical Noise Level (dBA) 50 ft from Source*
Air Compressor	81
Backhoe	80
Dozer	85
Generator	81
Grader	85
Jack Hammer	88
Loader	85
Pump	76
Truck	88

(FTA 2006)

b) Would the Project result in generation of excessive ground borne vibration or ground borne noise levels?

Finding: Less than Significant

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.12-3 summarizes the general threshold at which human annoyance could occur is noted as 0.1 in/sec peak particle velocity.

Table 3.12-3 Construction Equipment Related to Ground-borne Vibration

Type of Equipment	Peak Particle Velocity at 25 feet	Peak Particle Velocity at 50 feet	Peak Particle Velocity at 100 feet	Threshold at which Human Annoyance Could Occur	Potential for Proposed Project to Cause Human Annoyance
Large Bulldozer	0.089	0.031	0.011	0.1	None
Loaded Trucks	0.076	0.027	0.010	0.1	None
Small Bulldozer	0.003	0.001	0.000	0.1	None



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Type of Equipment	Peak Particle Velocity at 25 feet	Peak Particle Velocity at 50 feet	Peak Particle Velocity at 100 feet	Threshold at which Human Annoyance Could Occur	Potential for Proposed Project to Cause Human Annoyance
Jackhammer	0.035	0.012	0.004	0.1	None
Vibratory Compactor/roller	0.210	0.074	0.026	0.1	Slight

(FTA 2006)

Construction equipment used during the proposed Project such as loaded trucks, backhoe, mechanical compactors, and other equipment may generate localized ground-borne vibration or noise levels. Sensitive receptors in the area that have the potential to be affected by ground-borne construction include the two residences located approximately 0.11 and 0.13 miles northeast of the SRWWTF. Although these residences are located relatively close to the SRWWTF, they would be minimally affected, if at all, from any construction related vibration due to the varied topography of the surrounding areas. Additionally, the construction activities would be temporary, lasting approximately 18–24 months with sporadic use of construction equipment that could cause vibrations. Therefore, the potential for the proposed Project to result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels would be considered 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 of public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

Finding: No Impact

The proposed Project area is not located within an airport land use plan, or within two miles of a public airport. The nearest airport to the proposed Project area is the Columbia Airport which is located approximately 4.5 miles to the north of the proposed Project area in Columbia, California. The proposed Project would not expose sensitive receptors to excessive noise levels from airport/aircraft operations. Therefore, no impacts are anticipated.

3.13.4 Mitigation Measures

No mitigation is required.



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3.14 POPULATION AND HOUSING

3.14.1 Regulatory Setting

There are no applicable State or Federal regulations related to the proposed Project regarding Population and Housing.

Local

City of Sonora General Plan 2020

The following goal and policy from the Public Facilities & Services Element related to population and housing are relevant to the proposed Project and discussed in the impact analysis below (City of Sonora 2007).

- **Goal 7.A** Maintain the City of Sonora as the county's center for the provision of public services and facilities while sustaining levels of city-provided police, fire, administrative, and public works services and infrastructure.
- **Policy 7.A.6** Maintain a cooperative relationship with the Tuolumne Utilities District and continue to participate in planning efforts that involve the provision of water and sewer services to the city.

3.14.2 Environmental Setting

The proposed Project area is located in the City of Sonora which has a population of approximately 4,903 (USCB 2015). The City of Sonora is approximately 2.5 miles east of the City of Jamestown, California (population 3,433) and 3.5 miles south of the City of Columbia, California (population 2,297). Additionally, Tuolumne County as a whole has a population of approximately 55,365. Thus, the proposed Project area and the surrounding region is considered to be a rural setting with land uses consisting of mixed residential, agricultural, and open spaces (USCB 2016). The City of Sonora specifically, is a tourist destination with a historic downtown area with mostly mixed residential and commercial areas.

3.14.3 Impact Analysis

XIV. POPULATION AND HOUSING Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒



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XIV. POPULATION AND HOUSING Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

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

Finding: No Impact

Implementation of the proposed Project would not result in the construction of new homes or businesses. The proposed Project consist of improvements to the SRWWTF and the capacity of the facility would not be increased beyond current conditions. The improvements would allow the SRWWTF to meet current effluent quality requirements which would not have any effect of population growth either directly or indirectly. Therefore, there would be no impact.

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

Finding: No Impact

Implementation of the proposed Project would not displace any existing housing and would therefore not result in the necessity for the construction of replacement housing at an alternate location(s) because there are no people living within the proposed Project area and no housing or business would be constructed under the proposed Project. Therefore, no impact would result from project development.

3.14.4 Mitigation Measures

No mitigation is required.

3.15 PUBLIC SERVICES

3.15.1 Regulatory Setting

Federal

There are no Federal regulations that pertain to the proposed Project regarding public services.



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State

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8, Section 1270 Fire Prevention, and Section 6773 Fire Protection and Fire Equipment, the California OSHA has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hosing sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment (Cal OSHA 2017).

Local

City of Sonora General Plan 2020

The following goal and policy from the Public Facilities & Services Element related to public services are relevant to the proposed Project and discussed in the impact analysis below (City of Sonora 2007).

- **Goal 7.A.** Maintain the City of Sonora as the county's center for the provision of public services and facilities while sustaining levels of city-provided police, fire, administrative and public works services and infrastructure.
- **Policy 1.** Maintain a cooperative relationship with the Tuolumne Utilities District and continue to participate in planning efforts that involve the provision of water and sewer services to the city.

3.15.2 Environmental Setting

Public services are typically provided by fire districts, public utility districts, school districts, and other single purpose districts in addition to those provided by the City of Sonora and any State and Federal agencies.

Fire protection in the proposed Project area is provided through the joint effort of the City of Sonora Fire Department, Tuolumne County Fire Department, and Cal Fire. Police protection in the proposed Project area is under the jurisdiction of the City of Sonora Police Department. Additionally, there are no schools in the proposed Project area.

Fire Protection

The nearest fire station to the proposed Project area is approximately one mile away at the Sonora Fire Department, which is located at 201 South Shepherd Street, Sonora, California 95370. A joint effort between the City of Sonora Fire Department, Tuolumne County Fire Department, and Cal Fire would be responsible for any fire-related emergencies within the proposed Project area.



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Police Protection

The proposed Project area falls under the jurisdiction of the City of Sonora Police Department which has primary responsibility for police protection and public safety in the vicinity of the proposed Project area. Police backup is available from the Tuolumne County Sheriff's Office (28 Sunset Drive, Sonora 95370), and state highway traffic control and accident investigations are provided by the California Highway Patrol (18437 5th Ave, Jamestown, CA 95327). The nearest location of law enforcement services provided by the City of Sonora Police Department is located at 100 South Green Street, Sonora, California 95370 (approximately one mile north of the proposed Project area).

Schools

The City of Sonora is a part of the Sonora Unified High School District. The nearest school to the proposed Project area is Cassina High School which is located approximately 1.15 miles northeast of the Project area.

3.15.3 Impact Analysis

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



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a) **Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?**

Finding: No Impact

Fire protection and police services are not related to the proposed Project and there would be no increased demand for fire or police protection from the proposed Project. The construction activities would be temporary and within the existing SRWWTF and would not affect the existing fire or police protection needs in the region. Additionally, the proposed Project would not impact schools because there are no schools or bus routes near the proposed Project area. As discussed in the environmental setting of this section, the nearest school within to the proposed Project area is approximately 1.15 miles north and there are no residences in or immediately adjacent to the SRWWTF.

Furthermore, the proposed Project area is currently not open for public use and is not considered or intended to be a recreational area. The surrounding area of the SRWWTF is agricultural and commercial lands. There are no parks near the proposed Project area, nor would the proposed Project interfere or otherwise impact any local parks within the city. Therefore, no impact from the proposed Project related to fire protection, police protection, schools, parks, or any other governmental facilities would occur.

3.15.4 Mitigation Measures

No mitigation is required.

3.16 RECREATION

3.16.1 Regulatory Setting

Federal, State, and Local

The proposed Project does not propose improvements to or impact access to or use of any federally owned land. Therefore, there are no Federal regulations that apply to this project pertaining to recreation and recreational facilities. Additionally, there are no state or local policies related to the proposed Project regarding recreation.

3.16.2 Environmental Setting

The proposed Project area currently does not offer any public access for recreational purposes. The land surrounding the SRWWTF is zoned as agricultural and commercial lands with no current or planned parks or trails nearby (City of Sonora 2007). The nearest public park to the proposed Project area is the Woods



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Creek Rotary Park which is located approximately one mile north of the SRWWTF. Recreationalists in the vicinity of the proposed Project area could include bikers and hikers along public roadways.

3.16.3 Impact Analysis

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

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

Finding: No Impact

The proposed Project involves improvements to the existing SRWWTF and would not involve impacts the existing recreation in the area. Any nearby recreational users would be unlikely to hear or see the proposed construction activities and would not experience any substantial change to the existing recreational character of the area. Therefore, there would be no impact.

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

Finding: No Impact

The proposed Project involves improvements to the existing SRWWTF and would not involve impacts to existing recreation in the area. Recreationists would likely not be near the SRWWTF and would therefore not be impacted by either construction or operation of the proposed Project. Therefore, the proposed Project would not require the construction or expansion of recreational facilities and thus, there would be no impact.



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3.16.4 Mitigation Measures

No mitigation is required.

3.17 TRANSPORTATION AND TRAFFIC

3.17.1 Regulatory Setting

Federal

No federal transportation or traffic regulations would apply to the proposed Project.

State

California Department of Transportation

Caltrans manages interregional transportation, including the management and construction of the California highway system. In addition, Caltrans is responsible for the permitting and regulation of State roadways and requires that permits be obtained for transportation of oversized loads and transportation of certain materials, and for construction-related traffic disturbance.

Local

City of Sonora General Plan 2020

The following goal from the Circulation Element related to transportation and traffic are relevant to the proposed Project and discussed in the impact analysis below. (City of Sonora 2007)

- **Goal 2.A** Provide an integrated transportation system providing for the safe, efficient, and economic movement of goods and people which meets current and projected community needs.

Additionally, the General Plan has designated level of service (LOS) standards for the roadways within the city. Both local roadways and state highways and should have a LOS of C or better which means stable flow with speed and maneuverability restricted by higher traffic volumes, satisfactory operating speed in urban conditions, and possible delays at signals.

3.17.2 Environmental Setting

The proposed Project is located in the City of Sonora off of Southgate Drive. The closest major roadways are Highway 49 and SR 108. According to the City of Sonora General Plan, Highway 49 and SR 108 are the city's arterial roadways which are overseen by Caltrans while the remainder of the roadways in the city as well as throughout Tuolumne County are overseen by the Tuolumne County Transportation Council.



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The main roads on which the proposed Project construction equipment and truck trips would occur are Southgate Drive, Highway 49, and SR 108. While both Highway 49 and SR 108 are designated in the City of Sonora General Plan as arterial roadways, Southgate Drive would be considered a local roadway. Currently, Highway 49 nearest the proposed Project area is operating at a LOS of E with an average daily traffic flow (ADT) of 18,404 which is below the desired LOS. The city is in the process of creating a Streets and Highways Master Plan which would connect Southgate Drive from this portion of Highway 49 to SR 108, thus relieving traffic flows in this area (City of Sonora 2007).

3.17.3 Impact Analysis

XVII. TRANSPORTATION and TRAFFIC Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards 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?	☐	☐	☐	☒

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

Finding: Less than Significant

Construction employees and equipment resulting from construction of the proposed Project would use local roadways surrounding the proposed Project area (Southgate Drive, Highway 49, and SR 108) for the duration of construction. While haul trips would create a temporary and minimal increase of traffic on local roadways, it is not expected to conflict with any program, plan, ordinance, or policy related to addressing circulation and transit facilities since construction would occur during non-peak hours of traffic and proposed Project activities would be temporary lasting 18–24 months. The proposed Project would not result in a substantial increase in traffic relative to the capacity of the street system. Therefore, the impact would be less than significant.



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After the proposed Project is completed, the operation of the SRWWTF would not create an increase in traffic or conflict with established plans, policies, or standards related to motorized or non-motorized travel. Employees would continue to commute to the SRWWTF similar to current conditions and would not create additional traffic beyond what currently exists. Therefore, the proposed Project would have a less than significant impact on applicable plans, ordinances, or policies related to the circulation system in the City of Sonora.

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

Finding: Less than Significant

The proposed Project would use the nearby roadways (Southgate Drive, Highway 49, and SR 108) and proposed Project footprint for access to and from the proposed Project area. According to the City of Sonora General Plan, the most significant traffic increases occur on State Highways such as Highway 49 and SR 108. The LOS for Highway 49 and SR 108 is designated as "C", however the majority of Highway 49 and a portion of SR 108 are currently operating at a LOS of D and E. Although the LOS provides a general indication of the capacity of a roadway, the actual volume of traffic that can be accommodated at each LOS depends on several factors. As a local roadway, Southgate Drive is not near the core of the downtown area of the City of Sonora. The minimal temporary increase in proposed Project traffic, including construction employees and vehicles to and from the SRWWTF would not be expected to result in a substantial increase in traffic relative to the capacity of the street system. Therefore, the impact would be less than significant.

After the proposed Project is completed, the operation of the SRWWTF would not increase traffic or conflict with established plans, policies, or standards related to motorized or non-motorized travel. Employees would continue to commute to the SRWWTF similar current conditions and would not create additional traffic beyond the existing traffic volumes. Therefore, the proposed Project would not conflict with an applicable congestion management program and impacts would be considered less than significant.

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

Finding: No Impact

The proposed Project does not include any new geometric design features on roadways, and therefore, would not result in any associated hazards. The proposed construction activities would occur within the existing footprint of the SRWWTF and would not alter or change any of the public roadways in the area. Therefore, there would be no impact.

d) Would the Project result in inadequate emergency access?

Finding: No Impact



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The proposed Project would not change emergency access points to the proposed Project area. During proposed Project implementation, the movement of construction equipment along Southgate Drive, Highway 49, and SR 108 to other connecting roadways and arterials would be minimal. Emergency access would not be hindered. Therefore, there are no impacts to emergency access.

3.17.4 Mitigation Measures

No mitigation is required.

3.18 UTILITIES AND SERVICE SYSTEMS

3.18.1 Regulatory Setting

Federal

Clean Water Act

The Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), otherwise known as the CWA, sets forth national goals that waters shall be “fishable, swimmable” waters (CWA Section 101 (a)(2)). To enforce the goals of the CWA, the USEPA established the NPDES program. NPDES is a national program for regulating and administering permits for discharges to receiving waters, including non-point sources. Under Section 1251 (b) of the CWA, Congress and the USEPA must recognize and preserve the primary responsibilities and rights of states concerning the reduction of pollution in water resources (USEPA 2017).

National Pollution Discharge Elimination System Permit

Discharge of treated wastewater to surface water(s) of the United States, including wetlands, require a NPDES permit. In California, the RWQCB administer the issuance of these federal permits. Obtaining an NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Whether or not a permit may be issued, the conditions of a permit are subject to many factors such as basin plan water quality objectives, impaired water body status of the receiving water, historical flow rates of the receiving water, effluent quality and flow, the air quality State Implementation Plan (SIP), the California Toxics Rule, and established total maximum daily loading rates for various pollutants. These factors are highly specific to the potential discharge point. Obtaining an NPDES permit is generally considered difficult in inland areas and may not be possible in sensitive areas (USEPA 2018).

State

Porter-Cologne Water Quality Act

The State of California established the SWRCB, which oversees the nine RWQCBs, through the Porter-Cologne Act. Through the enforcement of the Porter Cologne Act, the SWRCB determines the beneficial uses of the waters (surface and groundwater) of the State, establishes narrative and/or numerical water



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quality standards, and initiates policies relating to water quality. The SWRCB and, more specifically, the RWQCB, is authorized to prescribe WDR for the discharge of waste, which may impact the waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by Porter-Cologne Act to protect water quality.

The SWRCB issues both General Construction Permits and individual permits under the auspices of the federal NPDES program. Projects disturbing more than one acre of land during construction are required to file a NOI with the SWRCB to be covered under the State NPDES General Construction Permit (State General Permit) (Adopted Order 2009-0009-DWQ (As amended by 2010-0014-DWQ and 2012-0006-DWQ)) for discharges of stormwater associated with construction activity. Construction activities that are subject to this General Permit includes clearing, grading, disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre of total land area. The project proponent must implement control measures that are consistent with the State General Permit. A SWPPP must be developed and implemented for each site covered by the General Permit. A SWPPP describes BMP the discharger would use to protect stormwater runoff and reduce potential impacts to surface water quality through the construction period. The SWPPP must contain the following: 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 (SWRCB 2017).

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (Water Code Sections 10610–10656). The UWMPA requires that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000-acre foot per year (AFY) shall prepare and adopt a UWMPA. The UWMPA states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple-dry years. The UWMPA also states that the management of urban water demands, and the efficient use of water shall be actively pursued to protect both the people of the state and their water resources (California Department of Water Resources 2015).

General Waste Discharge Requirements for Sanitary Sewer Systems

The General WDRs for Sanitary Sewer Systems were adopted by the SWRCB in May 2006. These WDRs require local jurisdictions to develop a sewer system management plan (SSMP) that addresses the necessary operation and emergency response plans to reduce sanitary sewer overflows. The WDRs require that the local jurisdiction approve the SSMP. The local jurisdiction for the District falls under the CVRWQCB and the District approved the SSMP on December 2009 (TUD 2009).

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 AB 939, effective January 1990. According to AB 939, all cities and counties are required to divert 25-percent



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of all solid waste from landfill facilities by January 1, 1995, and 50-percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. They must promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to \$10,000–per-day fines (CalRecycle 1997).

Electricity

PG&E provides electricity within Tuolumne County and is the current supplier of electricity to the District SRWWTF.

Local

City of Sonora General Plan 2020

The following goal and policy from the Public Facilities & Services Element related to public services are relevant to the proposed Project and discussed in the impact analysis below (City of Sonora 2007).

- **Goal 7.A.** Maintain the City of Sonora as the county's center for the provision of public services and facilities while sustaining levels of city-provided police, fire, administrative, and public works services and infrastructure.
- **Policy 1.** Maintain a cooperative relationship with the Tuolumne Utilities District and continue to participate in planning efforts that involve the provision of water and sewer services to the city.

Tuolumne Utilities District

The District manages the water and wastewater services in Tuolumne County for approximately 44,000 residences. The SRWWTF is located in the southern part of the City of Sonora and has a current permitted capacity of 2.6 Mgal/d and the average dry weather flow (ADWF) at the facility is approximately 1.6 Mgal. The secondary treated and disinfected effluent is discharged to Quartz Reservoir prior to distribution (City of Sonora 2007).

3.18.2 Environmental Setting

Water

The water supply within the City of Sonora is owned and operated through the District. According to the City of Sonora General Plan, the District obtains 90 percent of its water from the South Fork of the Stanislaus River and 5.5 percent of water supplies from groundwater. Currently there is a sufficient water supply for the needs of the City of Sonora (City of Sonora 2007).



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Wastewater

The District is also the wastewater services supplier within the City of Sonora. The SRWWFT is the only wastewater treatment facility within the City of Sonora with a current permitted capacity of 2.6 Mgal (City of Sonora 2007).

Solid Waste

The City of Sonora and Tuolumne County as a whole does not currently have any operating landfills. Solid waste services within the City of Sonora are operated by Cal Sierra Disposal, Inc. which is owned by Waste Management. Soils waste collected by Cal Sierra Disposal is transferred to the Highway 59 Disposal Site landfill which has a permitted capacity of 1,500 tons per day (CalRecycle 2018a). The nearest Cal Sierra transfer station to the proposed Project area is located at 19309 Industrial Drive in Sonora, California (approximately 3.6 miles east of the proposed Project).

3.18.3 Impact Analysis

XVIII. UTILITIES AND SERVICE SYSTEMS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future developments during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐



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XVIII. UTILITIES AND SERVICE SYSTEMS Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
e) Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

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

Finding: Less than Significant

The proposed Project is designed to improve effluent quality at the SRWWTF. Because the inherent nature of this proposed Project would be to improve the existing facility while maintaining the current capacity, these activities are being analyzed as part of this document to determine the environmental effects. All potentially significant environmental effects from proposed Project implementation would be considered less than significant or would be mitigated for as discussed throughout Chapter 3.0 of this document. Therefore, this would be considered a less than significant impact from the proposed Project implementation.

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

Finding: Less than Significant

Construction of the proposed Project would require some water supply for dust control, clean-up, and other minor construction activities. Additionally, operations of the proposed Project may require some water supplies for periodic cleaning and maintenance of the SRWWTF, however this would be similar to existing conditions and would not require new sources of water in the proposed Project area. The existing water supplies in the proposed Project area would be sufficient for the proposed Project construction activities and operation. Therefore, there would be a less than significant impact to water supplies from proposed Project implementation.

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

Finding: No Impact

As discussed under impact 'b' above, the SRWWTF is currently operating under its permitted capacity and no change to this current capacity would occur under the proposed Project. The District currently



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provides adequate capacity for wastewater treatment within the District service area. Therefore, because no change to the existing capacity of the SRWWTF would occur, there would be no impact.

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

Finding: Less than Significant

Proposed Project implementation would result in improvements to the existing SRWWTF which would include minimal trash associated with the proposed Project construction and operation. Most of the trash would come from the construction workers who would haul their trash out and clean up the site daily as well as minor amounts of debris from the proposed Project materials. The nearest Cal Sierra Transfer station to the proposed Project area is located at 19309 Industrial Drive, Sonora, California 95370 which is approximately 3.6 miles east of the SRWWTF. This transfer station currently has a permitted capacity of 350 tons/day which would be sufficient to take the relatively small amounts of trash/debris that the proposed Project may involve (CalRecycle 2018b). The proposed Project will not generate solid waste in excess of State or local standards or impair attainment of solid waste reduction goals. Therefore, impacts related to solid waste disposal needs would be considered less than significant.

e) Would the Project comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

Finding: No Impact

The California Integrated Waste Management Act requires every city and county to adopt an Irrigation and Watershed Management Program (IWMP) that describes city or county objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. The removal of solid waste due to proposed Project activities would comply with all Federal, State, and local statutes and regulations. Solid waste disposal services/facilities are currently available to accommodate proposed Project related waste in compliance with Federal, State, and local statutes and regulations. Therefore, no impacts would result from Project implementation.

3.18.4 Mitigation Measures

No mitigation is required.

3.19 WILDFIRE

3.19.1 Regulatory Setting

Federal

There are no federal regulations applicable to wildfire.



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State

California Department of Forestry and Fire Protection

The California Public Resources Code (Section 4101 et seq.) includes fire safety requirements for which the Department of Forestry and Fire Protection (CAL FIRE) has adopted regulations (for example, Chapters 6 and 7 of Chapter 1.5 of 14 CCR) that apply to state responsibility areas (SRAs). As the name implies, SRAs are areas where CAL FIRE has primary responsibility for fire protection. During the fire hazard season, these regulations: (a) restrict the use of equipment that may produce a spark, flame, or fire; (b) require the use of spark arrestors on equipment that has an internal combustion engine; (c) specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and (d) specify fire-suppression equipment that must be provided onsite for various types of work in fire-prone areas.

Assembly Bill 337

As a result of the Oakland Hills Fire (Tunnel Fire) of 1991, the Bates Bill (337) was passed in 1992 requiring CAL FIRE to work with local governments to identify high fire hazard severity zones within local responsibility areas throughout each county in the state. Over the years CAL FIRE has updated the maps and provided new recommendations to local governments. Following the Bill, CAL FIRE periodically gathers new data and updates the mapping. This is a massive project requiring policy and procedure staff, prevention and planning staff, and the technical GIS skills of CAL FIRE's Fire and Resource Assessment Program.

Local

City of Sonora 202 General Plan

- **Goal: 6.C** Protect persons and property from the hazards of urban and wildland fires.
- **Policy 6.C.4** Strive to maintain adequate fire, police and other emergency services necessary to protect persons and property from urban and wildland fires.

3.19.2 Environmental Setting

State Responsibility Areas are defined as areas where Cal Fire is the primary emergency response agency responsible for fire suppression and prevention. The proposed Project is not located in an area mapped as a Very High Fire Hazard Severity Zone by Cal Fire, nor within a State Responsibility Area. However, the proposed Project is within a Local Responsibility Zone and is designated as a High Fire Hazard Severity Zone by the City of Sonora. Fire suppression services for the Project would be provided by the City of Sonora Fire Department.



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3.19.3 Impact Analysis

XIX WILDFIRE Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒	☐	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒	☐	☐

a-d) Finding: Less than Significant with Mitigation Incorporated

The proposed Project is not located in an area mapped as a Very High Fire Hazard Severity Zone by Cal Fire, nor within a State Responsibility Area. However, the proposed Project is within a Local Responsibility Zone and is designated as a High Fire Hazard Severity Zone by the City of Sonora. The proposed Project involves improvements to the existing wastewater treatment facility and would not impair an adopted emergency response plan or emergency evacuation plan, exacerbate wildfire risks, require installation or maintenance of associated structures that may exacerbate wildfire risks, or expose people or structures to significant post-fire risks. To further reduce the risk of fire, MM HAZ-2, Fire Suppression and Control, would be incorporated into the proposed Project. This mitigation measure includes roles and responsibilities in the event of a fire, specific equipment to prevent and control fires, and coordination with the fire chief and/or the City of Sonora on specific fire suppression actions to be taken. This would reduce the potential for a fire that could be caused by sparks from construction activities by taking precautions outlined in MM HAZ-2, thus reducing the impact to a less than significant level.



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3.19.4 Mitigation Measures

Mitigation Measure HAZ-2 (Section 3.9.4)

3.20 MANDATORY FINDINGS OF SIGNIFICANCE

3.20.1 Impact Analysis

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

Biological and Cultural Impacts (a)

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

Finding: Less than Significant with Mitigation Incorporated



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Biological Resources

As disclosed in Section 3.4 of this document, the proposed Project would not reduce wildlife habitat or species, cause a fish or wildlife species population to drop below self-sustaining levels, or threaten to eliminate a rare or endangered plant or animal. Nor would the proposed Project substantially reduce fish habitat or wildlife species density. Biological resources that were not observed during the proposed Project biological surveys but may occur in the proposed Project area and may be affected by the proposed Project include, Nissenan manzanita, nesting raptors and other migratory birds; hoary bat, pallid bat, Townsend's big-eared bat, western mastiff bat, and Yuma myotis. However, with the implementation of the following mitigation measures the proposed Project would not significantly impact any local, State, or Federal listed rare and endangered species:

- MM BIO-1: Pre-Construction Environmental Awareness Training
- MM BIO-2: Avoid Disturbance to Roosting Bat Species
- MM BIO-3: Avoid Disturbance to Nesting Raptors and other Nesting Migratory Birds

Implementation of these mitigation measures would reduce potential impacts to special status plant species, wildlife species, or their habitat to less than significant levels.

Cultural Resources

As disclosed in Section 3.5 of this document, the cultural resources study did not identify any cultural or tribal cultural resources within or adjacent to the proposed Project area. However, there is always the possibility that subsurface cultural resources, tribal cultural resources, or human remains may exist within the proposed Project area, as cultural resources, tribal cultural resources, or human remains may be buried with no surface manifestation. Therefore, the following mitigation measures would be implemented to reduce impacts to a less than significant level:

- MM CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources; and
- MM CUL-2: Unanticipated Discovery of Human Remains.

With the implementation of MM CUL-1 and MM CUL-2, potential impacts would be reduced to a level of less than significant. Therefore, with the implementation of above mitigation, the proposed Project would not eliminate important examples of the major periods of California history or prehistory and impacts are considered less than significant.

Cumulative Impacts (b)

b) Does the Project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects)?

Finding: Less than Significant



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Although the proposed Project has the potential to impact the environment, those potential impacts, in addition to being fully mitigated, are primarily related to construction and are therefore, temporary. There are no long-term operational impacts from the proposed project and therefore not cumulatively considerable when viewed in connection with the effects of past, current, or probable future projects. The impact from construction related activities is less than significant with incorporation of mitigation measures discussed above.

Based on a search of the District, Tuolumne County, and City of Sonora webpages, there are a few projects in the vicinity of the proposed Project that could be constructed in the same timeframe. The District proposed a District wide trenching and paving project that would include 7,750 square feet of asphalt work within various locations throughout the District's jurisdiction (TUD 2018). Tuolumne County has proposed a bridge replacement project at Lime Kiln Road, which would include construction impacts starting in 2019 (Tuolumne County 2018). Additionally, the City of Sonora has proposed the Stockton-Washington Beautification project that could have construction and traffic related impacts (City of Sonora 2018). These projects, when viewed in conjuncture with the proposed Project could have cumulative impacts related to traffic, air quality, and noise. However, since the proposed Project construction time is minimal (approximately 18 to 24 months) and operation of the proposed Project would be similar to existing conditions, there would be a less than significant potential for temporary or operational effects when evaluated with other nearby proposed Projects.

Effects on Human Beings (c)

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

Finding: Less than Significant

As discussed in the various sections throughout this IS/MND, the proposed Project construction and operation would not include uses, such as increased demand for utilities, increased recreational facilities, or increases in transportation which would result in substantial adverse effects on human beings. All potential impacts are considered either less than significant with mitigation, less than significant, or resulting in no impact. Mitigation Measures described in the sections above would be incorporated by the District and would ensure all potential effects on human beings are less than significant. Therefore, the proposed Project would not have environmental effects with substantial adverse direct or indirect effects on human beings.



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APPENDICES

Appendix A MMRP

Sonora Regional Wastewater Treatment Facility Improvements Project
Mitigation Monitoring and Reporting Program

Environmental Impact	Finding	Mitigation Measure
Air Quality		
AIR-1: Potential to conflict with or obstruct implementation of the applicable air quality plan; 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; and Expose sensitive receptors to substantial pollutant concentrations.	Less than significant with mitigation incorporated	Mitigation Measure AIR-1: Dust Control Plan The District shall require that the selected contractor prepare and implement a Project Dust and Emissions Control Plan that is approved by the TCAPCD prior to construction. The following shall be included in the plan and shall be implemented throughout the construction period to limit and control dust and air emissions: - All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and/or causing a public nuisance. Watering during construction activities shall occur at least three times daily, with application to all disturbed areas. - All areas with vehicle traffic shall be watered or have dust palliative applied as necessary to minimize dust emissions. - All on-site vehicle traffic shall be limited to a speed of 15-mph on unpaved roads within the Project footprint. - All inactive portions of the Project area shall be covered, seeded, or watered or otherwise stabilized until a suitable cover is established. - All material transported to or from off-site shall be either sufficiently watered or securely covered to prevent it from being entrained in the air and there must be a minimum of six-(6) inches of freeboard in the bed of the transport vehicle.
		Mitigation Measure AIR-1 Implementation Responsible Party: The District shall require that the contractor prepare and implement a Construction Emissions and Dust Control Plan. The District shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of Project development and construction by the contractor. Timing: An Emissions and Dust Control Plan shall be prepared and approved by the TCAPCD and the District prior to construction and implemented during all activities that have the potential to generate dust. Monitoring and Reporting Program: During construction, regular inspections shall be performed by a District representative and reports shall be kept on file for inspection by the TCAPCD or other interested parties. Standards for Success: Visible emissions and dust are kept to the lowest practicable level during construction periods. The goal is to minimize dust and emissions during construction and to the extent feasible, complaints from the public.
		Mitigation Measure AIR-2: Implement BMPs to Reduce Impacts on Air Quality from Construction Equipment Emissions - Employ best management construction practices to avoid unnecessary emissions (e.g., trucks and vehicles in loading and unloading queues will turn their engines off when not in use). Vehicle and equipment idling shall not be allowed to exceed five minutes, unless extenuating circumstances are documented occur requiring additional idling time. Any idling time exceptions shall be documented by District representatives kept on file. - Encourage construction worker commuters to carpool or employ other means to reduce trip generation. - The Project contractor shall ensure that all construction equipment is properly maintained; and - All applicable portable engines and off-road equipment must be registered with CARB’s portable engine and off-road equipment programs.

Environmental Impact	Finding	Mitigation Measure
		Mitigation Measure AIR-2 Implementation Responsible Party: The District shall require that the contractor implement construction equipment BMPS during all phases of Project development and construction by the contractor. Timing: BMPs will be implemented during all phases of construction activities. Monitoring and Reporting Program: Prior to construction, equipment inspections shall be performed by a District representative and reports shall be kept on file for inspection by the TCAPCD or other interested parties. Reports documenting exceptions to idling time and off-road heavy-duty diesel engine compliance shall also be completed by the District and a file copy submitted to for inspection or review by TCAPCD or interested parties. Standards for Success: Construction queues are minimized, and idling vehicle time is limited to five-minute maximums, unless exceptions are documented. Workers encouraged to carpool.

Biological Resources

BIO-1: Potential to have a substantial adverse effect, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; and Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish or U.S. Fish and Wildlife Service.	Less than significant with mitigation incorporated	Mitigation Measure BIO-1: Pre-Construction Environmental Awareness Training Prior to construction, a qualified biologist shall conduct one Environmental Awareness Training for construction personnel. The Environmental Awareness Training shall be given to construction personnel to brief them on how to recognize special status plant species, wildlife species, and sensitive habitats that could occur in the Project area (i.e., special status plant identification and habitat, special status avian identification and habitat, wetland habitats, riparian habitats, and relevant BMPs, including the importance of remaining within the Project footprint). Environmental Awareness Training reference pamphlets shall also be provided to keep onsite for use by an environmentally trained foreman for training new Project personnel in the absence of the biologist. If special status species are encountered in the work area, construction shall cease, and the District and a qualified biologist shall be notified for guidance prior to the continuation of construction activities. Depending on the listing of the observed species and its persistence in the area, the District shall consult with CDFW and/or USFWS for guidance. Mitigation Measure BIO-1 Implementation Responsible Party: The District shall ensure that a qualified biologist conducts one pre-construction Environmental Awareness Training to construction personnel. Timing: Prior to the initiation of construction. Monitoring and Reporting Program: The training shall be conducted by a qualified biologist and the Environmental Awareness Training reference pamphlets shall be kept on the construction site. Standards for Success: Construction personnel are trained in the key characteristics for identifying and avoiding impacts to special status species and sensitive habitats. Mitigation Measure BIO-2: Avoid Disturbance to Roosting Bat Species If Project construction entails building demolition or tree removal/trimming, a pre-construction bat roosting survey shall take place. If this is to occur, a pre-construction bat roost survey shall be conducted by a qualified wildlife biologist experienced with bat species for the presence of bats in suitable habitat (e.g., trees or buildings within the Project area). The survey shall be conducted within one hour prior to sunset and two hours after sunset at the sites where potential roosting habitat exists in order to detect potential roosting bats leaving their daytime roosting sites to forage, no greater than one week prior to construction. • If it is determined that roosting bats are not present in the potential habitat within the Project area, no further mitigation is required. • If evidence of roosting bats is detected in the Project area, the District shall consult with CDFW regarding measures to minimize impacts to bat species for the
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Environmental Impact	Finding	Mitigation Measure
		Project. At a minimum these will include measures such as the avoidance of breeding areas (if determined to be breeding) until the bats have fully vacated the area. Mitigation Measure BIO-2 Implementation Responsible Party: The District shall ensure that a qualified biologist completes the pre-construction bat roosting survey if Project construction entails building demolition or tree removal/trimming. Timing: One evening pre-construction bat roost assessment survey shall be conducted by a qualified biologist within one week of conducting building demolition or tree removal/trimming within the Project area. Monitoring and Reporting Program: The survey shall be conducted, and the results shall be documented by a qualified biologist familiar with bat species. A brief survey report shall be documented and kept on file with the District. Standards for Success: Bats designated as SSC by CDFW are not impacted as a result of Project construction activities. Mitigation Measure BIO-3: Avoid Disturbance to Nesting Raptors and other Nesting Migratory Birds The District shall implement one of the following measures, depending on the specific construction timeframe, to avoid disturbing nesting raptors and other migratory birds. 1. If construction activities are scheduled to occur during the nesting season (i.e., approximately February 15 through August 31), a qualified biologist shall conduct a pre-construction nesting survey within the Project area and within an approximate 100-foot buffer of the Project area. If no active nests are observed, no additional mitigation is required. 2. If surveys indicate that active raptor or other active migratory bird nests are found in any areas that will be directly affected by construction activities, a no-disturbance buffer shall be established around the site to avoid disturbance or destruction of the nest site until after the breeding season, or after a wildlife biologist determines that the young have fledged (i.e., typically late June to mid-July). The extent of these buffers shall be determined through consultation with CDFW and/or USFWS (depending on the status of the species present) and the qualified biologist. Buffers shall depend on the species present, the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise, topographical or artificial barriers, and other disturbances. 3. If construction activities begin outside the breeding season (i.e., approximately September 1 through February 14), then construction may proceed until it is determined that an active migratory bird nest would be subject to abandonment because of construction activities. Optimally, all necessary vegetation removal/trimming shall be conducted before the breeding season so that nesting birds will not be present in the construction area during construction activities. If any bird nests are in the Project area under pre-existing construction conditions, then it is assumed that they are habituated (or will habituate) to the construction activities. Under this scenario, the pre-construction survey described previously will be conducted on or after February 15 to identify any active nests in the vicinity. A qualified biologist will monitor active sites periodically until after the breeding season or after the young have fledged (typically late June to mid-July). If active nests are identified on or immediately adjacent to the Project area, then all non-essential construction activities (e.g., equipment storage, meetings, etc.) will be avoided in the immediate vicinity of the nest site, but the remainder of construction activities may proceed. Mitigation Measure BIO-3 Implementation Responsible Party: The District shall ensure that a qualified biologist completes the pre-construction nesting raptor and other migratory bird survey. Timing: One nesting survey shall be conducted by a qualified biologist no more than one week of initiating Project construction, should the Project commence between February 15 and August 31. Monitoring and Reporting Program: The pre-construction nesting survey shall be conducted and results shall be documented by a qualified biologist. A brief survey report shall be documented and kept on file with the District.

Environmental Impact	Finding	Mitigation Measure
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Standards for Success: No raptor and/or other active migratory bird nests shall be disturbed due to Project activities.

Cultural and Tribal Cultural Resources
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CULT-1: Potential to cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5; Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; Disturb any human remains, including those interred outside of formal cemeteries; Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size, or object with cultural value to the California Native American tribe and that is 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); and Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size, or object with cultural value to the California Native American tribe and that is 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	Mitigation Measure CUL-1: Unanticipated Discovery of Cultural or Tribal Cultural Resources The District shall ensure that all construction personnel involved in any ground disturbing construction activity for the entire duration of the Project are informed of the possibility of encountering subsurface prehistoric or historical cultural resources and/or human remains within the Project area and the protocol to be followed if a cultural or tribal cultural resource or human remains are encountered as detailed below and with MM CUL-2. Sensitive cultural resources the construction personnel should be made aware of include: <u>Archaeological and/or Tribal Materials</u> – may include, but are not limited to, flaked stone tools (projectile point, biface, scraper, etc.) and debitage (flakes) made of chert, obsidian, etc., groundstone milling tools and fragments (mortar, pestle, handstone, millingstone, etc.), faunal bones, fire-affected rock, dark middens, house pit depressions and human interments. <u>Tribal Cultural Resources</u> – A site feature, place, cultural landscape, sacred place, or object, which is of cultural value to a tribe – and is either: on or eligible for the CRHR or a local historic register, – or the CEQA lead agency, at its discretion, chooses to treat the resource as a tribal cultural resource – See: PRC 21074 (a)(1)(A)-(B). <u>Historic-era Resources</u> – may include, but are not limited to, small cemeteries or burial plots, bones, cut (square) nails, containers or miscellaneous hardware, glass fragments, cans with soldered seams or tops, ceramic or stoneware objects or fragments, milled or split lumber, earthworks, feature or structure remains and trash dumps. In the event of the discovery of cultural or tribal cultural resources during construction activities the following steps outlining the proper handling, evaluation, and treatment of cultural or tribal cultural resources shall be undertaken to ensure protection of potentially significant historically, archaeologically, or tribally significant resources. Proper Handling: If subsurface cultural or tribal cultural resources are inadvertently uncovered during Project ground disturbing activities, the District’s contractor shall adhere to the following procedures and methods: • Immediately stop all work within 100 feet of the discovery; • Immediately contact the District Project Manager or representative; • Do not harass, damage, touch, or remove any cultural or tribal cultural resources materials once resource is identified; • Leave all spoils in their current location unless directed by District representatives; • Record the location and keep notes of all calls and events providing them to the District representative daily, or as requested; • Secure the discovery location with flagging, plywood, or other appropriate material around the exposed site or a person watching the site as directed by the District representative, until cleared by the District representative and qualified archaeologist; • Treat the find as confidential. Do not publicly disclose the location. Only authorized personnel, or individuals with the permission of the District representative (or the land owner) shall be allowed on the site; • Upon approval of District, work may resume within no less than 100 feet of the discovery; and • Upon clearance of the District, work may resume in the location where cultural resources were discovered after evaluation and clearance by the District qualified
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Environmental Impact	Finding	Mitigation Measure
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archaeologist.

Upon notification by the contractor, the District shall adhere to the following procedures and methods:

- Record the location and keep notes of all calls and events;
- Consult with the on-call qualified archaeologist who shall facilitate evaluation and treatment procedures;
- Maintain communications with the archaeologist, documenting and recording evaluation, protection, treatment, and avoidance steps taken;
- Relocate work no less than 100 feet from the discovery or as otherwise directed by the archaeologist; and
- Treat the find as confidential. Do not publicly disclose the location. Only authorized personnel, or individuals with the permission of the District (or the land owner) shall be allowed on the archaeological site.

Upon notification by the District, the retained qualified archaeologist shall adhere to professional standards regarding the evaluation and treatment of the discovered cultural or tribal cultural resources and shall implement the following avoidance, evaluation, and/or treatment procedures and methods:

- Examine the site to confirm that no additional cultural or tribal resources are in the disturbed area where the resource was found;
- Recommend the appropriate discovery securing measures such as flagging, plywood, other material, or monitor around the exposed site until the evaluation is complete;
- Coordinate with District to determine if design modifications are feasible to avoid the resource. If the resource can be avoided appropriate security measures such as flagging or other exclusion fencing shall be placed around the resource until construction activities within 250 feet of the resource are complete; and
- If the resource cannot be avoided, an evaluation of the find shall be conducted to determine the historical, archaeological, or tribal significance of the resource shall be undertaken by a qualified archaeologist. If evaluation results in the determination that a resource is historically, archaeologically, or tribally significant, mitigation as recommended by the archaeologist/tribal representative and agreed upon by the District will be implemented and the resource will be recorded for documentation in accordance with Office of Historic Preservation Standards, tribal, and industry standards. If the resource is not found significant, construction may resume.

Mitigation Measure CUL-1 Implementation

Responsible Party: The District, representatives, and contractor.

Timing: During all ground disturbing activities.

Monitoring and Reporting Program: If any find is determined to be significant, representatives of the District shall document consultation with the qualified archaeologist (and tribal representative if a tribal cultural resource) and determination of recommended protection and/or avoidance measures or other appropriate mitigation. The District shall prepare a memorandum incorporating notes and records from the contractor and qualified archaeologist to document steps taken to comply with the avoidance measures or other appropriate mitigation. The memorandum shall be saved as a file copy by the District and submitted to the Central California Information Center.

Standards for Success: The evaluation and recording of any newly identified cultural or tribal cultural resources and treatment by avoidance, protection, or documentation of any discovered resources that qualify as historically, archaeologically, or tribally significant.

Mitigation Measure CUL-2: Unanticipated Discovery of Human Remains

Section 7050 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial site. If human remains are encountered (or are

Environmental Impact	Finding	Mitigation Measure
		suspected) during any project-related activity, the District, District’s representatives, and District’s contractor shall complete the following steps: • Immediately stop all work; • Immediately contact the District Project Manager or representative; • Contact a qualified archaeologist (someone who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology) who shall then notify the County Coroner immediately pursuant to PRC Section 7050.5. The County Coroner may assess the human remains. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of such identification. The NAHC shall identify the most likely descendant (MLD); • Once given the permission by the District (and the land owner), the MLD shall be allowed onsite. The MLD shall complete their inspection and make their recommendation to the District for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. MLD recommendations must be made within 48 hours of the NAHC notification to the MLD; • Relocate work under direction of the District within no less than 150 feet of the discovery or as otherwise directed by the District qualified archaeologist; • Consult with the onsite qualified archaeological monitor to confirm that no additional human remains are in the area; • No additional work shall take place within the immediate vicinity of the find until the District's qualified archaeologist gives approval to resume work in that area; • Once work resumes in a location where human remains have been discovered and cleared, the onsite monitor shall observe further ground-disturbing construction activities closely for evidence of additional human remains; • Do not touch, damage, remove any human remains, associated materials, or associated spoils; • Record the location of the discovered remains and keep notes of all calls, site visits and events; and • Treat the find as confidential and do not publicly disclose the location. The District shall provide security to the area as needed. Only authorized personnel, or individuals with the permission of the District (and the land owner) shall be allowed onsite. Mitigation Measure CUL-2 Implementation Responsible Party: The District, representatives, and contractor. Timing: During all ground disturbing activities. Monitoring and Reporting Program: The find shall be immediately reported to the County Coroner. The recording and evaluation of any newly identified human remains shall be conducted by qualified professional archaeologist in conjunction with the County Coroner and a report detailing the recording, location, evaluation, and treatment of human remains, shall be kept on file at the District, and submitted to the CCIC. Standards of Success: The proper recording, evaluation, and treatment of any newly identified human remains.
Geology and Soils		
GEO-1: Potential for substantial soil erosion or the loss of topsoil.	Less than significant with mitigation incorporated	Mitigation Measure GEO-1: Sedimentation and Erosion Control Measures In compliance with the requirements of the State General Construction Activity Stormwater Permit, the District shall obtain coverage under the current Construction General Permit (2009-0009-DWQ) and prepare a SWPPP that incorporates measures or comparable BMPs which describes the site, erosion and sediment controls, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls. The District shall require all construction contractors to retain a copy of the approved SWPPP at the Project area and implement the SWPPP.

Environmental Impact	Finding	Mitigation Measure
		Additionally, the SWPPP shall ensure that all stormwater discharges are in compliance with all current requirements of the Construction General Permit (2009-009-DWQ). Mitigation Measure GEO-1 Implementation Responsible Party: The District shall obtain coverage under the current Construction General Permit (2009-0009-DWQ) and prepare a SWPPP. The District will also obtain a Grading Permit. This mitigation measure will be referenced in the plans and specifications bid for the Project. Timing: During construction activities and until the site is stabilized. Monitoring and Reporting Program: The recording and evaluation of the SWPPP and erosion control practices shall be conducted by the District and the contractor and kept on file at the District office and at the Project area. Standards of Success: Minimize on- and off-site erosion and prevent introduction of significant amounts of sediment into any stream or drainage. Ensure that all stormwater discharges are in compliance with all current requirements of the Construction General Permit.
Hazards and Hazardous Materials		
HAZ-1: Potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Less than significant with mitigation incorporated	Mitigation Measure HAZ-1: Develop or Use Current Spill Prevention Control and Countermeasure Plan The District, or its contractor shall develop and implement a Spill Prevention Control and Countermeasure Plan (SPCCP) in accordance with Federal and State requirements to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. The SPCCP shall include the following measures: - Materials shall be stored in appropriate containers and contents labeled; - Material volume shall be restricted to the volume that can be addressed by available spill kits and supplies. - Used containers shall be disposed of at an appropriate landfill or other legal disposal or recycling facility; - Bulk storage tanks shall have secondary containment systems. Secondary containment shall be at least 110 percent of storage tank capacity or more if the area is uncovered to account for storm events; - Spill cleanup shall occur immediately, and notification shall be given to the California Department of Fish and Wildlife, USFWS, RWQCB; - Workers shall be trained to properly handle hazardous materials, cleanup spills, and report spills. Construction workers shall be trained to identify indicators of contaminated soils such as soil discoloration, odors, differences in soil properties, and buried debris. Construction workers shall be trained to be aware of proper handling techniques and appropriate responses and actions to be taken if hazardous materials are accidentally released, with special emphasis on those hazardous materials with the greatest potential to occur at the Project area; - Soils contaminated with fuels or chemicals shall be disposed of in a suitable location to prevent discharge to surface waters and in accordance with the rules and regulations of the U.S. Department of Transportation, the USEPA, the RWQCB, and other agencies including but not limited to CalEPA; - Excess or unused quantities of hazardous materials shall be removed upon Project completion. Although hazardous waste generation is not anticipated, any such wastes produced during construction shall be properly containerized, labeled, and transported to an approved hazardous waste disposal facility; and - All nonhazardous waste materials including construction refuse, garbage, and sanitary waste, shall be disposed of by removal from the work area to an approved disposal facility. All nonhazardous waste containers shall be covered when not in use and/or at the end of each shift or before a rain event. A fueling plan shall be prepared separately or as a part of the SPCCP. The fueling plan shall include the following measures:

Environmental Impact	Finding	Mitigation Measure
	- Vehicles shall be monitored for fluid leaks and shall be maintained regularly to reduce the chance of leakage. If any leaks are detected, the vehicle shall be taken to a special paved area designated for vehicle repair and equipped with management controls for leaked materials or if it cannot be repaired removed from service and site and obtain replacement; - Vehicles refueling shall only occur on flat level ground where there is little chance of a spilled substance reaching a stream or waterway over an impermeable surface. A spill kit shall be available as appropriate for the activity; - Refueling and vehicle maintenance shall be performed at least 100 feet from receiving waters; - All fueling materials shall be properly labeled; and - Oil, antifreeze, solvents, and other materials related to equipment maintenance shall be disposed of or recycled appropriately offsite. If these materials have to be stored before disposal/recycling, they shall be stored in covered areas in containers with 110 percent capacity with berms and lined with impermeable material to contain any spills. The impermeable material should be maintained free of holes, etc. that would permit leaks to contact the ground surface or otherwise leave the containment area. The District shall review and approve the SPCCP before onset of construction activities. The District shall routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. The District shall notify its contractors immediately if there is a noncompliance issue and shall require compliance. The Federal reportable spill quantity for petroleum products, as defined in the EPA's CFR (40 CFR 110) is any oil spill that (1) violates applicable water quality standards, (2) causes a film or sheen upon or discoloration of the water surface or adjoining shoreline, or (3) causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. If a spill is reportable, the District or the contractor will take action to contact the appropriate safety and clean-up crews to ensure the SPCCP is followed. A written description of reportable releases must be submitted to the RWQCB. The submittal must include a description of the release, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. The releases will be documented on a spill report form. Mitigation Measure HAZ-1 Implementation Responsible Party: The District or its contractor shall develop and implement a SPCCP to minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities for all contractors. Timing: The SPCCP shall be implemented prior to and during all phases of construction. Monitoring and Reporting Program: Evaluation of SPCCP shall be conducted by the District. Reports on the SPCCP implementation shall be documented by the District and kept on file. Standards of Success: Minimize the potential for, and effects from, spills of hazardous, toxic, or petroleum substances during construction activities in accordance with the requirements of this measure as well as State and Federal laws.	
HAZ-2: Potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Less than significant with mitigation incorporated	Mitigation Measure HAZ-2: Fire Suppression and Control The District shall require the selected construction contractor to coordinate with the local fire chief and the City of Sonora to ensure fire control measures are in place to reduce the risk of fires during the Project. The fire prevention and control measures shall include requirements for onsite extinguishers; roles and responsibilities of the District, and the contractor including what to do in the event of a fire; fire suppression equipment and critical fire prevention and suppression items, and any other items or

Environmental Impact	Finding	Mitigation Measure
		awareness measures recommended by the fire chief and/or the City of Sonora. Mitigation Measure HAZ-2 Implementation Responsible Party: The District's contractor shall coordinate with the local fire chief and the City of Sonora to ensure fire control measures including but not limited to fire suppression and management measures are in place and on site and readily accessible during construction in the event of an unintended fire. Timing: Coordination with the local fire chief and the City of Sonora shall take place prior to construction and implementation of fire suppression and control measures shall be implemented during all phases of construction. Monitoring and Reporting Program: Evaluation of the fire suppression and control measures shall be conducted by the District. The District inspector or other District personnel shall verify that coordination with the fire chief and the City of Sonora took place and that proper responsibilities and fire suppression and control equipment/items are available on site during construction. Documentation shall be kept on file at District offices. Standards of Success: Preparedness for and minimization of the start and spread of wildfire during construction activities for all contractors.
Hydrology and Water Quality		
HWQ-1: Potential to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or 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; In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than significant with mitigation incorporated	Mitigation Measure GEO-1: Sedimentation and Erosion Control Measures See above. Mitigation Measure HAZ-1: Develop or Use Current Spill Prevention Control and Countermeasure Plan See above.
Wildfire		
WDFR-1: Potential to substantially impair an adopted emergency response plan or emergency evacuation plan; 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; Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; And 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.	Less than significant with mitigation incorporated	Mitigation Measure HAZ-2: Fire Suppression and Control See above.

**SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

Appendix B Caleemod Results
November 1, 2019

Appendix B CALEEMOD RESULTS



TUD**Tuolumne County APCD Air District, Annual****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	217.80	1000sqft	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Demolition -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	255.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	8.00	95.00
tblConstructionPhase	NumDays	5.00	70.00
tblConstructionPhase	PhaseEndDate	4/28/2019	8/21/2020
tblConstructionPhase	PhaseEndDate	4/28/2019	10/25/2019
tblConstructionPhase	PhaseEndDate	4/28/2019	12/13/2019
tblConstructionPhase	PhaseEndDate	4/28/2019	8/2/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	9/2/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	8/5/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	8/5/2019
tblGrading	AcresOfGrading	47.50	4.00
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3902	3.3910	2.5386	4.3200e-003	0.5681	0.1650	0.7330	0.2918	0.1535	0.4453	0.0000	386.3546	386.3546	0.0880	0.0000	388.5541
2020	0.3035	2.1026	2.4021	4.0100e-003	0.1116	0.0973	0.2089	0.0301	0.0915	0.1216	0.0000	354.9325	354.9325	0.0578	0.0000	356.3781
Total	0.6937	5.4936	4.9406	8.3300e-003	0.6797	0.2623	0.9419	0.3218	0.2450	0.5669	0.0000	741.2871	741.2871	0.1458	0.0000	744.9322

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3902	3.3910	2.5386	4.3200e-003	0.5681	0.1650	0.7330	0.2918	0.1535	0.4453	0.0000	386.3543	386.3543	0.0880	0.0000	388.5538
2020	0.3035	2.1026	2.4021	4.0100e-003	0.1116	0.0973	0.2089	0.0301	0.0915	0.1216	0.0000	354.9323	354.9323	0.0578	0.0000	356.3779
Total	0.6937	5.4936	4.9406	8.3300e-003	0.6797	0.2623	0.9419	0.3218	0.2450	0.5669	0.0000	741.2865	741.2865	0.1458	0.0000	744.9316

[illegible]

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1032	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003
Energy	4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	317.2798	317.2798	0.0133	3.3400e-003	318.6060
Mobile	0.9095	3.4375	11.8323	0.0209	1.6525	0.0279	1.6804	0.4448	0.0263	0.4711	0.0000	1,900.618 1	1,900.618 1	0.1240	0.0000	1,903.717 9
Waste						0.0000	0.0000		0.0000	0.0000	54.8218	0.0000	54.8218	3.2399	0.0000	135.8186
Water						0.0000	0.0000		0.0000	0.0000	15.9789	79.2826	95.2615	1.6448	0.0395	148.1499
Total	2.0169	3.4752	11.8660	0.0212	1.6525	0.0308	1.6833	0.4448	0.0291	0.4739	70.8007	2,297.184 3	2,367.985 0	5.0219	0.0428	2,506.296 5

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1032	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003
Energy	4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	317.2798	317.2798	0.0133	3.3400e-003	318.6060
Mobile	0.9095	3.4375	11.8323	0.0209	1.6525	0.0279	1.6804	0.4448	0.0263	0.4711	0.0000	1,900.618 1	1,900.618 1	0.1240	0.0000	1,903.717 9
Waste						0.0000	0.0000		0.0000	0.0000	54.8218	0.0000	54.8218	3.2399	0.0000	135.8186
Water						0.0000	0.0000		0.0000	0.0000	15.9789	79.2826	95.2615	1.6448	0.0395	148.1499
Total	2.0169	3.4752	11.8660	0.0212	1.6525	0.0308	1.6833	0.4448	0.0291	0.4739	70.8007	2,297.184 3	2,367.985 0	5.0219	0.0428	2,506.296 5

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	9/2/2019	8/21/2020	5	255	
2	Demolition	Demolition	8/5/2019	10/25/2019	5	60	
3	Grading	Grading	8/5/2019	12/13/2019	5	95	
4	Site Preparation	Site Preparation	4/29/2019	8/2/2019	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	4.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Welders	1	4.00	46	0.45
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Cement and Mortar Mixers	1	4.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	91.00	36.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	3	8.00	0.00	14.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1027	0.9169	0.7466	1.1700e-003		0.0561	0.0561		0.0528	0.0528	0.0000	102.2703	102.2703	0.0249	0.0000	102.8932
Total	0.1027	0.9169	0.7466	1.1700e-003		0.0561	0.0561		0.0528	0.0528	0.0000	102.2703	102.2703	0.0249	0.0000	102.8932

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.2288	0.0913	3.9000e-004	9.2100e-003	2.0800e-003	0.0113	2.6600e-003	1.9900e-003	4.6500e-003	0.0000	37.1546	37.1546	1.5500e-003	0.0000	37.1933
Worker	0.0600	0.0525	0.4801	5.3000e-004	0.0486	5.9000e-004	0.0492	0.0129	5.5000e-004	0.0135	0.0000	47.1845	47.1845	4.5400e-003	0.0000	47.2980
Total	0.0713	0.2813	0.5714	9.2000e-004	0.0578	2.6700e-003	0.0605	0.0156	2.5400e-003	0.0181	0.0000	84.3391	84.3391	6.0900e-003	0.0000	84.4913

3.2 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1027	0.9169	0.7466	1.1700e-003		0.0561	0.0561		0.0528	0.0528	0.0000	102.2702	102.2702	0.0249	0.0000	102.8931
Total	0.1027	0.9169	0.7466	1.1700e-003		0.0561	0.0561		0.0528	0.0528	0.0000	102.2702	102.2702	0.0249	0.0000	102.8931

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.2288	0.0913	3.9000e-004	9.2100e-003	2.0800e-003	0.0113	2.6600e-003	1.9900e-003	4.6500e-003	0.0000	37.1546	37.1546	1.5500e-003	0.0000	37.1933
Worker	0.0600	0.0525	0.4801	5.3000e-004	0.0486	5.9000e-004	0.0492	0.0129	5.5000e-004	0.0135	0.0000	47.1845	47.1845	4.5400e-003	0.0000	47.2980
Total	0.0713	0.2813	0.5714	9.2000e-004	0.0578	2.6700e-003	0.0605	0.0156	2.5400e-003	0.0181	0.0000	84.3391	84.3391	6.0900e-003	0.0000	84.4913

3.2 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1781	1.6116	1.4153	2.2600e-003		0.0938	0.0938		0.0882	0.0882	0.0000	194.5524	194.5524	0.0475	0.0000	195.7390
Total	0.1781	1.6116	1.4153	2.2600e-003		0.0938	0.0938		0.0882	0.0882	0.0000	194.5524	194.5524	0.0475	0.0000	195.7390

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.3989	0.1486	7.6000e-004	0.0178	2.3800e-003	0.0202	5.1400e-003	2.2800e-003	7.4200e-003	0.0000	71.7812	71.7812	2.5500e-003	0.0000	71.8450
Worker	0.1086	0.0921	0.8382	9.9000e-004	0.0938	1.0800e-003	0.0949	0.0250	1.0000e-003	0.0260	0.0000	88.5989	88.5989	7.8100e-003	0.0000	88.7942
Total	0.1255	0.4910	0.9868	1.7500e-003	0.1116	3.4600e-003	0.1151	0.0301	3.2800e-003	0.0334	0.0000	160.3801	160.3801	0.0104	0.0000	160.6391

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1781	1.6116	1.4153	2.2600e-003		0.0938	0.0938		0.0882	0.0882	0.0000	194.5522	194.5522	0.0475	0.0000	195.7388
Total	0.1781	1.6116	1.4153	2.2600e-003		0.0938	0.0938		0.0882	0.0882	0.0000	194.5522	194.5522	0.0475	0.0000	195.7388

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.3989	0.1486	7.6000e-004	0.0178	2.3800e-003	0.0202	5.1400e-003	2.2800e-003	7.4200e-003	0.0000	71.7812	71.7812	2.5500e-003	0.0000	71.8450
Worker	0.1086	0.0921	0.8382	9.9000e-004	0.0938	1.0800e-003	0.0949	0.0250	1.0000e-003	0.0260	0.0000	88.5989	88.5989	7.8100e-003	0.0000	88.7942
Total	0.1255	0.4910	0.9868	1.7500e-003	0.1116	3.4600e-003	0.1151	0.0301	3.2800e-003	0.0334	0.0000	160.3801	160.3801	0.0104	0.0000	160.6391

3.3 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4800e-003	0.0000	1.4800e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0557	0.5503	0.3375	6.0000e-004		0.0284	0.0284		0.0267	0.0267	0.0000	53.0491	53.0491	0.0128	0.0000	53.3695
Total	0.0557	0.5503	0.3375	6.0000e-004	1.4800e-003	0.0284	0.0299	2.2000e-004	0.0267	0.0269	0.0000	53.0491	53.0491	0.0128	0.0000	53.3695

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.0200e-003	9.0000e-004	1.0000e-005	1.2000e-004	2.0000e-005	1.4000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.5654	0.5654	1.0000e-005	0.0000	0.5657
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	3.1800e-003	0.0291	3.0000e-005	2.9500e-003	4.0000e-005	2.9800e-003	7.8000e-004	3.0000e-005	8.2000e-004	0.0000	2.8608	2.8608	2.8000e-004	0.0000	2.8676
Total	3.7400e-003	6.2000e-003	0.0300	4.0000e-005	3.0700e-003	6.0000e-005	3.1200e-003	8.1000e-004	5.0000e-005	8.7000e-004	0.0000	3.4261	3.4261	2.9000e-004	0.0000	3.4334

3.3 Demolition - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4800e-003	0.0000	1.4800e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0557	0.5503	0.3375	6.0000e-004		0.0284	0.0284		0.0267	0.0267	0.0000	53.0490	53.0490	0.0128	0.0000	53.3694
Total	0.0557	0.5503	0.3375	6.0000e-004	1.4800e-003	0.0284	0.0299	2.2000e-004	0.0267	0.0269	0.0000	53.0490	53.0490	0.0128	0.0000	53.3694

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-004	3.0200e-003	9.0000e-004	1.0000e-005	1.2000e-004	2.0000e-005	1.4000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.5654	0.5654	1.0000e-005	0.0000	0.5657
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	3.1800e-003	0.0291	3.0000e-005	2.9500e-003	4.0000e-005	2.9800e-003	7.8000e-004	3.0000e-005	8.2000e-004	0.0000	2.8608	2.8608	2.8000e-004	0.0000	2.8676
Total	3.7400e-003	6.2000e-003	0.0300	4.0000e-005	3.0700e-003	6.0000e-005	3.1200e-003	8.1000e-004	5.0000e-005	8.7000e-004	0.0000	3.4261	3.4261	2.9000e-004	0.0000	3.4334

3.4 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2882	0.0000	0.2882	0.1575	0.0000	0.1575	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1005	1.1245	0.5552	1.1100e-003		0.0516	0.0516		0.0474	0.0474	0.0000	100.0460	100.0460	0.0317	0.0000	100.8373
Total	0.1005	1.1245	0.5552	1.1100e-003	0.2882	0.0516	0.3397	0.1575	0.0474	0.2049	0.0000	100.0460	100.0460	0.0317	0.0000	100.8373

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7600e-003	5.0400e-003	0.0461	5.0000e-005	4.6600e-003	6.0000e-005	4.7200e-003	1.2400e-003	5.0000e-005	1.2900e-003	0.0000	4.5295	4.5295	4.4000e-004	0.0000	4.5404
Total	5.7600e-003	5.0400e-003	0.0461	5.0000e-005	4.6600e-003	6.0000e-005	4.7200e-003	1.2400e-003	5.0000e-005	1.2900e-003	0.0000	4.5295	4.5295	4.4000e-004	0.0000	4.5404

3.4 Grading - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2882	0.0000	0.2882	0.1575	0.0000	0.1575	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1005	1.1245	0.5552	1.1100e-003		0.0516	0.0516		0.0474	0.0474	0.0000	100.0459	100.0459	0.0317	0.0000	100.8372
Total	0.1005	1.1245	0.5552	1.1100e-003	0.2882	0.0516	0.3397	0.1575	0.0474	0.2049	0.0000	100.0459	100.0459	0.0317	0.0000	100.8372

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7600e-003	5.0400e-003	0.0461	5.0000e-005	4.6600e-003	6.0000e-005	4.7200e-003	1.2400e-003	5.0000e-005	1.2900e-003	0.0000	4.5295	4.5295	4.4000e-004	0.0000	4.5404
Total	5.7600e-003	5.0400e-003	0.0461	5.0000e-005	4.6600e-003	6.0000e-005	4.7200e-003	1.2400e-003	5.0000e-005	1.2900e-003	0.0000	4.5295	4.5295	4.4000e-004	0.0000	4.5404

3.5 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2108	0.0000	0.2108	0.1159	0.0000	0.1159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0479	0.5044	0.2305	4.1000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	36.6085	36.6085	0.0116	0.0000	36.8981
Total	0.0479	0.5044	0.2305	4.1000e-004	0.2108	0.0261	0.2368	0.1159	0.0240	0.1398	0.0000	36.6085	36.6085	0.0116	0.0000	36.8981

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	2.3200e-003	0.0212	2.0000e-005	2.1500e-003	3.0000e-005	2.1700e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	2.0860	2.0860	2.0000e-004	0.0000	2.0910
Total	2.6500e-003	2.3200e-003	0.0212	2.0000e-005	2.1500e-003	3.0000e-005	2.1700e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	2.0860	2.0860	2.0000e-004	0.0000	2.0910

3.5 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2108	0.0000	0.2108	0.1159	0.0000	0.1159	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0479	0.5044	0.2305	4.1000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	36.6085	36.6085	0.0116	0.0000	36.8980
Total	0.0479	0.5044	0.2305	4.1000e-004	0.2108	0.0261	0.2368	0.1159	0.0240	0.1398	0.0000	36.6085	36.6085	0.0116	0.0000	36.8980

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	2.3200e-003	0.0212	2.0000e-005	2.1500e-003	3.0000e-005	2.1700e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	2.0860	2.0860	2.0000e-004	0.0000	2.0910
Total	2.6500e-003	2.3200e-003	0.0212	2.0000e-005	2.1500e-003	3.0000e-005	2.1700e-003	5.7000e-004	2.0000e-005	6.0000e-004	0.0000	2.0860	2.0860	2.0000e-004	0.0000	2.0910

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9095	3.4375	11.8323	0.0209	1.6525	0.0279	1.6804	0.4448	0.0263	0.4711	0.0000	1,900.618 ₁	1,900.618 ₁	0.1240	0.0000	1,903.717 ₉
Unmitigated	0.9095	3.4375	11.8323	0.0209	1.6525	0.0279	1.6804	0.4448	0.0263	0.4711	0.0000	1,900.618 ₁	1,900.618 ₁	0.1240	0.0000	1,903.717 ₉

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1,518.07	287.50	148.10	4,429,701	4,429,701
Total	1,518.07	287.50	148.10	4,429,701	4,429,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	276.2519	276.2519	0.0125	2.5800e-003	277.3343
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	276.2519	276.2519	0.0125	2.5800e-003	277.3343
NaturalGas Mitigated	4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0279	41.0279	7.9000e-004	7.5000e-004	41.2717
NaturalGas Unmitigated	4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0279	41.0279	7.9000e-004	7.5000e-004	41.2717

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	768834	4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0279	41.0279	7.9000e-004	7.5000e-004	41.2717
Total		4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0279	41.0279	7.9000e-004	7.5000e-004	41.2717

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	768834	4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0279	41.0279	7.9000e-004	7.5000e-004	41.2717
Total		4.1500e-003	0.0377	0.0317	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0279	41.0279	7.9000e-004	7.5000e-004	41.2717

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	949608	276.2519	0.0125	2.5800e-003	277.3343
Total		276.2519	0.0125	2.5800e-003	277.3343

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	949608	276.2519	0.0125	2.5800e-003	277.3343
Total		276.2519	0.0125	2.5800e-003	277.3343

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1032	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003
Unmitigated	1.1032	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8506					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003
Total	1.1032	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Consumer Products	0.8506					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003
Architectural Coating	0.2524					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.1032	2.0000e-005	2.0100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8900e-003	3.8900e-003	1.0000e-005	0.0000	4.1500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	95.2615	1.6448	0.0395	148.1499
Unmitigated	95.2615	1.6448	0.0395	148.1499

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	50.3663 / 0	95.2615	1.6448	0.0395	148.1499
Total		95.2615	1.6448	0.0395	148.1499

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	50.3663 / 0	95.2615	1.6448	0.0395	148.1499
Total		95.2615	1.6448	0.0395	148.1499

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	54.8218	3.2399	0.0000	135.8186
Unmitigated	54.8218	3.2399	0.0000	135.8186

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	270.07	54.8218	3.2399	0.0000	135.8186
Total		54.8218	3.2399	0.0000	135.8186

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	270.07	54.8218	3.2399	0.0000	135.8186
Total		54.8218	3.2399	0.0000	135.8186

9.0 Operational Offroad

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

TUD**Tuolumne County APCD Air District, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	217.80	1000sqft	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Demolition -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	255.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	8.00	95.00
tblConstructionPhase	NumDays	5.00	70.00
tblConstructionPhase	PhaseEndDate	4/28/2019	8/21/2020
tblConstructionPhase	PhaseEndDate	4/28/2019	10/25/2019
tblConstructionPhase	PhaseEndDate	4/28/2019	12/13/2019
tblConstructionPhase	PhaseEndDate	4/28/2019	8/2/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	9/2/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	8/5/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	8/5/2019
tblGrading	AcresOfGrading	47.50	4.00
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.2505	69.4767	55.8023	0.0949	7.7055	3.3868	11.0922	3.7489	3.1620	6.9109	0.0000	9,343.7090	9,343.7090	2.0174	0.0000	9,394.1441
2020	3.6415	24.7164	29.0717	0.0487	1.3812	1.1580	2.5391	0.3711	1.0890	1.4602	0.0000	4,752.8605	4,752.8605	0.7633	0.0000	4,771.9426
Total	11.8919	94.1931	84.8740	0.1436	9.0866	4.5447	13.6314	4.1200	4.2510	8.3711	0.0000	14,096.5695	14,096.5695	2.7807	0.0000	14,166.0866

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.2505	69.4767	55.8023	0.0949	7.7055	3.3868	11.0922	3.7489	3.1620	6.9109	0.0000	9,343.7090	9,343.7090	2.0174	0.0000	9,394.1441
2020	3.6415	24.7164	29.0717	0.0487	1.3812	1.1580	2.5391	0.3711	1.0890	1.4602	0.0000	4,752.8605	4,752.8605	0.7633	0.0000	4,771.9426
Total	11.8919	94.1931	84.8740	0.1436	9.0866	4.5447	13.6314	4.1200	4.2510	8.3711	0.0000	14,096.5695	14,096.5695	2.7807	0.0000	14,166.0866

[illegible]

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Energy	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Mobile	7.4949	22.7880	88.4885	0.1614	12.5031	0.2032	12.7063	3.3540	0.1909	3.5449		16,145.6353	16,145.6353	1.0315		16,171.4238
Total	13.5635	22.9947	88.6842	0.1627	12.5031	0.2189	12.7221	3.3540	0.2067	3.5607		16,393.4941	16,393.4941	1.0364	4.5400e-003	16,420.7584

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Energy	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Mobile	7.4949	22.7880	88.4885	0.1614	12.5031	0.2032	12.7063	3.3540	0.1909	3.5449		16,145.6353	16,145.6353	1.0315		16,171.4238
Total	13.5635	22.9947	88.6842	0.1627	12.5031	0.2189	12.7221	3.3540	0.2067	3.5607		16,393.4941	16,393.4941	1.0364	4.5400e-003	16,420.7584

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	9/2/2019	8/21/2020	5	255	
2	Demolition	Demolition	8/5/2019	10/25/2019	5	60	
3	Grading	Grading	8/5/2019	12/13/2019	5	95	
4	Site Preparation	Site Preparation	4/29/2019	8/2/2019	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	4.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Welders	1	4.00	46	0.45
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Cement and Mortar Mixers	1	4.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	91.00	36.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	3	8.00	0.00	14.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2516	5.1074	1.9382	9.0900e-003	0.2188	0.0474	0.2662	0.0629	0.0453	0.1082		948.1857	948.1857	0.0373		949.1184
Worker	1.4136	1.0000	11.6801	0.0130	1.1624	0.0136	1.1759	0.3082	0.0125	0.3208		1,286.029 9	1,286.029 9	0.1214		1,289.065 1
Total	1.6652	6.1074	13.6183	0.0221	1.3811	0.0610	1.4421	0.3711	0.0579	0.4290		2,234.215 6	2,234.215 6	0.1587		2,238.183 5

3.2 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2516	5.1074	1.9382	9.0900e-003	0.2188	0.0474	0.2662	0.0629	0.0453	0.1082		948.1857	948.1857	0.0373		949.1184
Worker	1.4136	1.0000	11.6801	0.0130	1.1624	0.0136	1.1759	0.3082	0.0125	0.3208		1,286.029 9	1,286.029 9	0.1214		1,289.065 1
Total	1.6652	6.1074	13.6183	0.0221	1.3811	0.0610	1.4421	0.3711	0.0579	0.4290		2,234.215 6	2,234.215 6	0.1587		2,238.183 5

3.2 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1953	4.6215	1.6305	9.1000e-003	0.2188	0.0281	0.2469	0.0629	0.0268	0.0897		949.0674	949.0674	0.0318		949.8616
Worker	1.3263	0.9089	10.5927	0.0127	1.1624	0.0129	1.1752	0.3082	0.0119	0.3201		1,250.730 0	1,250.730 0	0.1087		1,253.446 5
Total	1.5216	5.5304	12.2232	0.0218	1.3812	0.0409	1.4221	0.3711	0.0387	0.4098		2,199.797 4	2,199.797 4	0.1404		2,203.308 1

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1953	4.6215	1.6305	9.1000e-003	0.2188	0.0281	0.2469	0.0629	0.0268	0.0897		949.0674	949.0674	0.0318		949.8616
Worker	1.3263	0.9089	10.5927	0.0127	1.1624	0.0129	1.1752	0.3082	0.0119	0.3201		1,250.730 0	1,250.730 0	0.1087		1,253.446 5
Total	1.5216	5.5304	12.2232	0.0218	1.3812	0.0409	1.4221	0.3711	0.0387	0.4098		2,199.797 4	2,199.797 4	0.1404		2,203.308 1

3.3 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0492	0.0000	0.0492	7.4500e-003	0.0000	7.4500e-003			0.0000			0.0000
Off-Road	1.8573	18.3448	11.2495	0.0200		0.9475	0.9475		0.8901	0.8901		1,949.2197	1,949.2197	0.4709		1,960.9926
Total	1.8573	18.3448	11.2495	0.0200	0.0492	0.9475	0.9967	7.4500e-003	0.8901	0.8975		1,949.2197	1,949.2197	0.4709		1,960.9926

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.3700e-003	0.0967	0.0291	2.0000e-004	4.0100e-003	7.3000e-004	4.7500e-003	1.0900e-003	7.0000e-004	1.7900e-003		20.8554	20.8554	5.2000e-004		20.8684
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1243	0.0879	1.0268	1.1500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		113.0576	113.0576	0.0107		113.3244
Total	0.1276	0.1846	1.0559	1.3500e-003	0.1062	1.9300e-003	0.1081	0.0282	1.8000e-003	0.0300		133.9129	133.9129	0.0112		134.1928

3.3 Demolition - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0492	0.0000	0.0492	7.4500e-003	0.0000	7.4500e-003			0.0000			0.0000
Off-Road	1.8573	18.3448	11.2495	0.0200		0.9475	0.9475		0.8901	0.8901	0.0000	1,949.2197	1,949.2197	0.4709		1,960.9926
Total	1.8573	18.3448	11.2495	0.0200	0.0492	0.9475	0.9967	7.4500e-003	0.8901	0.8975	0.0000	1,949.2197	1,949.2197	0.4709		1,960.9926

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.3700e-003	0.0967	0.0291	2.0000e-004	4.0100e-003	7.3000e-004	4.7500e-003	1.0900e-003	7.0000e-004	1.7900e-003		20.8554	20.8554	5.2000e-004		20.8684
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1243	0.0879	1.0268	1.1500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		113.0576	113.0576	0.0107		113.3244
Total	0.1276	0.1846	1.0559	1.3500e-003	0.1062	1.9300e-003	0.1081	0.0282	1.8000e-003	0.0300		133.9129	133.9129	0.0112		134.1928

3.4 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0667	0.0000	6.0667	3.3151	0.0000	3.3151			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985		2,321.723 1	2,321.723 1	0.7346		2,340.087 3
Total	2.1149	23.6733	11.6880	0.0234	6.0667	1.0853	7.1520	3.3151	0.9985	4.3135		2,321.723 1	2,321.723 1	0.7346		2,340.087 3

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1243	0.0879	1.0268	1.1500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		113.0576	113.0576	0.0107		113.3244
Total	0.1243	0.0879	1.0268	1.1500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		113.0576	113.0576	0.0107		113.3244

3.4 Grading - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0667	0.0000	6.0667	3.3151	0.0000	3.3151			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985	0.0000	2,321.723 1	2,321.723 1	0.7346		2,340.087 3
Total	2.1149	23.6733	11.6880	0.0234	6.0667	1.0853	7.1520	3.3151	0.9985	4.3135	0.0000	2,321.723 1	2,321.723 1	0.7346		2,340.087 3

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1243	0.0879	1.0268	1.1500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		113.0576	113.0576	0.0107		113.3244
Total	0.1243	0.0879	1.0268	1.1500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		113.0576	113.0576	0.0107		113.3244

3.5 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3674	14.4118	6.5868	0.0116		0.7448	0.7448		0.6852	0.6852		1,152.9703	1,152.9703	0.3648		1,162.0900
Total	1.3674	14.4118	6.5868	0.0116	6.0221	0.7448	6.7669	3.3102	0.6852	3.9954		1,152.9703	1,152.9703	0.3648		1,162.0900

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0777	0.0549	0.6418	7.2000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		70.6610	70.6610	6.6700e-003		70.8278
Total	0.0777	0.0549	0.6418	7.2000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		70.6610	70.6610	6.6700e-003		70.8278

3.5 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3674	14.4118	6.5868	0.0116		0.7448	0.7448		0.6852	0.6852	0.0000	1,152.9703	1,152.9703	0.3648		1,162.0900
Total	1.3674	14.4118	6.5868	0.0116	6.0221	0.7448	6.7669	3.3102	0.6852	3.9954	0.0000	1,152.9703	1,152.9703	0.3648		1,162.0900

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0777	0.0549	0.6418	7.2000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		70.6610	70.6610	6.6700e-003		70.8278
Total	0.0777	0.0549	0.6418	7.2000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		70.6610	70.6610	6.6700e-003		70.8278

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.4949	22.7880	88.4885	0.1614	12.5031	0.2032	12.7063	3.3540	0.1909	3.5449		16,145.6353	16,145.6353	1.0315		16,171.4238
Unmitigated	7.4949	22.7880	88.4885	0.1614	12.5031	0.2032	12.7063	3.3540	0.1909	3.5449		16,145.6353	16,145.6353	1.0315		16,171.4238

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1,518.07	287.50	148.10	4,429,701	4,429,701
Total	1,518.07	287.50	148.10	4,429,701	4,429,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
NaturalGas Unmitigated	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	2106.39	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Total		0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	2.10639	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Total		0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Unmitigated	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	4.6609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0900e-003	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Architectural Coating	1.3829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	4.6609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0900e-003	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Architectural Coating	1.3829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508

7.0 Water Detail

7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

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

TUD**Tuolumne County APCD Air District, Winter****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	217.80	1000sqft	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Off-road Equipment - Non-default values based on PD

Demolition -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	255.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	8.00	95.00
tblConstructionPhase	NumDays	5.00	70.00
tblConstructionPhase	PhaseEndDate	4/28/2019	8/21/2020
tblConstructionPhase	PhaseEndDate	4/28/2019	10/25/2019
tblConstructionPhase	PhaseEndDate	4/28/2019	12/13/2019
tblConstructionPhase	PhaseEndDate	4/28/2019	8/2/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	9/2/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	8/5/2019
tblConstructionPhase	PhaseStartDate	4/29/2019	8/5/2019
tblGrading	AcresOfGrading	47.50	4.00
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.4324	70.0344	55.7417	0.0935	7.7055	3.3880	11.0935	3.7489	3.1632	6.9121	0.0000	9,198.2904	9,198.2904	2.0152	0.0000	9,248.6703
2020	3.7868	25.1495	28.9962	0.0474	1.3812	1.1588	2.5399	0.3711	1.0898	1.4609	0.0000	4,628.7328	4,628.7328	0.7612	0.0000	4,647.7631
Total	12.2192	95.1839	84.7379	0.1409	9.0866	4.5468	13.6334	4.1200	4.2530	8.3730	0.0000	13,827.0233	13,827.0233	2.7764	0.0000	13,896.4334

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	8.4324	70.0344	55.7417	0.0935	7.7055	3.3880	11.0935	3.7489	3.1632	6.9121	0.0000	9,198.2904	9,198.2904	2.0152	0.0000	9,248.6703
2020	3.7868	25.1495	28.9962	0.0474	1.3812	1.1588	2.5399	0.3711	1.0898	1.4609	0.0000	4,628.7328	4,628.7328	0.7612	0.0000	4,647.7631
Total	12.2192	95.1839	84.7379	0.1409	9.0866	4.5468	13.6334	4.1200	4.2530	8.3730	0.0000	13,827.0233	13,827.0233	2.7764	0.0000	13,896.4334

[illegible]

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Energy	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Mobile	6.6215	26.1242	89.4176	0.1506	12.5031	0.2039	12.7071	3.3540	0.1917	3.5456		15,057.4561	15,057.4561	1.0028		15,082.5265
Total	12.6901	26.3309	89.6134	0.1518	12.5031	0.2197	12.7228	3.3540	0.2074	3.5614		15,305.3149	15,305.3149	1.0077	4.5400e-003	15,331.8611

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Energy	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Mobile	6.6215	26.1242	89.4176	0.1506	12.5031	0.2039	12.7071	3.3540	0.1917	3.5456		15,057.4561	15,057.4561	1.0028		15,082.5265
Total	12.6901	26.3309	89.6134	0.1518	12.5031	0.2197	12.7228	3.3540	0.2074	3.5614		15,305.3149	15,305.3149	1.0077	4.5400e-003	15,331.8611

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	9/2/2019	8/21/2020	5	255	
2	Demolition	Demolition	8/5/2019	10/25/2019	5	60	
3	Grading	Grading	8/5/2019	12/13/2019	5	95	
4	Site Preparation	Site Preparation	4/29/2019	8/2/2019	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	4.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Architectural Coating	Cranes	1	4.00	231	0.29
Architectural Coating	Welders	1	4.00	46	0.45
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Cement and Mortar Mixers	1	4.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	91.00	36.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	3	8.00	0.00	14.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2681	5.2751	2.2450	8.9400e-003	0.2188	0.0486	0.2674	0.0629	0.0465	0.1094		932.3174	932.3174	0.0409		933.3389
Worker	1.5543	1.3277	11.3662	0.0119	1.1624	0.0136	1.1759	0.3082	0.0125	0.3208		1,176.016 3	1,176.016 3	0.1165		1,178.928 5
Total	1.8223	6.6027	13.6111	0.0209	1.3811	0.0622	1.4434	0.3711	0.0590	0.4302		2,108.333 8	2,108.333 8	0.1574		2,112.267 4

3.2 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2681	5.2751	2.2450	8.9400e-003	0.2188	0.0486	0.2674	0.0629	0.0465	0.1094		932.3174	932.3174	0.0409		933.3389
Worker	1.5543	1.3277	11.3662	0.0119	1.1624	0.0136	1.1759	0.3082	0.0125	0.3208		1,176.016 3	1,176.016 3	0.1165		1,178.928 5
Total	1.8223	6.6027	13.6111	0.0209	1.3811	0.0622	1.4434	0.3711	0.0590	0.4302		2,108.333 8	2,108.333 8	0.1574		2,112.267 4

3.2 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2093	4.7570	1.8921	8.9400e-003	0.2188	0.0288	0.2476	0.0629	0.0276	0.0905		932.1737	932.1737	0.0350		933.0473
Worker	1.4577	1.2065	10.2556	0.0116	1.1624	0.0129	1.1752	0.3082	0.0119	0.3201		1,143.496 1	1,143.496 1	0.1034		1,146.081 3
Total	1.6669	5.9635	12.1477	0.0205	1.3812	0.0417	1.4229	0.3711	0.0395	0.4106		2,075.669 8	2,075.669 8	0.1384		2,079.128 6

3.2 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2093	4.7570	1.8921	8.9400e-003	0.2188	0.0288	0.2476	0.0629	0.0276	0.0905		932.1737	932.1737	0.0350		933.0473
Worker	1.4577	1.2065	10.2556	0.0116	1.1624	0.0129	1.1752	0.3082	0.0119	0.3201		1,143.496 1	1,143.496 1	0.1034		1,146.081 3
Total	1.6669	5.9635	12.1477	0.0205	1.3812	0.0417	1.4229	0.3711	0.0395	0.4106		2,075.669 8	2,075.669 8	0.1384		2,079.128 6

3.3 Demolition - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0492	0.0000	0.0492	7.4500e-003	0.0000	7.4500e-003			0.0000			0.0000
Off-Road	1.8573	18.3448	11.2495	0.0200		0.9475	0.9475		0.8901	0.8901		1,949.2197	1,949.2197	0.4709		1,960.9926
Total	1.8573	18.3448	11.2495	0.0200	0.0492	0.9475	0.9967	7.4500e-003	0.8901	0.8975		1,949.2197	1,949.2197	0.4709		1,960.9926

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4800e-003	0.1014	0.0308	2.0000e-004	4.0100e-003	7.5000e-004	4.7600e-003	1.0900e-003	7.1000e-004	1.8100e-003		20.6616	20.6616	5.5000e-004		20.6754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1366	0.1167	0.9992	1.0500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		103.3861	103.3861	0.0102		103.6421
Total	0.1401	0.2181	1.0300	1.2500e-003	0.1062	1.9500e-003	0.1081	0.0282	1.8100e-003	0.0300		124.0477	124.0477	0.0108		124.3174

3.3 Demolition - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0492	0.0000	0.0492	7.4500e-003	0.0000	7.4500e-003			0.0000			0.0000
Off-Road	1.8573	18.3448	11.2495	0.0200		0.9475	0.9475		0.8901	0.8901	0.0000	1,949.2197	1,949.2197	0.4709		1,960.9926
Total	1.8573	18.3448	11.2495	0.0200	0.0492	0.9475	0.9967	7.4500e-003	0.8901	0.8975	0.0000	1,949.2197	1,949.2197	0.4709		1,960.9926

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4800e-003	0.1014	0.0308	2.0000e-004	4.0100e-003	7.5000e-004	4.7600e-003	1.0900e-003	7.1000e-004	1.8100e-003		20.6616	20.6616	5.5000e-004		20.6754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1366	0.1167	0.9992	1.0500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		103.3861	103.3861	0.0102		103.6421
Total	0.1401	0.2181	1.0300	1.2500e-003	0.1062	1.9500e-003	0.1081	0.0282	1.8100e-003	0.0300		124.0477	124.0477	0.0108		124.3174

3.4 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0667	0.0000	6.0667	3.3151	0.0000	3.3151			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985		2,321.723 1	2,321.723 1	0.7346		2,340.087 3
Total	2.1149	23.6733	11.6880	0.0234	6.0667	1.0853	7.1520	3.3151	0.9985	4.3135		2,321.723 1	2,321.723 1	0.7346		2,340.087 3

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1366	0.1167	0.9992	1.0500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		103.3861	103.3861	0.0102		103.6421
Total	0.1366	0.1167	0.9992	1.0500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		103.3861	103.3861	0.0102		103.6421

3.4 Grading - 2019**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0667	0.0000	6.0667	3.3151	0.0000	3.3151			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985	0.0000	2,321.723 1	2,321.723 1	0.7346		2,340.087 3
Total	2.1149	23.6733	11.6880	0.0234	6.0667	1.0853	7.1520	3.3151	0.9985	4.3135	0.0000	2,321.723 1	2,321.723 1	0.7346		2,340.087 3

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1366	0.1167	0.9992	1.0500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		103.3861	103.3861	0.0102		103.6421
Total	0.1366	0.1167	0.9992	1.0500e-003	0.1022	1.2000e-003	0.1034	0.0271	1.1000e-003	0.0282		103.3861	103.3861	0.0102		103.6421

3.5 Site Preparation - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3674	14.4118	6.5868	0.0116		0.7448	0.7448		0.6852	0.6852		1,152.9703	1,152.9703	0.3648		1,162.0900
Total	1.3674	14.4118	6.5868	0.0116	6.0221	0.7448	6.7669	3.3102	0.6852	3.9954		1,152.9703	1,152.9703	0.3648		1,162.0900

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0854	0.0730	0.6245	6.6000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		64.6163	64.6163	6.4000e-003		64.7763
Total	0.0854	0.0730	0.6245	6.6000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		64.6163	64.6163	6.4000e-003		64.7763

3.5 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3674	14.4118	6.5868	0.0116		0.7448	0.7448		0.6852	0.6852	0.0000	1,152.9703	1,152.9703	0.3648		1,162.0900
Total	1.3674	14.4118	6.5868	0.0116	6.0221	0.7448	6.7669	3.3102	0.6852	3.9954	0.0000	1,152.9703	1,152.9703	0.3648		1,162.0900

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0854	0.0730	0.6245	6.6000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		64.6163	64.6163	6.4000e-003		64.7763
Total	0.0854	0.0730	0.6245	6.6000e-004	0.0639	7.5000e-004	0.0646	0.0169	6.9000e-004	0.0176		64.6163	64.6163	6.4000e-003		64.7763

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6215	26.1242	89.4176	0.1506	12.5031	0.2039	12.7071	3.3540	0.1917	3.5456		15,057.4561	15,057.4561	1.0028		15,082.5265
Unmitigated	6.6215	26.1242	89.4176	0.1506	12.5031	0.2039	12.7071	3.3540	0.1917	3.5456		15,057.4561	15,057.4561	1.0028		15,082.5265

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	1,518.07	287.50	148.10	4,429,701	4,429,701
Total	1,518.07	287.50	148.10	4,429,701	4,429,701

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
NaturalGas Unmitigated	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	2106.39	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Total		0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	2.10639	0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837
Total		0.0227	0.2065	0.1735	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.8111	247.8111	4.7500e-003	4.5400e-003	249.2837

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Unmitigated	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.6609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0900e-003	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Total	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	4.6609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0900e-003	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508
Architectural Coating	1.3829					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	6.0459	2.0000e-004	0.0223	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		0.0477	0.0477	1.3000e-004		0.0508

7.0 Water Detail

7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

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

SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Appendix C Biological Resources: Communities and Special Status Species Potential Occurrence Table
November 1, 2019

Appendix C BIOLOGICAL RESOURCES: COMMUNITIES AND SPECIAL STATUS SPECIES POTENTIAL OCCURRENCE TABLE

B.1 BIOLOGICAL COMMUNITIES

B.1.1 Disturbed Lands/Ruderal

Disturbed lands/ruderal land cover types typically include disturbed lands, industrial and commercial areas, vacant lots, and remnant native habitats within the proposed Project area. Ornamental planted landscapes were also observed intermittently throughout this landcover type of the proposed Project area.

Common observed species at the time of baseline biological surveys include wild geranium (*Geranium dissectum*), hyssop loosestrife (*Lythrum hyssopifolia*), Kentucky blue grass (*Poa pratensis*), clover species (*trifolium* spp.), and red stemmed filaree (*Erodium cicutarium*). Some of these introduced ornamental species have become locally naturalized.

This land cover type is not classified as a biological vegetation community; however, it is present throughout the proposed Project area within the existing SRWWTF.

B.1.2 Blue Oak-Foothill Pine Woodland Alliance

Blue oak and foothill pine typically comprise the overstory of this habitat, with blue oak usually most abundant. Stands dominated by foothill pine tend to lose their blue oak, which is intolerant of shade. In the foothills of the Sierra Nevada, tree species typically associated with this habitat are interior live oak (*Quercus wislizeni*) and California buckeye (*Aesculus californica*). At lower elevations, where blue oaks make up most of the canopy, the understory tends to be primarily annual grasses and forbs.

Within the proposed Project area, blue oak-foothill pine woodland is present at the existing SRWWTF along the entrance road, on the east side of the storage ponds where there will be a staging area, and to the west, along Woods Creek. The condition of this community at the SRWWTF is declining due to the encroachment of non-native annual grasses and shrubs.

B.1.3 Non-Native Annual Grassland Herbaceous Alliance

Native grasslands within the proposed Project area have been degraded due to encroachment from non-native species and development, thus decreasing biodiversity and habitat suitability. Non-native annual grasslands are present throughout the proposed Project area. The percent cover and composition of grasses changes depending on cardinal direction, though the species present are primarily uniform in most areas. Along the lower elevation ridges and where drainages are present, non-native annual grassland acts as an understory to the blue oak-foothill pine woodland.



SONORA REGIONAL WASTEWATER TREATMENT FACILITY IMPROVEMENTS PROJECT CEQA INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Appendix C Biological Resources: Communities and Special Status Species Potential Occurrence Table
November 1, 2019

B.1.4 Wetlands and Other Hydrologic Communities and Features

Man-made hydrologic features are extensive within the proposed Project area, but natural features and hydrophytic vegetation associated with these features were not observed within the proposed Project area. Hydrologic features observed throughout the entirety of the proposed Project area during reconnaissance-level biological surveys primarily included existing SRWWTF ponds.

Additionally, while not within the proposed Project area, Woods Creek and associated riparian habitat border the existing SRWWTF to the west. There is a chain link fence boundary that prevents ground movement for wildlife species to enter and/or exit the SRWWTF. However, with the riparian habitat and associated creek adjacent to the proposed Project area, wildlife species have the potential to be attracted to the area.

B.1.5 Wildlife Habitat

The adjacent riparian and wetland habitats have the potential to be high value habitat for a variety of wildlife including birds, mammals, reptiles, amphibians, and invertebrates alike. Wildlife species have been known to use these habitats during all stages of their life cycles including breeding, feeding, nesting, and/or migration. However, the biological vegetation communities and habitats present within the proposed Project area (actual footprint) provide minimal suitable habitat for both special status vegetation and wildlife species.

Wildlife movement corridors have been recognized by federal agencies and the State as important habitats worthy of conservation. Wildlife movement corridors provide seasonal migration between winter and summer habitats and provide non-migrant wildlife movement within their home range food, cover, and reproduction. While data on the locations and value of wildlife movement corridors specific to the proposed Project region is lacking, the establishment of deer migration corridors have been pursued within a 50-foot buffer on either side of Woods Creek. While the existing SRWWTF overlaps with this buffer, the facility is fenced and inaccessible to deer.

In addition, the aforementioned biological vegetation communities (e.g., riparian corridors, blue oak-foothill pine woodland) have the potential to support wildlife movement in the proposed Project region, the existing fragmentation of the surrounding landscape by the SRWWTF, SR 49 and 108, the Sierra Railroad, South Washington Street, and the nearby Mother Lode Fairgrounds is likely to reduce wildlife use of the proposed Project area for migration or other movements within the proposed Project area.

B.2 SPECIAL STATUS SPECIES

Based on the results of the background research listed in Section 3.4 Biological Resources, a total of 29 special status plant and 27 wildlife species were identified as potentially occurring within the proposed Project region (e.g., in USGS 7.5-minute Quads for Angels Camp, Columbia, Columbia SE, New Melones Dam, Sonora, Standard, Keystone, Chinese Camp, and Moccasin). This includes special status plant and wildlife species known to occur within five miles of the proposed Project area or have the potential to



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occur based on background research data from the CDFW CNDDDB, CNPS online inventory, Calflora, and USFWS list of Federal Endangered and Threatened Species. Conclusions in Table C.1 below regarding the habitat suitability and the potential for species occurrence were based on the background research, database searches, and local observation and analysis of habitat suitability during field surveys. For each special status species known to occur in the Project region, the “potential for occurrence” at the Project area has been evaluated and is defined as follows:

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

Species with a moderate or high potential to occur or are known to be present within the proposed Project area are included in Table 3.4-1 in the body of this IS/MND and further described in the species accounts. Species identified in the database search but determined to have a very low to nil or low potential to occur within the Project area are included in Table B.1 below and do not warrant further evaluation.



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

Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
Plants							
beaked clarkia Clarkia rostrata	–	S2S3	1B.3	196-1,641 feet (60-500 meters)	Cismontane woodland; valley and foothill grassland.	April-May	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
big-scale balsamroot Balsamorhiza macrolepis	–	S2	1B.2	295-5,102 feet (90-1,555 meters)	Chaparral; valley and foothill grassland; cismontane woodland; serpentine.	March-June	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Chinese Camp brodiaea Brodiaea pallida	T	E, S1	1B.1	0-1,345 meters (0-410 meters)	Vernal streambeds; valley and foothill grassland; cismontane woodland; serpentine.	May-June	Very Low to Nil. No suitable habitat within the proposed Project area. Outside of known species range. No known occurrences within five miles of the proposed Project area.
Congdon's lomatium Lomatium congdonii	–	S2	1B.2	984-6,890 feet (300-2,100 meters)	Chaparral, cismontane woodland; serpentine.	March-June	Low. Limited suitable habitat within the proposed Project area. Known occurrence from 2009 near French Flat Road, approximately four miles west of the proposed Project area.



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Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
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delicate bluecup <i>Githopsis tenella</i>	–	S2	1B.3	1,066-6,234 feet (325-1,900 meters)	Chaparral; cismontane woodland; mesic; serpentinite.	April-June	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
foothill jepsonia <i>Jepsonia heterandra</i>	–	S4	4.3	164-1,641 feet (50-500 meters)	Cismontane woodland; lower montane coniferous forest; rocky, metamorphic.	August-December	Low. Limited suitable habitat in the proposed Project area. No known occurrences within five miles of the proposed Project area.
Hernandez bluecurls <i>Trichostema rubisepalum</i>	–	S4	4.3	984-4,708 feet (300-1,435 meters)	Broadleafed upland forest; chaparral; cismontane woodland; lower montane coniferous forest; vernal pools; volcanic or serpentinite, gravelly.	June-August	Low. Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Jepson's onion <i>Allium jepsonii</i>	–	S1	1B.2	984-4,330 feet (300-1,320 meters)	Chaparral; cismontane woodland; lower montane coniferous forest; serpentine and volcanic environments.	April-August	Low. Limited suitable habitat within the proposed Project area. Known occurrences from 1991 near Table Mountain and Rawhide Flat, approximately two miles west of the proposed Project area.



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	Federal	State	CNPS				
Layne's ragwort <i>Packera layneae</i>	T	R	1B.2	655-3,280 feet (200-1,000 meters)	Chaparral, cismontane woodland; serpentine, gabbroic or rocky environments.	April-August	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Mariposa clarkia <i>Clarkia biloba</i> <i>ssp. australis</i>	–	S2S3	1B.2	984-4,790 feet (300-1,460 meters)	Chaparral; cismontane woodland; serpentinite.	April-July	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Mariposa cryptantha <i>Cryptantha mariposae</i>	–	–	1B.3	656-2,133 feet (200-650 meters)	Chaparral; serpentine; rocky soils.	April-June	Low. Limited suitable habitat within the proposed Project area. Known occurrences from 1991 and 1993 near Quartz and Stent, approximately five miles south of the proposed Project area.
Michael's rein orchid <i>Piperia michaelii</i>	–	S3	4.2	9-3,002 feet (3-915 meters)	Coastal bluff scrub; closed-cone coniferous forest; chaparral; cismontane woodland; coastal scrub; lower montane coniferous forest.	April-August	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.



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	Federal	State	CNPS				
mountain lady's- slipper <i>Cypripedium</i> <i>montanum</i>	-	S4	4.2	606-7,300 feet (185-2,225 meters)	Broad-leafed upland forest; cismontane woodland; lower montane coniferous forest; North Coast coniferous forest.	March-August	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Parry's horkelia <i>Horkelia</i> <i>parryi</i>	—	S2	1B.2	262-3,510 feet (80-1,070 meters)	Cismontane woodland, chaparral; lone formation and other soils.	April- September	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Rawhide Hill onion <i>Allium</i> <i>tuolumnense</i>	—	S2	1B.2	984-1,967 feet (300-600 meters)	Cismontane woodland; serpentine.	March-May	Very Low to Nil. No suitable habitat within the proposed Project area.
Red Hills cryptantha <i>Cryptantha</i> <i>spithamaea</i>	—	S2	1B.3	902–1,510 feet (275–460 meters)	Chaparral; cismontane woodland; streambeds; openings; serpentine.	April–May	Very Low to Nil. No suitable habitat within the proposed Project area. Known occurrence from 1998 near Rawhide Flat, approximately four miles west of the proposed Project area.



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Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	–	S2	1B.2	804–4,068 feet (245–1,240 meters)	Chaparral; cismontane woodland; lower montane coniferous forest; serpentinite and gabbroic soils.	May–June	Very Low to Nil. No suitable habitat within the proposed Project area.
Red Hills vervain <i>Verbena californica</i>	T	T, S2	1B.1	853–1,313 feet (260–400 meters)	Cismontane woodland; valley and foothill grassland; serpentinite seeps or creeks.	May–September	Very Low to Nil. No suitable habitat within the proposed Project area. Outside of species known range. No known occurrences within five miles of the proposed Project area.
serpentine bluecup <i>Githopsis pulchella</i> ssp. <i>serpentinicola</i>	–	S3	4.3	1,049–2,001 feet (320–610 meters)	Cismontane woodland; serpentinite or lone.	May–June	Low. Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
shaggyhair lupine <i>Lupinus spectabilis</i>	–	S2	1B.2	853–2,707 feet (260–825 meters)	Chaparral; cismontane woodland; serpentinite.	April–May	Low. Limited suitable habitat within the proposed Project area.
spiny-sepaed button-celery <i>Eryngium spinosepalum</i>	–	S2	1B.2	262–2,034 feet (80–620 meters)	Valley and foothill grassland; vernal pools.	April–June	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.



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Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
Stanislaus monkeyflower <i>Erythranthe marmorata</i>	–	SX	1B.1	328–2,953 feet (100–900 meters)	Cismontane woodland; lower montane coniferous forest.	March–May	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
stinkbells <i>Fritillaria agrestis</i>	–	S3	4.2	32–5,100 feet (10–1,555 meters)	Chaparral; cismontane woodland; pinyon and juniper woodland; valley and foothill grassland; clay and serpentine environments.	March–June	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
streambank spring beauty <i>Claytonia parviflora</i> ssp. <i>grandiflora</i>	–	S3	4.2	820–3,937 feet (250–1,200 meters)	Cismontane woodland; wetlands; rocky environments.	February–May	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Tuolumne button-celery <i>Eryngium pinnatisectum</i>	–	S2	1B.2	230–3,002 feet (70–915 meters)	Cismontane woodland; lower montane coniferous forest; vernal pools; mesic.	May–August	Low. Limited suitable habitat within the proposed Project area.



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	Federal	State	CNPS				
Tuolumne fawn lily <i>Erythronium tuolumnense</i>	–	S2S3	1B.2	1,673–4,479 feet (510–1,365 meters)	Broadleafed upland forest; chaparral; cismontane woodland; lower montane coniferous forest.	March–June	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Tuolumne iris <i>Iris hartwegii</i> ssp. <i>columbiana</i>	-	S1	1B.2	1,390–4,595 feet (425–1,400 meters)	Cismontane woodland; lower montane coniferous forest.	May–June	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
yellow-lip pansy monkeyflower <i>Diplacus pulchellus</i>	–	S2	1B.2	1,968–6,562 feet (600–2,000 meters)	Lower montane coniferous forest; meadows and seeps; vernal mesic, often disturbed areas, clay.	April–July	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Invertebrates							
Crotch bumble bee <i>Bombus crotchii</i>	-	S1S2	N/A	Central Valley and adjacent foothills, southwestern California. Historically common in the Central Valley of California.	Open grassland; scrub habitats. Usually nests underground.	Spring–Summer	Low. Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.



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Common Name Scientific Name	Legal Status			Geographic Distribution/ Floristic Province	Preferred Habitat	Identification Period	Level of Potential for Occurrence Within Project Area
	Federal	State	CNPS				
Grady's Cave amphipod <i>Stygobromus gradyi</i>	-	S1	N/A	Grady's Cave, Tuolumne County, California.	Intermittent stream pools within the cave.	Year-round	Very Low to Nil. No suitable habitat within the proposed Project area.
Hirsute Sierra sideband (snail) <i>Monadenia mormonum hirsuta</i>	-	S1	N/A	Tuolumne County near Jamestown.	Associated with the basalt of Table Mountain.	Year-round	Very Low to Nil. No suitable habitat within the proposed Project area. Known occurrences near Table Mountain, approximately two miles northwest of the proposed Project area.
Lacey's Cave pseudoscorpion <i>Larca laceyi</i>	-	S1	N/A	Music Hall Cave in Tuolumne County.	Mines and caves.	Year-round	Very Low to Nil. No suitable habitat within the proposed Project area.
Music Hall Cave pseudoscorpion <i>Pseudogarypus orpheus</i>	-	S1	N/A	Music Hall Cave in Tuolumne County.	Mines and caves.	Year-round	Very Low to Nil. No suitable habitat within the proposed Project area.
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	S1	N/A	California Central Valley and foothills below 3,280 feet (1,000 meters) elevation.	Elderberry shrubs.	Year-round	Low. No suitable habitat within the proposed Project area. Known occurrence from 2002 and 2007 near Rawhide Flat and Algerine School, approximately four miles west and south of the proposed Project, respectively.



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	Federal	State	CNPS				
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T, X	-	N/A	Scattered throughout Central Valley, Coast Range, and Southern California.	Vernal pools.	December–May	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project.
Fish							
delta smelt <i>Hypomesus transpacificus</i>	T	E	N/A	From Suisun Bay upstream through the Delta in Contra Costa, San Joaquin, Yolo, Sacramento, Solano, Counties.	Estuaries, river channels, tidally influenced backwaters. Shallow, fresh or slightly brackish water upstream of mixing zone (spawning)	March–June (spawning)	Very Low to Nil. No suitable habitat within the proposed Project area. Out of species range; no known occurrences within five miles of the proposed Project area.
San Joaquin roach <i>Lavinia symmetricus</i>	-	SSC, S3	N/A	Sacramento-San Joaquin Valley. Tributaries to the San Joaquin River from the Cosumnes River south.	Varied habitats; coastal streams to mountain foothill streams. Primarily found in small warm streams 1–3 feet deep with large cobbles, isolated pools, moderate to strong water flow. Spawns in gravel beds or riffles.	Year-round	Very Low to Nil. No suitable habitat within the proposed Project area; no connectivity to viable waterways. Known occurrences from 1998 and 1999 in Sullivan, Woods, and Rough and Ready Creeks, approximately three miles southwest, three miles south, and five miles southeast of the proposed Project area, respectively.



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	Federal	State	CNPS				
Reptiles and Amphibians							
California red- legged frog <i>Rana draytonii</i>	T, X	SSC	N/A	Coastal Range of California, foothill range of Sierra Nevada mountains.	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Year-round	Low. Limited suitable habitat within the proposed Project area. There are previously known occurrences within five miles of the proposed Project area; however, there are no recent known occurrences. Additionally, the proposed Project is outside of suitable habitat for CRLF.
California tiger salamander <i>Ambystoma californiense</i>	T, X	T	N/A	Isolated populations: Gray Lodge NWR, Sonoma County, and Santa Barbara County.	Grassland, oak savanna, edges of mixed woodland and coniferous forest.	Year-round	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Birds							
bald eagle <i>Haliaeetus leucocephalus</i>	D	E, FP	N/A	North America including all continuous U.S.	Foraging areas include rivers, reservoirs, lakes, estuaries, and coastal marine ecosystems. Breeds within one mile of foraging habitat and primarily near reservoirs in California.	Year-round	Low: Limited suitable habitat within the proposed Project area.



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	Federal	State	CNPS				
black swift <i>Cypseloides niger</i>	-	SSC	N/A	Coastal belt of Santa Cruz and Monterey Counties. Central and southern Sierra Nevada. San Bernardino and San Jacinto Mountains.	Mountainous regions, nesting on canyon walls near water or behind waterfalls.	Breeding	Low. Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
burrowing owl <i>Athene cunicularia</i>	-	SCC, S3	N/A	Eastern California, Central Valley.	Open, dry annual or perennial grasslands, deserts, and scrublands with by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Breeding	Low. Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.



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	Federal	State	CNPS				
golden eagle <i>Aquila chrysaetos</i>	-	FP, WL, S3	N/A	Throughout California, except center of Central Valley. 0–11,500 feet (0–3,833 meters)	Rolling foothills, mountain areas, sage-juniper flats, and desert. Nests in cliff-walled canyons and large trees in open areas.	Year-round	Low: Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
olive-sided flycatcher <i>Contopus cooperi</i>	-	SSC	N/A	Mountain ranges throughout the western North America, including the Sierra Nevada.	Coniferous forests at edges and openings, meadows and ponds, nesting on the outer rim of a tree branch.	Breeding	Low. Limited suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
prairie falcon <i>Falco mexicanus</i>	-	WL	N/A	In California from the southeastern deserts, northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada.	Grasslands, shrub-steppe, deserts, and other open areas. Nests on cliff ledges, bluffs, and rock outcrops.	Year-round	Low: Limited suitable habitat within the proposed Project area. Known occurrence from 1995, west and within five miles of the proposed Project area.
tricolored blackbird <i>Agelaius tricolor</i>	-	T, SSC	N/A	Highly colonial species, most numerous in Central Valley and Coastal Range.	Freshwater marshes, swamps, wetlands. Requires nearby open water.	Year-round	Low. Limited suitable habitat within the proposed Project area.



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willow flycatcher <i>Empidonax traillii</i>	-	E	N/A	United States, through Mexico south into the northern region of South America.	Nests in riparian areas, often marsh areas with shrubs and standing or running water.	Breeding	Very Low to Nil. No suitable habitat within the proposed Project area. No known occurrences within five miles of the proposed Project area.
Mammals							
fisher – West Coast DPS <i>Pekania pennanti</i>	PT	T, SSC	N/A	In California, currently in two separated regions: the northwest including the northern Coast Range and Klamath Province, and the southern Sierra Nevada.	In California, currently in two separated regions: the northwest including the northern Coast Range and Klamath Province, and the southern Sierra Nevada.	Year-round	Very Low to Nil: No suitable habitat within the proposed Project area.
North American porcupine <i>Erethizon dorsatum</i>	–	S3	N/A	Common resident of the western U.S and most of Canada.	In California, montane conifer, alpine dwarf-shrub, and wet meadow habitats.	Year-round	Low: Limited suitable habitat within the proposed Project area. Known occurrence from 2010 and 2013 near Reynolds Ferry Road and Telegraph Hill, approximately five miles northwest and northeast of the proposed Project area, respectively.



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Federal – U.S. Fish and Wildlife Service (USFWS)

E = Listed as endangered under the federal ESA

T = Listed as threatened under the federal ESA

D = Delisted under the federal ESA

PD = Proposed for delisting

PT = Proposed threatened

C = Candidate to become a proposed species

MBTA = Migratory Bird Treaty Act

= No listing.

State – California Department Fish and Wildlife (CDFW)

E = Listed as endangered under the California ESA

T = Listed as threatened under the California ESA

R = Listed as rare under the California Native Plant Protection Act.

This category is no longer used for newly listed plants, but some plants previously listed as rare retain this designation.

C = Candidate species for listing as endangered under the California ESA

FP = Fully protected species

SSC = Species of special concern in California

= No listing.

California Native Plant Society (CNPS)

1B = Rank 1B species: rare, threatened, or endangered in California and elsewhere.

2B = Rank 2B species: rare, threatened, or endangered in California but more common elsewhere.

3 = Rank 3 species: plants about which more information is needed to determine their status.

4 = Rank 4 species: plants of limited distribution.

References: Calflora. 2018, CDFW 2018f, CDFW 2018g, CNPS 2018b, CNPS 2018c, USFWS 2019.

