CEQA-Plus Initial Study/Proposed Mitigated Negative Declaration

Sump 85 Reconstruction Project

Prepared for

City of
SACRAMENTO
Department of Utilities

March 2021

City of
SACRAMENTO

DEPARTMENT OF UTILITIES

1395 35TH Street
Sacramento, CA 95822

MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Sump 85 Reconstruction Project – The project would replace the aging Sump 85 sewage pumping station (Sump 85) with a new pumping station that would be located on a 1-acre site 0.06 mile north of the existing Sump 85 site. The new pump station would include new submersible pumps, wet wells, manholes, below and above-grade piping, vertical surge tanks, a generator and electrical equipment building, fiber optic line, a microwave communication tower, and a restroom. The project would also include demolition of the existing station and associated tie-in work related to commissioning of the new station and decommissioning of the existing station. The existing Sump 85 pump station is located at 2537 Edgewater Road in the City of Sacramento. The new pump station site is bordered by Edgewater Road to the west, vacant land to the north and east, and the Bay Drive Drainage Ditch to the south.

The Lead Agency is the City of Sacramento. The City of Sacramento, Department of Utilities, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code. The following is a list of the mitigation measures that have been committed to and shall be implemented by the City or its Contractor to avoid or minimize environmental impacts. Implementation of these mitigation measures will reduce the potentially significant environmental impacts of the project to a less-than-significant level. See Chapter 3, "Environmental Checklist," for the full mitigation measure text.

- Mitigation Measure 3.4-1: Avoid Disturbance of Burrowing Owl Nests
- Mitigation Measure 3.4-2: Avoid Disturbance of Swainson's Hawk Nests
- Mitigation Measure 3.4-3: Avoid Disturbance of White-tailed Kite, Common Raptor, and Other Common Bird Nests
- Mitigation Measure 3.5-1: Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities
- Mitigation Measure 3.5-2: In the Event that Cultural Resources or Tribal Cultural Resources are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources
- Mitigation Measure 3.5-3: Implement Protection Procedures in the Event of Inadvertent Discovery of Human Remains
- Mitigation Measure 3.9-1: Prepare and Implement a Health and Safety Plan
- Mitigation Measure 3.9-2: Traffic Control Plan

A copy of this IS/MND and all supporting documents are available on the City's EIR Webpage at: http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

City of
SACRAMENTO

Due to the COVID 19 crises and the current public counter closures, the document is not available for review in printed form. If you need assistance in reviewing the document please contact Tim Moresco, Associate Civil Engineer at (916) 808-1432 or TMoresco@cityofsacramento.org.

Environmental Services Manager, City of Sacramento, California, a municipal corporation

By: Scott Johnson

For Tom Buford, Environmental Services Manager

Date: 03-01-2021

CEQA-Plus Initial Study/Proposed Mitigated Negative Declaration

Sump 85 Reconstruction Project

Prepared for:

City of Sacramento
Department of Utilities
1395 35th Avenue,
Sacramento, CA 95822

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March 2021

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LIST OF ABBREVIATIONS

BMP	best management practice
CAAQS	California ambient air quality standards
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CO	Carbon monoxide
Cortese List	Hazardous Waste and Substances Sites List
CRHR	California Register of Historic Resources
CVRWQCB	Central Valley Regional Water Quality Control Board
dBA	A-weighted decibels
DOC	California Department of Conservation
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
FHSZ	fire hazard severity zone
FMMP	Farmland Mapping and Monitoring Program
GHGs	greenhouse gases
IPaC	Information, Planning, and Consultation System
L_{dn}	Day-Night Level
L_{eq}	Equivalent Continuous Sound Level
LOS	level of service
LRA	Local Responsibility Area
MLD	Most Likely Descendant
$MTCO_2$/year	metric tons of carbon dioxide-equivalent per year
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center

NO_2	nitrogen dioxide
NO_X	nitrogen oxide
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
PG&E	Pacific Gas and Electric Company
PM_{10}	respirable particulate matter with an aerodynamic diameter less than or equal to 10 microns
$PM_{2.5}$	fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in diameter
PPV	peak particle velocity
PRC	Public Resources Code
RMS	root-mean-square
ROG	reactive organic gases
RPS	renewables portfolio standard
SACOG	Sacramento Area Council of Governments
SFD	Sacramento Fire Department
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	Sulfur dioxide
SPD	Sacramento Police Department
SPL	sound pressure level
SRA	State Responsibility Area
SVAB	Sacramento Valley Air Basin
SWPPP	stormwater pollution prevention plan
USFWS	U.S. Fish and Wildlife Service
VdB	vibration velocity
WDR	waste discharge requirements

1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This Initial Study/Proposed Mitigated Negative Declaration (IS/Proposed MND) has been prepared by the City of Sacramento (City) to evaluate potential environmental effects resulting from the Sump 85 Reconstruction Project (proposed project). Chapter 2 "Project Description" presents detailed project information.

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

In addition, the proposed project may be partially funded with a loan from the federal Clean Water State Revolving Fund (SRF) program established by the federal Water Pollution Control Act (Clean Water Act or CWA), as amended in 1987. This program is administered, nationally, by the U.S. Environmental Protection Agency, and in certain instances the administration has been delegated to the states. In California, administration of the SRF program has been delegated to the State Water Resources Control Board (SWRCB). In turn, the SWRCB requires that all projects being considered under the SRF program must comply with CEQA and certain federal environmental protection laws. Collectively, the SWRCB refers to these requirements as "CEQA-Plus." Therefore, this IS/MND has been expanded beyond the typical content requirements of an initial study to include additional "CEQA-Plus" information. CEQA does not require consideration of alternatives in MNDs; however, an analysis of alternatives is provided to meet SRF Program requirements. Other CEQA-Plus requirements are fulfilled in the IS analysis and associated appendices (see Chapter 4, "Compliance with Federal Regulations," for a complete list of federal laws address in compliance with SRF Program requirements). The SWRCB, as a responsible agency for the project, will consider this CEQA document prior to any SRF loan authorization.

1.2 PURPOSE OF THIS DOCUMENT

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

Under CEQA, the lead agency is the public agency with primary responsibility over approval of the project. The City is the CEQA lead agency because they are responsible for constructing, operating, and funding the Sump 85 Reconstruction Project. The purpose of this document is to present to decision-makers and the public information about the environmental consequences of implementing the project. This disclosure document is being made available to the public for review and comment. Because state agencies will act as responsible or trustee agencies, the City will circulate the IS/Proposed MND to the State Clearinghouse of the Governor's Office of Planning and Research for distribution and a 30-day public review period from March 4, 2021 to April 2, 2021. A copy of the IS/Proposed

MND and supporting documentation are available for review on the City's website: https://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.

Comments should be addressed to:

Tim Moresco, P.E.
Department of Utilities
City of Sacramento
1395 35th Avenue
Sacramento, CA 95822

E-mail comments may be addressed to: TMoresco@cityofsacramento.org.

If you have questions regarding the IS/Proposed MND, please call Tim Moresco at: (916) 808-1432. If you wish to send written comments (including via e-mail), they must be postmarked by April 2, 2021.

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

1.3 SUMMARY OF FINDINGS

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

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

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

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

1.4 DOCUMENT ORGANIZATION

This IS/Proposed MND is organized as follows:

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

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

Chapter 3: Environmental Checklist. This chapter presents an analysis of a range of environmental issues identified in the CEQA Environmental Checklist and determines if project actions would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, or a potentially significant impact. If any impacts

were determined to be potentially significant, an EIR would be required. For this project, however, none of the impacts were determined to be significant after implementation of mitigation measures.

Chapter 4: Compliance with Federal Regulations. This chapter provides a discussion of compliance with federal executive orders and regulations required for "CEQA-Plus" compliance.

Chapter 5: Alternatives. This chapter provides an analysis of alternatives to the proposed project including the No Project Alternative.

Chapter 6: References. This chapter lists the references used in preparation of this IS/Proposed MND.

Chapter 7: List of Preparers. This chapter identifies report preparers.

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2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The City of Sacramento (City) is proposing to replace the aging Sump 85 sewage pumping station (Sump 85) with a new pump station (Sump 85 Reconstruction Project) that would be located 0.06 mile north of the existing Sump 85 site. The new pump station would include new submersible pumps, wet wells, manholes, below and above-grade piping, vertical surge tanks, a generator and electrical equipment building, fiber optic line, a microwave communications tower (microwave tower), and a restroom. The project would also include demolition of the existing pump station and associated tie-in work related to commissioning of the new station and decommissioning of the existing station.

2.2 PROJECT BACKGROUND AND NEED

The existing Sump 85 was constructed in the 1950s and was partially rehabilitated in 1984. The facility is now in need of a complete overhaul to be a self-cleaning, adequately-sized sump station. The current configuration and condition of Sump 85 pose several technical challenges, including:

- air binding and ragging in the wet well, which can lead to substantial overheating and damage;
- difficulty cleaning and operating;
- deteriorating facilities;
- inadequate access resulting from poor site layout and obstructing overhead utilities; and
- no flow meter to accurately monitor flow.

In addition to these technical and operational issues, the existing Sump 85 site is not secure and does not provide safe access to City operators. There is also limited space on the existing site to accommodate an expanded wet well because of the proximity to adjacent residences. Sump 85 has been identified as a high priority pump station for rehabilitation and improvements in the City's Sanitary Sewer Management Plan and therefore requires more frequent inspections until the facility can be replaced or rehabilitated.

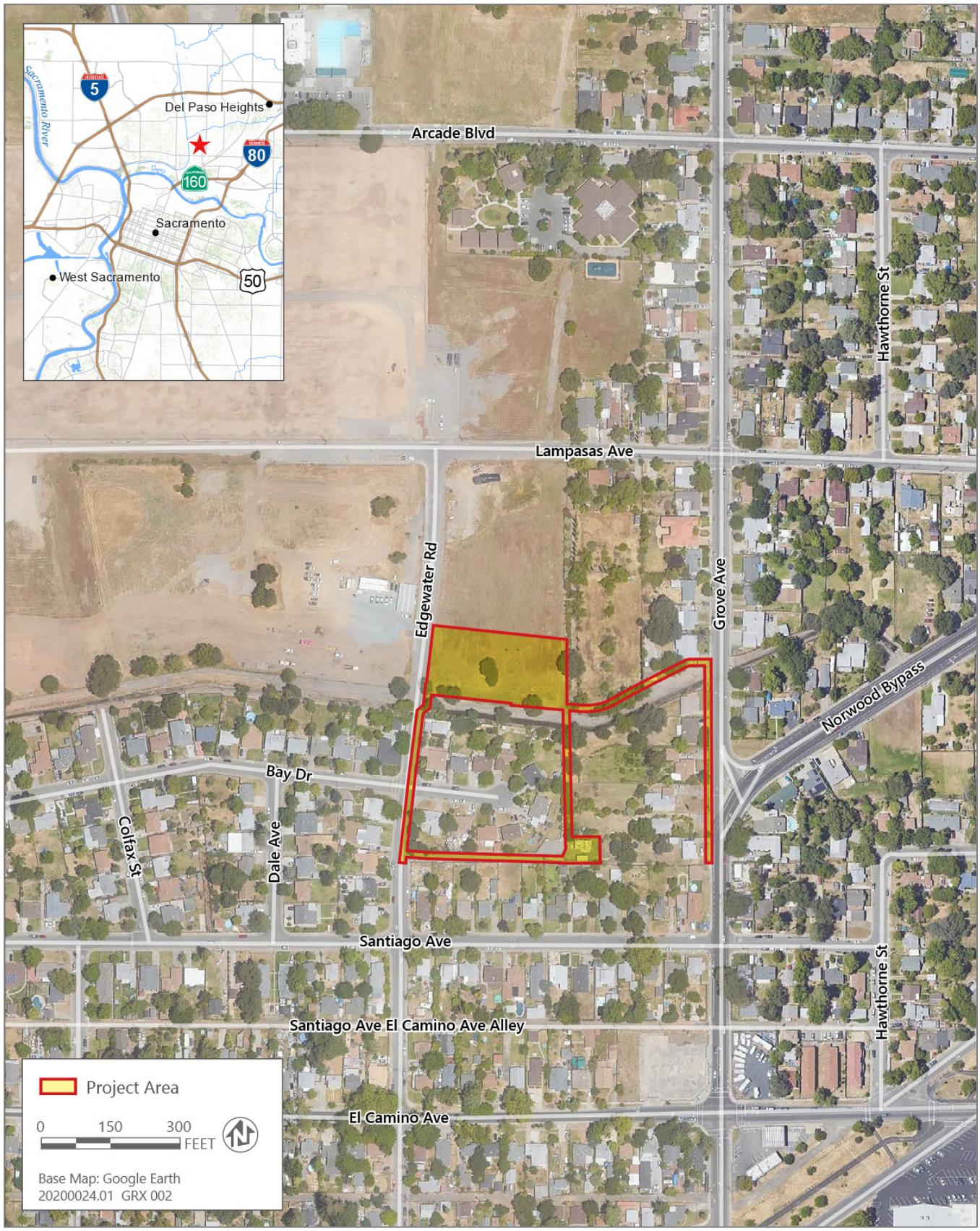
2.3 PROJECT LOCATION

The existing Sump 85 pump station is located at 2537 Edgewater Road in the City of Sacramento (Figure 2-1). The new pump station would be constructed on a 1-acre site north of the existing site (new pump station site). The new pump station site is bordered by Edgewater Road to the west, vacant land to the north and east, and the Bay Drive Drainage Ditch to the south (Figure 2-2). Land uses in the project vicinity include residences, vacant land owned by PG&E, and a maintenance yard for Twin Rivers Unified School District. The project area also includes a corridor along Edgewater Road for installation of a new forcemain and a corridor along Grove Avenue and from Grove Avenue to the new pump station site for a new fiber optic line.

2.4 PROJECT OBJECTIVES

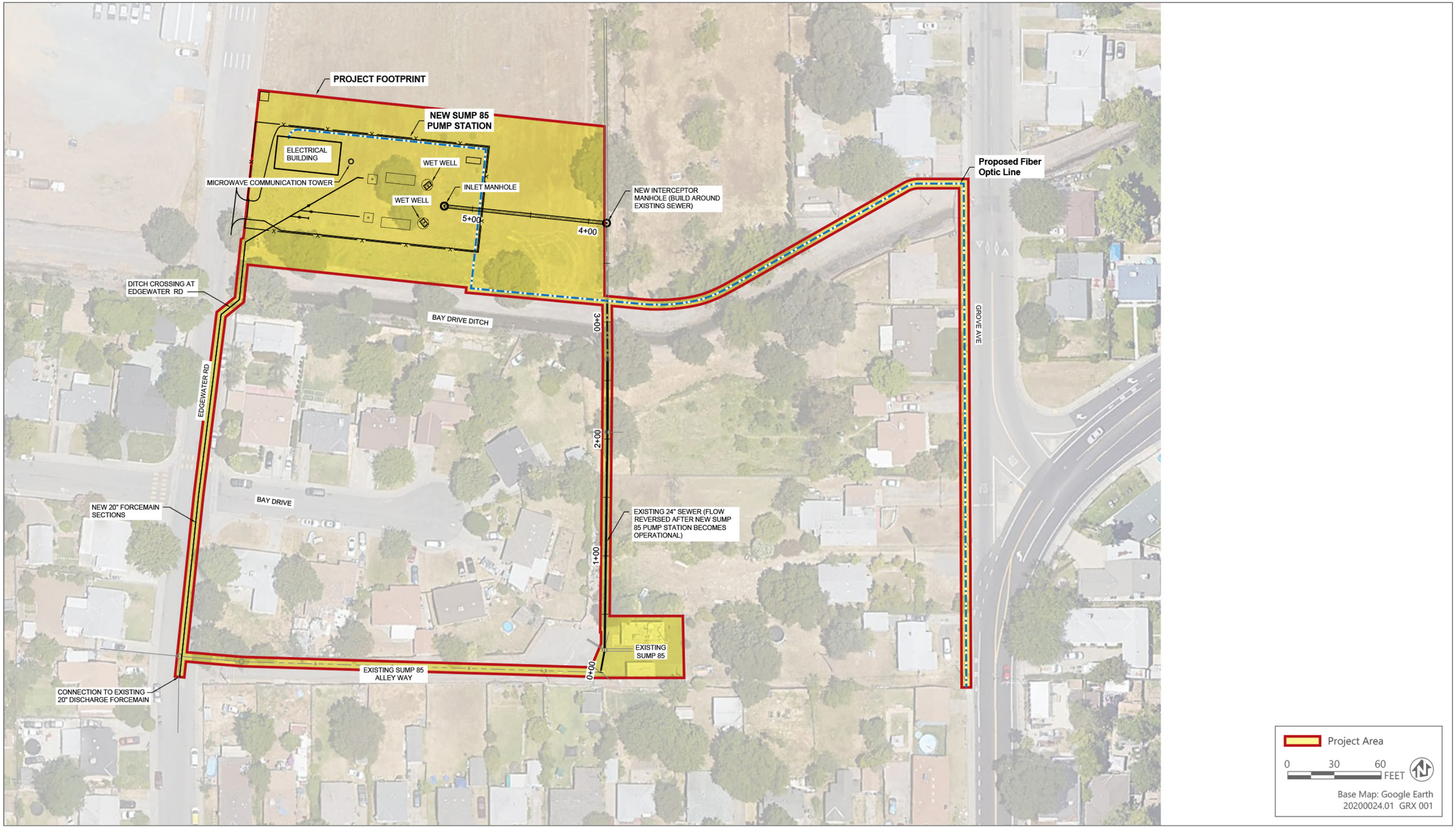
The proposed project is intended to achieve the following basic objectives:

- reduce risk of service interruptions or system failures related to deteriorated facilities,
- improve access for maintenance and operations,
- improve site security,
- reduce the need for maintenance of sewer facilities, and
- strengthen overall communications infrastructure in the project area consistent with City standards.



Source: Figure produced by Ascent Environmental in 2020

Figure 2-1 Project Vicinity



Source: Data provided by Brown and Caldwell 2020

Figure 2-2 Project Area

2.5 EXISTING SUMP 85 PUMP STATION

Sump 85 pumps wastewater from Basin 85 in north Sacramento to Sacramento County's Regional San Wastewater Treatment Plant in Elk Grove, California. Facilities at the existing Sump 85 site include a pump/electrical building, generator building, two surge tanks, a wet well, and an influent manhole. The existing wet dry well has four 50 horsepower pumps that have a capacity of 9,160 gallons per minute and an estimated capacity of 9.5 million gallons per day (MGD). The existing Sump 85 would be demolished once the new pump station is operational.

2.6 PROPOSED PROJECT

The proposed project would involve construction of a new Sump 85 pump station within the new pump station site to replace the existing Sump 85. The new pump station site is currently vacant and would be graded to provide adequate drainage. Once graded, the new pump station site would either be paved or covered with gravel. Two oak trees located in the center of the site would need to be removed. The proposed project would also include off-site improvements along Edgewater Road and Grove Avenue, including installation of an underground fiber optic line and underground sewer connections. The new pump station would include construction and installation of the following components:

- dual 8-foot-diameter wet wells;
- four submersible non-clog pumps (two pumps in each wet well);
- aboveground valves and meters;
- two 2,500-gallon surge tanks;
- activated carbon scrubber for odor and corrosion control;
- electrical building to house the electrical equipment and backup generator;
- controls and local/remote monitoring and operation;
- Americans with Disabilities Act-compliant restroom (enclosed in the electrical building);
- utility water connection;
- SMUD transformer;
- influent manhole;
- microwave tower;
- underground fiber optic line;
- rolling gate with 16-foot vehicle entrance; and
- fencing, lighting, and security equipment.

2.6.1 Wet Wells and Pipelines

The new pump station would include a submersible wet well pumping configuration and a capacity of approximately 7 to 11 MGD. Wet wells would be below grade. A dual wet well arrangement with 35 to 50 horsepower non-clog Flygt pumps and a three-duty one-standby pumping configuration is proposed. Each wet well would be approximately 25 feet deep and would house two identical submersible pumps with two 10-inch discharge headers, one for each pump. Each 10-inch pump discharge header would be steel piping and would connect to a 16-inch header above grade. Each 16-inch steel header would include a magnetic flow meter, measuring flow from each wet well. A bypass pumping connection would allow bypassing the wet wells, if needed. Before leaving the project site, both 16-inch headers would go below grade and combine into a single 20-inch ductile iron forcemain. The pipe sizes are preliminary and may change during final design.

2.6.2 Electrical Building

An electrical building, housing the electrical equipment, including a motor control center, automatic transfer switch, variable frequency drives, generator, and a restroom, would be constructed in the northwest corner of the site and would be approximately 25 feet by 55 feet. A 5-foot concrete sidewalk would be constructed on the south side of the electrical building.

2.6.3 Fencing and Security Measures

The project would have a concrete masonry wall approximately 8 to 10 feet high with barrier spikes surrounding the new pump station site, security lighting, and security equipment depending on final design.

2.6.4 Microwave Communication Tower

A microwave tower would be constructed within the new pump station site immediately east of the electrical building. The microwave tower would serve the new pump station and strengthen the overall communications infrastructure for cellular and internet service in the project area consistent with City standards. The tower would be a monopole design with a spread footing foundation and would consist of a steel lattice with antenna at the top. The tower would be between 90 and 120 feet tall and the footprint would be approximately 324 square feet. The frame would be powder coated steel or other non-reflective material and would not have any aboveground guide wires. The tower would include a radio/antenna, a couple of LED lights for security, and a video camera that would operate on 120VAC. The spread footing foundation would be approximately 2.5 feet deep.

2.6.5 Off-Site Improvements

Off-site improvements would be needed to connect the new pump station with existing utilities including sewer pipelines and fiber optic lines.

A new 20-inch forcemain would direct flow from the project site to the existing 20-inch forcemain along Edgewater Road, near the entrance to the existing Sump 85 site (Figure 2-2). Bay Drive Ditch passes under Edgewater Road through an existing culvert. The new forcemain would be placed under the existing culvert. Excavation depths for the forcemain would be approximately 5 feet or deeper if utilities are encountered. Influent flows to the existing Sump 85 would be intercepted and diverted to the new Sump 85 site via the existing 24-inch sewer. This flow would be diverted by constructing a new interceptor manhole and influent manhole at the project site through a new 30-inch influent sewer into dual wet wells. To divert remaining flows at the existing site, sections of the existing 24-inch sewer along the existing Sump 85 alley would need replaced to avoid standing water in this section of pipeline.

In addition, approximately 875 feet of underground fiber optic line would be installed to connect the electrical building to existing fiber optic lines along Grove Avenue (Figure 2-2). The fiber optic line would follow Grove Avenue north to the north side of Bay Drive Ditch, then extend west along the north side of Bay Drive Ditch until reaching the project site. Excavation depths for the fiber optic line would be approximately 2.5 to 3 feet.

2.6.6 Demolition of Existing Sump 85

The 50 horsepower pumps, generator, and transfer switch would be salvaged from the existing pumping station if possible. All other components of the existing Sump 85 pumping station would be demolished or removed. Underground concrete structures would be demolished and removed to 6-feet below ground. Structures below 6 feet would be filled with controlled low-strength material (CLSM) concrete and abandoned in place. The existing pump station area would then be backfilled and compacted level. The demolition work would include the station building, generator building, on-site yard piping, electrical, and connections to the existing gravity sewer and forcemain. This would include decommissioning steps with the City and utilities to terminate connections at the site.

2.7 CONSTRUCTION

Project construction would take between 36 and 38 weeks beginning in December 2021. Construction of the new Sump 85 pump station on a separate site would allow the existing Sump 85 to remain in service without interruption through most of the construction. All construction would be limited to the hours of 7:00 a.m. through 6:00 p.m., Monday through Friday, consistent with the City of Sacramento noise ordinance. During construction, staging areas for equipment storage, personnel vehicles, and laydown of materials would be within the project footprint. All construction equipment and truck deliveries would occur during the daytime hours. The number of construction workers on-site would vary; however, approximately 10 to 16 workers including carpenters and laborers are anticipated to be on-site during construction, and there may be several deliveries for materials each day with a few additional delivery trips during construction start-up and the end of construction. Equipment used for construction would include one or more of the following: dozer, excavator, air compressor, backhoe, boom truck, extended reach forklift, compactor, grader, a welding machine, and hauling trucks.

Construction of the microwave tower and new pump station, including the influent manhole, dual wet wells, on-site piping, and electrical building, as well as the off-site portions of the forcemain, excluding the connection to the existing forcemain would occur first. Then the interception manhole around the existing 24-inch sewer would be constructed, followed by connecting to the existing 20-inch forcemain.

Anticipated equipment for demolition of the existing pump station would include an excavator, a backhoe, dump trucks for debris, a flatbed haul truck for salvage equipment, a walk-behind compactor, an air compressor with jack hammer, a water truck, and cutting torch. The demolition activities may also require a 12-cubic yard capacity ready-mix concrete truck for CLSM concrete. The anticipated duration of the demolition activities is 4 weeks with a crew of 3 to 5 workers.

The project would comply with the City of Sacramento's Grading Ordinance, which requires projects to comply with the City's Stormwater Quality Improvement Plan (SQIP). In addition, because the disturbed area exceeds 1 acre or more in size, the project would be covered under the City's National Pollutant Discharge Elimination System (NPDES) General Construction Permit. Compliance with the General Construction Permit would require erosion and sediment control plans with specific best management practices (BMPs). BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. The City's SQIP and the Stormwater Quality Design Manual for the Sacramento Region include BMPs to be implemented to mitigate impacts from new development and redevelopment projects.

In addition, during construction the construction contractor would be required to implement Sacramento Metropolitan Air Quality Management District (SMAQMD) Basic Construction Emission Control Practices for controlling fugitive PM_{10} and $PM_{2.5}$ dust emissions and limiting exhaust emissions from construction equipment. These measures would include the following:

- Water all exposed surfaces at least two times daily. Exposed surfaces include, but are not limited to, soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two (2) feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Cover any haul trucks that will be traveling along freeways or major roadways.
- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speed on unpaved roads to 15 miles per hour.
- All roadways, driveways, sidewalks, and parking lots to be paved will be completed as soon as possible. In addition, building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing idling time to 5 minutes (required by California Code of Regulations Title 13, Sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.

- Maintain all construction equipment in proper working condition according to manufacturer's specifications. Equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated.

2.8 OPERATIONS AND MAINTENANCE

Before operation, the new pipelines, pumps, and wells would go through testing and a startup process to determine whether they meet design specifications and are operating properly. Once operational, modifications to the existing sewers between the interception manhole and the existing sump would be made. After the new sump is operational, the flow from the gravity sewers would be reversed between the interceptor manhole and the existing pump stations such that they will be free-draining toward the new sump. The new microwave tower would be a new facility in the project area and would result in a slight increase in maintenance; however, the new pump station would be similar to or less than maintenance and operations for the existing Sump 85, so overall the operations and maintenance activities for the project would be similar to existing conditions. Maintenance activities for the pump station would include wet well and manhole cleaning, pump de-ragging and maintenance, washdown of surge tanks, flushing of drain lines, valve and slide gate operation, and general housekeeping of structural pads, restroom inside the building and servicing and maintenance of electrical equipment.

2.9 REQUIRED PERMITS AND PROJECT APPROVALS

Construction of the proposed project may be partially funded through the Clean Water State Revolving Fund loan program, which uses federal funds to reduce interest costs on funds used for clean water projects. Therefore, the project is subject to federal environmental regulations, including the Federal Endangered Species Act (Section 7), the National Historic Preservation Act (Section 106), and the General Conformity Rule for the Clean Air Act, among others. A portion of the fiber optic line would be parallel to Bay Drive Drainage Ditch and may require a Lake and Streambed Alteration Agreement from California Department of Fish and Wildlife. It is expected that because the disturbed area for the project exceeds 1 acre or more in size, the project would be required to comply with the City's NPDES General Construction Permit (NPDES No. CAS082597), and a Sacramento Metropolitan Air Quality Management District Authority to Construct and Permit to Operate. Removal of oak trees from the project site would also be subject to the City Code Chapter 12.56.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1. Project Title: Sump 85 Reconstruction Project
2. Lead Agency Name and Address: City of Sacramento, 915 I Street, Sacramento, CA 95814
3. Contact Person and Phone Number: Tim Moresco, Associate Civil Engineer, (916) 808-1432
4. Project Location: 2537 Edgewater Road in the City of Sacramento
5. General Plan Designation: See Section 3.11, "Land Use and Planning" below.
6. Zoning: See Section 3.11, "Land Use and Planning" below.
7. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

   See Chapter 2, "Project Description"
8. Surrounding Land Uses and Setting:
   (Briefly describe the project's surroundings)

   Land uses in the project vicinity include residences, vacant land owned by PG&E, and a maintenance yard for Twin Rivers Unified School District
9. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

   See Section 2.9 in Chapter 2, "Project Description"
10. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

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

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

☒ I find that although the proposed project COULD have a significant effect on the environment, there WILL NOT be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

☐ I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Scott Johnson Date 03-01-2021

Printed Name Scott Johnson Title Senior Planner

Agency City of Sacramento

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

3.1.1 Environmental Setting

The new pump station site is currently vacant and topography is generally flat. The new pump station site is bordered by Edgewater Road to the west, vacant land to the north and east, and the Bay Drive Drainage Ditch to the south. The existing Sump 85 site is paved and developed with the pump station facilities. Land uses in the project area include residences, vacant land owned by PG&E, and a maintenance yard for Twin Rivers Unified School District. Most structures in the area are one or two stories in height. Two oak trees are located in the center of the new pump station site.

The visual character of the project area and the surrounding area is typical of the Sacramento suburban neighborhood, which includes residences, roads, overhead utility lines, trees, and landscaping. Public views of the project area are available from the Edgewater Road.

The *Sacramento 2035 General Plan Update* designates the American River and Sacramento River, including associated parkways, the State Capitol (as defined by the Capitol View Protection Ordinance), and important historic structures listed on the Sacramento Register of Historic and Cultural Resources, California and/or National Registers as scenic resources (City of Sacramento 2014:4.13-4). The closest scenic resource to the project area is the American River, located approximately 2.7 miles to the southwest.

The nearest designated scenic highway is State Route 160 (SR 160), located approximately 0.45 mile south of the existing Sump 85 site and 0.5 mile from the new pump station site (Caltrans 2019). The project area is not located within the viewshed of SR 160.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The City's 2035 General Plan Master EIR (Master EIR) described the existing visual conditions in the City of Sacramento and the potential changes to those conditions that could result from development consistent with the 2035 General Plan. See Master EIR, Chapter 4.13, Visual Resources.

The Master EIR identified potential impacts related to light and glare (Impact 4.13-1) and concluded that impacts would be less than significant.

3.1.2 Discussion

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

No impact. The new pump station site is currently vacant and located in an area surrounded by existing development. The *Sacramento 2035 General Plan Update* designates the American River and Sacramento River, including associated parkways, the State Capitol, and important historic structures listed on the Sacramento Register of Historic and Cultural Resources, California and/or National Registers as scenic resources (City of Sacramento 2014:4.13-4). The closest scenic resource is the American River, located approximately 2.7 miles from the project area. No scenic vistas are visible from the project area. Construction- and demolition-related activities have the potential to temporarily modify the existing visual character and views of the project area. These effects on visual character would be temporary in nature, would be confined to the project area, and would not have a substantial effect on a scenic vista. Following construction, views of the new pump station site would change from vacant land. The 8- to 10-foot masonry wall surrounding the site would be visible as well as the top of the electrical building and the microwave tower. However, there are no scenic vistas with views of the project area and the development would be consistent with the surrounding development and utility lines. Because the project would not be visible from a scenic vista and the changes in views would be consistent with surrounding development, the project would have **no impact** on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. The nearest designated state scenic roadway is SR 160, located approximately 0.45 mile south of the project area. The project area is not located within the viewshed of SR 160. Because there are no designated state scenic highways nearby, adjacent to, or visible from the project area, the project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The project would have **no impact** on a state scenic highway.

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

Less-than-significant impact. The project is in an urbanized area and is zoned for residential development. During project construction and demolition, views in the area would be modified as a result of the temporary presence of construction and demolition equipment and activities. However, the appearance of construction equipment and activities would be temporary and consistent with the developed nature surrounding the project area. Once construction activities are complete, views of new pump station site would change from vacant land to development associated with the new pump station.

Views of the new pump station site would include the microwave tower and the 8- to 10-foot high concrete masonry wall that would surround the entire perimeter of the site. All aboveground structures associated with the project, except for the electrical building and microwave tower, would be screened by the surrounding wall and would not be visible to motorists, pedestrians, and bicyclists from public viewpoints. The microwave tower would be between 90 and 120 feet tall and would be the most visible feature of the project. The tower would consist of a steel lattice with a small (i.e., 25 square feet) footprint and guide wires would be underground (Figure 3.1-1 shows an example photo of a microwave tower). There are overhead utility lines along Lampasas Avenue, Grove Avenue, portions of Edgewater Road, and the south side of Bay Drive Drainage Ditch immediately south of the new pump station site that are approximately 45 to 50 feet tall. While the tower would be considerably taller than the overhead utility lines in the project area, it would be a narrow structure that would be a lattice design rather than a solid structure. Therefore, it would not block or dominate views in the area. It would also be consistent with the developed nature of the city and surrounding area. There is a line of trees east of the new pump station site that would provide some screening of the microwave tower and project features. Views at the existing Sump 85 site would change from existing pump station facilities to a vacant, paved area. The fiber optic line and new forcemain would be underground and would not be visible once constructed. Development of the new pump station would be consistent with the zoning for the project area and with the surrounding visual character of existing residential development. This impact would be **less than significant**.

Source: City of Sacramento 2020

Figure 3.1-1 Representative Photograph of a Microwave Communication Tower

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

Less-than-significant impact. Construction and demolition-related activities would occur during daylight hours from 7:00 a.m. through 6:00 p.m. and would not require nighttime lighting. Construction and demolition equipment are unlikely to have reflective surfaces and would not be a substantial source of glare in the area. The project would mainly be constructed of metal and concrete and would not be constructed with materials that would create substantial glare. The project area is located in a developed/urban setting. Surrounding development includes light fixtures and sources (both interior and exterior). The project would result in a minor sources of new exterior security lighting on the electrical building and microwave tower, which would be consistent with lighting from surrounding residential buildings. As discussed below in Section 3.9, "Hazards and Hazardous Materials," no flashing warning lights would be required for the microwave tower because it would be less than 200 feet in height. All lighting would be subject to City of Sacrament municipal code Section 17.612.030, which requires that all exterior lighting reflect away from residential areas and public streets. In addition, although the microwave tower would be metal, it would be coated steel that would not be reflective or increase glare on the project site. The project would not result in a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Therefore, the project would have a **less-than-significant** impact related to light and glare.

3.2 AGRICULTURE AND FOREST RESOURCES

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

3.2.1 Environmental Setting

Farmlands are mapped by the State of California Department of Conservation (DOC) under the Farmland Mapping and Monitoring Program (FMMP). Under the FMMP, land is delineated into the following eight categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban or Built-Up Land, Other Land, and Water. The project area is defined as Urban and Built-Up Land and Other Land by the DOC and therefore is not designated as Important Farmland (Figure 3.2-1). The new pump station site was used historically for agriculture; however, it has not been in agricultural production since at least 1957 (City of Sacramento 2020a). The remainder of the project area is currently developed roadway or occupied by the existing pump station. The project area is surrounded by residences, vacant land owned by PG&E, and a maintenance yard for Twin Rivers Unified School District. The existing Sump 85 site is developed and surrounded by residences. There is no farmland in the project vicinity.

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of preserving agriculture and restricting unnecessary conversion to urban uses. Under the contract, landowners received reduced property tax assessments based on the property's value for farming and open spaces as opposed to full market value. Based on Sacramento County's data base on Williamson Act lands, lands in the project area are not under a Williamson Act contract (Sacramento County 2021).

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

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR discussed the potential impact of development under the 2035 General Plan on agricultural resources. See Master EIR, Chapter 4.1. In addition to evaluating the effect of the General Plan on sites within the city, the Master EIR noted that to the extent the 2035 General Plan accommodates future growth within the city limits, the conversion of farmland outside the city limits is minimized. The Master EIR concluded that the impact of the 2035 General Plan on agricultural resources within the city was less than significant.

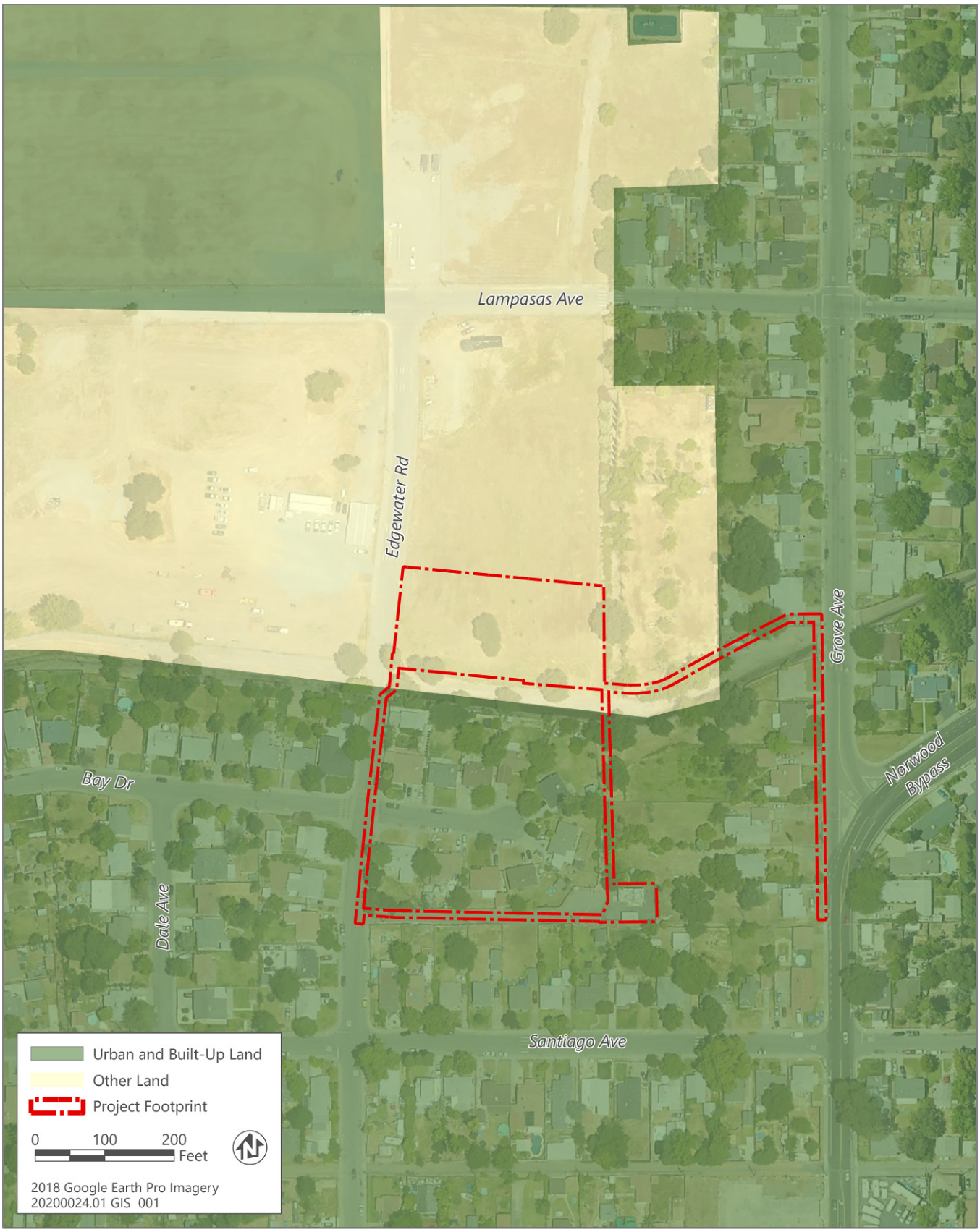
3.2.2 Discussion

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

No impact. The project area is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance according to the FMMP. Implementation of the project would not convert farmland to non-agricultural uses. There would be **no impact**.

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

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



Source: Data downloaded from DOC in 2020

Figure 3.2-1 Farmland Classification

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

No impact. The existing zoning within the project area is not for forest land, timberland, or Timberland Production. The project would include construction of a new pump station on vacant land and would not cause rezoning of forest land. There would be **no impact**.

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

No impact. The project area is not considered forest land. Implementation of the project would require removal two oak trees from the new pump station site; however, the site does not contain any riparian or oak woodland forest and is not considered forest land. Therefore, the project would not convert forest land to non-forest uses. There would be **no impact**.

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

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

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Are significance criteria established by the applicable air district available to rely on for significance determinations? Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
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?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

3.3.1 Environmental Setting

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

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

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

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

Table 3.3-1 Criteria Air Pollutants

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

Notes: CO = carbon monoxide; NO_2 = nitrogen dioxide; NO_x = nitrogen oxides; ROG = reactive organic gases; SO_2 = sulfur dioxide.

Source: EPA 2018

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

Air quality impacts would be significant if the project would:

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

- result in operational emissions of ROG exceeding 65 lb/day, NO_X exceeding 65 lb/day, PM_{10} exceeding 80 lb/day or 14.6 tons/year, or $PM_{2.5}$ exceeding 82 lb/day or 15 tons/year;
- emit levels of CO that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm during construction and operations;
- expose any off-site sensitive receptor to a substantial incremental increase in TAC emissions greater than 10 in one million for carcinogenic risk (i.e., the risk of contracting cancer) and/or a noncarcinogenic hazard index of 1.0 or greater; or
- create objectional odors affecting a substantial number of people.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthful pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with CARB and SMAQMD to meet state and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of TACs as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and impose appropriate conditions on projects to protect public health and safety; as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

3.3.2 Discussion

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

Less-than-significant impact. The project would involve construction of a microwave tower and new pump station, demolition and decommissioning of the existing Sump 85 pump station, and installation of related off-site improvements, including an underground fiber optic line and forcemain. Because the project would replace an existing pump station in the project vicinity with newer, more efficient equipment and would not involve any land use development or result in an increase in employees, operational emissions from the project would be similar, if not less than, existing conditions. In addition, the new microwave tower would result in fewer than five annual vehicle trips associated with maintenance. Therefore, the project's long-term operational emissions of criteria air pollutants and precursors would be less than SMAQMD-recommended thresholds and would not contribute to exceedances of the NAAQS or CAAQS or conflict with air quality planning efforts in the region.

The total duration for project construction would be 42 weeks. Construction activities related to the new pump station and the off-site improvements, demolition and decommissioning of the existing Sump 85 pump station, and construction of the microwave tower would occur consecutively. Project construction and demolition would result in temporary emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ associated with the use of off-road equipment, haul trucks delivering equipment and materials, and worker commute trips. Fugitive dust PM_{10} and $PM_{2.5}$ emissions would be associated primarily with site preparation and earthwork and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, and unpaved vehicle miles traveled. Exhaust from off-road equipment, haul trucks, and construction worker vehicles would also contain PM_{10} and $PM_{2.5}$. Emissions of ozone precursors, ROG and NO_X,

would primarily be associated with construction equipment and on-road mobile exhaust. Construction and demolition activities associated with the project would likely require the use of equipment such as excavators, dozers, a backhoe, a boom truck, forklifts, compactors, graders, welding machines, and haul trucks.

Emissions associated with construction of the new pump station and demolition of the existing pump station were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program. Modeling was based on project-specific information, where available; assumptions based on typical construction and demolition activities; and default values in CalEEMod that are based on the project's location and land use type. Worst-case maximum daily construction emissions were estimated based on anticipated construction activities that would occur simultaneously (e.g., construction of the new pump station and off-site improvements). Table 3.3-2 summarizes the modeled maximum daily emissions from construction and demolition activities. For detailed assumptions and modeling inputs, refer to Appendix A.

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

	Maximum Daily Emissions (lb/day)[3]			
	ROG	NO_X	PM_{10} (Exhaust/Fugitive)	$PM_{2.5}$ (Exhaust/Fugitive)
Construction-Related Emissions[1]	44.2	35.9	1.7/11.8	1.6/6.3
Demolition-Related Emissions[2]	0.9	8.6	0.4/0.8	0.4/0.4
SMAQMD threshold of significance	None	85	80	82

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

1. Includes construction of the new pump station, off-site improvements, and microwave tower.

2. Demolition of the existing Sump 85 pump station.

3. See Appendix A for detailed modeling and calculations.

Source: Modeled by Ascent Environmental in 2020.

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

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

Less-than-significant impact. As described in Section 3.3.1, "Environmental Setting," Sacramento County is designated as nonattainment with respect to the NAAQS for $PM_{2.5}$ and CAAQS for PM_{10}. As discussed under item a), after the project is constructed there would be no substantial change in operational emissions, but construction of the project would result in temporary emissions of ozone precursors, as well as PM_{10} and $PM_{2.5}$ and precursors. Ozone is the result of cumulative emissions from numerous sources that can be inside or outside the region. Ozone is formed in a photochemical reaction involving ROG, NO_X, and sunlight. As shown in Table 3.3-2, project construction would not result in emissions of ROG,NO_X, PM_{10}, or $PM_{2.5}$ emissions that exceed SMAQMD-recommended mass emission thresholds, construction-related emissions would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment with respect to the NAAQS or CAAQS. Therefore, this impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less-than-significant impact. Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children and the elderly. Residences, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and the potential for these individuals to experience increased and prolonged exposure to pollutants. Sensitive receptors in the project vicinity include single-family residences in the Noralto Neighborhood. The new pump station would be located approximately 55 feet away, the new forcemain along Edgewater Road would be located approximately 15 feet away, the new fiber optic line would be located approximately 25 feet away, the microwave tower would be located approximately 130 feet away, and the existing pump station, which would be demolished, is located approximately 60 feet away from the nearest single-family residences.

Project construction would result in new emissions of criteria air pollutants and precursors, as described above, as well as TACs. Particulate matter emitted from diesel construction equipment (diesel PM) would be the primary TAC of concern associated with the project. As shown above in Table 3.3-2, construction-related activities would emit up to 1.7 lb/day of diesel PM and demolition-related activities would emit up to 0.4 lb/day of diesel exhaust. The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 30- or 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Additionally, construction would occur temporarily and intermittently over a limited period of 42 weeks, a duration substantially shorter than the exposure period used for typical health risk calculations (i.e., 30 or 70 years), and not all diesel PM–emitting construction and demolition activity occur in the same location near the same residences. For these reasons, it is expected that the cancer risk associated with diesel PM generated by project construction and demolition activities would be less than 10 in one million at any nearby sensitive receptors. Furthermore, the project would not result in an increase in other, noncarcinogenic TACs that could expose nearby receptors to an acute or chronic Hazard Index greater than 1.0.

As shown in Table 3.3-2, project construction would not result in emissions of ROG, NO_X, PM_{10}, or $PM_{2.5}$ emissions that exceed SMAQMD-recommended mass emission thresholds. Construction-related emissions would not expose sensitive receptors to concentrations of criteria air pollutants that exceed the NAAQS or CAAQS; or to a dose of TACs that would result in an incremental increase in cancer risk greater than 10 in one million or a Hazard Index greater than 1.0. This impact would be **less than significant**.

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

Less-than-significant impact. Minor odors from the use of heavy equipment during construction would be temporary and intermittent and would dissipate rapidly from the source with increases in distance. As discussed above, the nearest residential receptors to each project component (e.g., fiber optic line, new pump station) range from 15 to 130 feet away. Although some construction activities would occur within proximity to single-family residences, construction activity would be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday; would move linearly during construction of the forcemain and the fiber optic line; and would not occur in one area for the entire duration of construction (i.e., 42 weeks). Therefore, project construction is not anticipated to result in an odor-related impact.

Activities associated with project operation would be limited and would not generate any new odors. Additionally, an activated carbon scrubber would be installed for odor and corrosion control. Therefore, project construction or operation would not result in exposure of a substantial number of people to objectionable odors, and this impact would be **less than significant**.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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?				X

3.3.3 Environmental Setting

This section describes biological resources within the project area and evaluates potential impacts to such resources as a result of project implementation. To determine the biological resources that may be subject to impacts from the project, Ascent biologists reviewed several existing data sources including:

- a reconnaissance survey of the new pump station site conducted by an Ascent biologist on June 23, 2020;
- a records search of the California Natural Diversity Database (CNDDB) (CNDDB 2020); and
- a list of federally proposed, candidate, threatened, and endangered species that could be affected by projects in the region obtained from the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Consultation System (IPaC) (USFWS 2020).

VEGETATION AND HABITAT TYPES

The project area is located within the City of Sacramento, includes the new pump station site, which is vacant, the existing Sump 85 site, and portions of Edgewater Road and Grove Avenue (Figure 2-2). The project is adjacent to several vacant parcels, residential development, and a maintenance yard for Twin Rivers Unified School District. The project area includes a portion of Bay Drive Drainage Ditch (Figure 3.4-1), which carries stormwater from the surrounding residential development, though a pump station, and into lower Arcade Creek. The ditch contains little to no emergent vegetation and does not contain water in all months of the year. Vegetation within the new pump station site consists mostly of mowed ruderal vegetation (e.g., field bindweed [*Convolvulus arvensis*], Italian ryegrass [*Festuca perennis*], wild oat [*Avena* sp.], chicory [*Cichorium intybus*], curly dock [*Rumex crispus*]), and several valley oaks (*Quercus lobata*) (Figure 3.4-1). The portions of Edgewater Road and Grove Avenue where work would occur are lined with street trees and landscaped vegetation (Figure 2-2). The existing pump station site is a paved lot surrounded by residences with landscaped vegetation and trees.

SPECIAL-STATUS SPECIES

Special-status species include botanical species (plants, lichen, and fungi) and animals that are legally protected or otherwise considered sensitive by federal, state, or local resource agencies and conservation organizations. In this document, special-status species are defined as botanical species and animals in the following categories:

- Listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA).
- Designated as a candidate for listing as threatened or endangered under ESA.
- Listed, proposed for listing, or a candidate for listing as threatened or endangered under the California Endangered Species Act (CESA).
- Listed as fully protected under the California Fish and Game Code.
- Animals identified by California Department of Fish and Wildlife (CDFW) as species of special concern.
- Plants considered by CDFW to be "rare, threatened or endangered in California" (California Rare Plant Ranks of 1A, presumed extinct in California; 1B, considered rare or endangered in California and elsewhere; 2A, presumed to be extinct in California, but more common elsewhere; and 2B, considered rare or endangered in California but more common elsewhere).
- Considered a locally significant species, which is a species that is not rare from a statewide perspective but is rare or uncommon in a local context, such as within a county or region (CEQA Section 15125[c]) or is so designated in local or regional plans, policies, or ordinances (State CEQA Guidelines, Appendix G).
- Otherwise meet the definition of rare or endangered under CEQA Sections 15380(b) and (d).

A preliminary list of special-status botanical and animal species with potential to occur within the project area was developed based on a review of the existing data sources described previously and is provided in Appendix B. An analysis of special-status botanical and animal species potential to occur within the project area was conducted based on species range and distribution, the presence of suitable habitat, and other factors.

Source: Ascent Environmental in 2020

Bay Drive Drainage Ditch Adjacent to the New Pump Station Site

Source: Ascent Environmental in 2020

Oak Trees within the New Pump Station Site

Figure 3.4-1 Representative Photographs

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Chapter 4.3 of the Master EIR evaluated the effects of the 2035 General Plan on biological resources within the city. The Master EIR identified potential impacts in terms of degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.

Policies in the 2035 General Plan were identified as mitigating the effects of development that could occur under the provisions of the 2035 General Plan. Goal ER 2.1 Natural and Open Space Protection calls for the City to protect and enhance open space, natural areas, and significant wildlife and vegetation in the city as integral parts of a sustainable environment within a large regional ecosystem. Policy ER 2.1.6 requires the City to preserve and protect wetland resources including creeks, rivers, ponds, marshes, vernal pools, and other seasonal wetlands and if not feasible, the mitigation of all adverse impacts on wetland resources is required to comply with state and federal regulations protecting wetland resources, including no-net-loss of value and/or function through on- or off-site permanent preservation. Policy ER 2.1.10 requires the City to consider the potential impact on sensitive plants for each project and to require habitat assessment surveys when appropriate; and Policy ER 2.1.11 requires the City to coordinate its actions with those of the CDFW, USFWS, and other agencies in the protection of resources.

Goal EIR 3.1 Urban Forest calls for the City to manage its urban forest as an environmental, economic, and aesthetic resource to improve Sacramento residents' quality of life. Policy ER 3.1.1 requires the City to continue planting and ensure new developments have sufficient right-of-way width for tree plantings, manage and care for all publicly owned trees, and work to retain healthy trees. Policy ER. 3.1.4 requires the City to balance the tree canopy of the urban forest with the need for visibility along commercial corridors, including the selection of tree species with elevated canopies. Policy EIR 3.1.6 requires the City to continue to promote planting shade trees with substantial canopies, and require, where feasible, site design that uses trees to shade rooftops, parking facilities, streets, and other facilities to minimize heat island effects.

The Master EIR concluded that policies in the general plan, combined with compliance with the CESA, Natomas Basin HCP (when applicable), and CEQA, would minimize the impacts on special-status species to a less-than-significant level (see Impact 4.3-1), and that the general plan policies, along with similar compliance with local, state, and federal regulation would reduce impacts to a less-than-significant level for habitat for special-status invertebrates, birds, amphibians and reptiles, mammals, and fish (Impacts 4.3-3–4.3-6).

3.3.4 Discussion

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

Less than significant with mitigation incorporated. Most of the ground disturbance associated with the project would occur within the new pump station site. This disturbance would occur within ruderal habitat and would result in removal of two valley oaks (Figure 3.4-1). The remainder of project disturbance would occur within the existing pumping station footprint, the rights-of-way of city streets, and within the unpaved access road for the Bay Drive Drainage Ditch (Figure 2-2). A query of the CNDDB for the nine U.S. Geological Survey 7.5-minute quadrangles containing and surrounding the project area (CNDDB 2020) and a query of the IPaC system (USFWS 2020) identified 17 special-status plants and 28 special-status animal species that are documented to occur within the search area. No other botanical species were identified in the search area. Appendix B, "Special-Status Species Occurrence Tables" lists the common names, scientific names, status, and habitats of all special-status plants and animals within the search area; and describes the likelihood of occurrence of each species within the project area. The project area does not contain suitable habitat for special-status plant species; therefore, the proposed project would have no impact on

special-status plants and this subject is not discussed further in this section. Twenty-five special-status animal species were eliminated from further consideration because of the project occurring outside of the current range of the species or lack of suitable habitat within the project area. Three special-status animal species could occur within the project area or could be indirectly affected by the project, and a discussion of the potential impacts to these species is included below.

There are four CNDDB records of nesting Swainson's hawks within 1.5 miles of the project area (CNDDB 2020). Three of these occurrences are within the riparian area along the American River to the south of the project area, and one nest occurrence is in a residential area west of Steelhead Creek. While the project area is disturbed and located within a developed area, Swainson's hawks are known to nest in urban settings in some locations (England et al. 1995). The nearest CNDDB record for white-tailed kite is approximately 1.7 miles to the south, along the American River. Similar to Swainson's hawk, this species is known to nest within urban settings. Foraging habitat within and near the project area is of limited quality due to surrounding disturbances; however, the project area contains trees that could provide nesting sites for these species and there is potential for nesting Swainson's hawk and white-tailed kite within or near the project area. Should Swainson's hawk or white-tailed kite nest in or near the project area during project construction and demolition, the noise from construction equipment could result in the disturbance and abandonment of nests and loss of young. Although the new microwave tower would be up to 120 feet tall, there would be no aboveground guide wires that would pose a hazard to wildlife.

The closest record of burrowing owl nesting is approximately 2.0 miles to the north, and ruderal habitat is present within the project area, including the new pump station site and the banks of Bay Drive Drainage Ditch. Both ruderal habitat and the banks of irrigation and stormwater ditches are considered suitable nesting habitat for burrowing owls. The potential habitat within the project area is regularly disturbed by mowing and other human activities, and no ground squirrel burrows, which are needed for burrowing owl to nest and winter, were observed during the site visit in June of 2020. However, due to the presence of ruderal habitat and the barren banks of Bay Drive Drainage Ditch, there is the potential for the occurrence of burrowing owls within the project area at the time of construction. Should burrowing owls use the ruderal vegetation or ditch banks within the project area for nesting during project construction, ground disturbance could result in burrow collapse and loss of nests and young if owls nest, and the noise of construction could result in indirect disturbance of nests, nest abandonment, and loss of young. Additionally, construction-generated noise and increased human presence have the potential to disturb burrowing owls nesting near construction activities. Disturbance of active breeding owls could result in nest abandonment or direct loss of adults, fledglings, or eggs. Burrowing owls need burrows at all times to survive and displacing individuals from their burrows can result in indirect impacts such as predation, increased energetic costs, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction. Burrowing owls using burrows, culverts, or other cover habitat during the wintering season could also be directly affected by construction activities if those areas are disturbed.

In addition to providing potential nesting sites for burrowing owl, Swainson's hawk, and white-tailed kite, ruderal vegetation and trees within the project area could support nests of common raptors and other common nesting birds. These common species that may nest within the project area include: Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*), and great horned owl (*Bubo virginianus*). The nests of common raptors and other common birds are protected under Sections 3503 and 3503.5 of the Fish and Game Code. As discussed for burrowing owl, Swainson's hawk, and white-tailed kite, should common raptors and other common birds be nesting in the area during construction, nests may be removed or disturbed which would cause the loss of young.

The loss of nests and young of special-status and common nesting birds could result in a substantial adverse effect on these species and would be a potentially significant impact.

Mitigation Measure 3.4-1: Avoid Disturbance of Burrowing Owl Nests

Before any ground disturbing activities within 500 feet of potential burrowing owl habitat (i.e., ruderal habitat and the bank of Bay Drive Drainage Ditch) a qualified biologist will conduct surveys as access allows in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012). If no occupied burrow or burrowing owls are found in the survey area, no further mitigation is required.

If an active burrow is identified within 500 feet the proposed work area and work cannot be conducted outside of the nesting season (February 1 to August 31), a qualified biologist will establish a no-construction buffer zone that extends 164 to 1,640 feet around the burrow, depending on nesting stage, exposure of the nest burrow to construction disturbances (e.g., are there visual or audio barriers or existing disturbances between the burrow and the construction site), and level/magnitude of disturbance. If burrowing owls are present at the site during the non-breeding season (September 1 through January 31), a qualified biologist will establish a no-construction buffer zone that extends a minimum of 150 feet around the burrow.

If the designated no-construction buffer zone for breeding or non-breeding burrowing owls is not practicable, a wildlife biologist experienced in burrowing owl behavior will evaluate site-specific conditions and, in coordination with CDFW, may recommend a smaller buffer (if possible) that still minimizes the potential to disturb the owls (and is deemed to still allow reproductive success during the breeding season). The site-specific buffer will consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities. Additional measures may be identified by the designated biologist or CDFW including regular monitoring of the owls by a qualified biologist, modified construction activity schedule in proximity to the owls, or establishment of a barrier between construction and the occupied burrow.

If burrowing owls are present within the construction work area and cannot be avoided by the appropriate buffers during the non-breeding season (generally September 1 through January 31), a burrowing owl exclusion plan will be developed in consultation with and approved by CDFW prior to construction. The exclusion plan will include monitoring, documentation, compensatory mitigation lands, and a mitigation land management plan as outlined in CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012).

Mitigation Measure 3.4-2: Avoid Disturbance of Swainson's Hawk Nests

Prior to any construction, including tree removal, that occurs between March 1 and September 15, a qualified biologist will conduct a preconstruction survey for Swainson's hawk to identify active nests on and within 0.5 mile of the project area as access allows. The surveys will be conducted following the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee 2000).

If the preconstruction survey identifies active nests, impacts to nesting Swainson's hawks will be avoided by establishing appropriate buffers around active nest sites. No project activity will commence within the buffer areas until a qualified biologist has determined, in coordination with CDFW, the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.25-mile-wide buffer for Swainson's hawk, but the size of the buffer may be adjusted if a qualified biologist and the City, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities will be required if the activity has potential to adversely affect the nest.

Mitigation Measure 3.4-3: Avoid Disturbance of White-tailed Kite, Common Raptor, and Other Common Bird Nests

If construction will occur during the nesting season, approximately March - September, a qualified biologist will conduct preconstruction nesting bird surveys to determine if birds are nesting in the project area and within 500 feet of the project area as access allows.

The preconstruction nesting bird surveys will identify on-site bird species and any nest-building behavior. If no nesting birds are found in or within 500 feet of the project area during the preconstruction clearance surveys, no further mitigation is required.

If pre-nesting behavior is observed for species other than white-tailed kite, but an active nest has not yet been established (e.g., courtship displays, but no eggs in a constructed nest), a nesting bird deterrence and removal program will be implemented. Such deterrence methods include removal of previous year's nesting materials and removal of partially completed nests in progress. Once a nest is situated and identified with eggs or young, it is considered to be "active" and the nest cannot be removed until the young have fledged. The nesting bird deterrence and removal program cannot be applied to white-tailed kite due to its status as a CDFW fully protected species.

If there is a pause in construction for more than 3 days, another preconstruction survey for nesting birds will be conducted prior to resuming construction.

If an active nest is found in or within 500 feet of the project area during construction, a no construction buffer zone will be established around the active nest (usually a minimum radius of 50 feet for passerine birds and 500 feet for raptors) to minimize the potential for disturbance of the nesting activity. The project biologist will determine and flag the appropriate buffer size required, based on the species, specific activities being conducted, tolerances of the species, and the nest location. Project activities will resume in the buffer area when the project biologist has determined that the nest(s) is(are) no longer active or the biologist has determined that with implementation of an appropriate buffer, work activities would not disturb the birds nesting behavior.

If special-status bird species are found nesting in or within 500 feet of the project area, the qualified biologist shall notify the City to notify CDFW or USFWS, as appropriate, within 24 hours of first nesting observation.

Significance Conclusion

Implementation of Mitigation Measures 3.4-1 through 3.4-3 would minimize impacts to special-status and common nesting bird species by requiring preconstruction nesting surveys, no-disturbance buffers around active nests, and monitoring of the project area to prevent new nests from being established during construction. With implementation of Mitigation Measures 3.4-1 through 3.4-3, potential impacts to special-status and common nesting birds would be reduced to a **less-than-significant** level.

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

Less-than-significant impact. The project area is developed or paved except for the new pump station site. Vegetation within the new pump station site includes upland ruderal species, several valley oaks, and landscape trees. There is no riparian or oak woodland present within the project area. The Bay Drive Drainage Ditch may be considered a sensitive habitat type by CDFW because of the potential value to wildlife that it represents. The new forcemain would follow Edgewater Road and cross Bay Drive Ditch adjacent to the road and below the existing culvert; therefore, the installation of the forcemain not result in disturbance to the bed and bank of the Bay Drive Drainage Ditch. The fiber optic line would follow Grove Avenue to the north side of Bay Drive Drainage Ditch, then extend west along the north side of the ditch within the existing unpaved access road until reaching the new pump station site. A portion of the fiber optic line would be parallel to Bay Drive Drainage Ditch and may require a Lake and Streambed Alteration Agreement from CDFW. However, no impacts to riparian or sensitive communities are expected. Therefore, the project would have a **less-than-significant** impact on riparian habitat and other sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFW or the USFWS.

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

Less-than-significant impact. Based on analysis of a historic topographical map of the project area (USGS 1911), the Bay Drive Drainage Ditch is likely a channelized natural drainage. With its apparent creation by modifying a natural drainage, the ditch may be considered a water of the State and a water of the United States. No other potential wetlands exist within the project area. The new forcemain would be located adjacent to Edgewater Road and cross under Bay Drive Drainage Ditch below the existing culvert. The new fiber optic line would follow Grove Avenue to

the north side of Bay Drive Drainage Ditch, then extend west along the unpaved access road on the north side of the ditch until reaching the new pump station site. Therefore, the project would not result in excavation or fill below the ordinary high-water mark of Bay Drive Drainage Ditch. As discussed in Chapter 2, "Project Description," the project would be required to comply with the City's NPDES General Construction Permit including implementation of stormwater best management practices (BMPs) that would avoid or minimize runoff from ground disturbing activities into Bay Drive Drainage Ditch. For these reasons, impacts to state or federally protected wetlands would be **less than significant**.

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?

No impact. The project area is located in an urban setting that does not support established native wildlife nursery sites or a wildlife movement corridor. Although the new microwave tower would be up to 120 feet tall, there would be no aboveground guide wires that would interfere with wildlife movement. Additionally, the project would not alter any existing wildlife corridor and would not interfere with the movement of migratory fish species. Due to the fish passage blockage at the Sump 154 pump station downstream of the project area and the lack of perennial water, the Bay Drive Drainage Ditch does not support a fishery. Therefore, the proposed project would have **no impact** on the movement of native resident or migratory fish or wildlife species, movement corridors, or native wildlife nursery sites.

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

Less-than-significant impact. The project area is within the City of Sacramento, and Section 12.56 of the Sacramento City Code would apply to removal of trees within the new pump station site. The City would comply with Section 12.56 for removal of the two trees within the new pump station site and any other work within the dripline of trees for off-site improvements. The City would obtain City Council approval prior to tree removal pursuant to Sacramento City Code Section 12.56.040. Because the City would comply with this ordinance for the protection biological resources, this impact would be **less than significant**.

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

No impact. The Natomas Basin Habitat Conservation Plan covers an area just west of the project area across Steelhead Creek. However, the project is located outside of the HCP plan area and would not conflict with any of the provisions of these plans. Therefore, the project would result in **no impact**.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Disturb any human remains, including those interred outside of dedicated cemeteries?		X		

3.5.1 Environmental Setting

In June 2020, a California Historical Resources Information System records search was conducted by the North Central Information Center (NCIC) on the campus of California State University, Sacramento to determine whether prehistoric archaeological, historic-period archaeological, or built-environment historical resources have been previously recorded within the project area, the extent to which the project area has been previously surveyed, and the number and type of cultural resources within a 0.5-mile radius of the project area (NCIC File No. SAC-20-85). The results indicated that there are no previously recorded resources or surveys within the project area. However, within the 0.5-mile radius, 62 resources and 24 survey reports have been recorded. The previously recorded resources are historic-era structures, primarily located along Arden Way.

A pedestrian survey of the project area was conducted in October 2020, which resulted in the identification of one historic-period archaeological feature. The water conveyance ditch, locally referred to as Bay Drive Drainage Ditch, is a common drainage ditch. The existing Sump 85 pump station is also within the APE and was constructed in the 1950s. The pump station was partially rehabilitated in 1984 (NIC 2020).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General plan policies identified to reduce these potential effects require identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10), and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort (Policy HCR 2.1.15).

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources (Impacts 4.4-1, 2).

3.5.2 Discussion

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

No impact. The only structures in the project area are the existing Sump 85 pump station and the Bay Drive Drainage Ditch. The existing Sump 85 pump station is a ubiquitous infrastructure element that can be found throughout the City, Sacramento Valley, and California. Having been constructed in the 1950s and partially rehabilitated in 1984, the pump station has no potential to contribute individually to any criterion of eligibility for listing in the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR), or to the significance of larger historic properties. In addition, the Bay Drive Drainage Ditch is in poor condition and lacks integrity. It is not significant under any of NRHP or CRHR eligibility criterion (NIC 2020). Therefore, these historic-period features are not considered resources under CEQA. Therefore, there would be **no impact** to historical resources.

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

Less than significant with mitigation incorporated. The cultural resources study prepared for the proposed project determined that no prehistoric or historic-period archeological resources were found within the project area or in the immediate vicinity. The report also determined that based on the results of the NCIC records search, geoarchaeological study; site-specific variables (i.e., former swampland); and prior disturbance by agricultural activities, urban development, roadways, and utilities during the last 100 years, the sensitivity of the project area for buried prehistoric or historic-era archaeological resources is considered low. Nevertheless, the possibility remains that archaeological materials could be encountered during construction-related ground disturbing activities. This impact would be potentially significant.

Mitigation Measure 3.5-1: Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities

The City shall require the applicant/contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (Worker Environmental Awareness Program [WEAP]) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, as well as culturally affiliated Native American tribes. The City may invite Native American representatives from interested culturally affiliated Native American tribes to participate. The WEAP shall be conducted before any project-related construction activities begin in the project area. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations.

The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

Mitigation Measure 3.5-2: In the Event that Cultural Resources or Tribal Cultural Resources are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources

If cultural resources or tribal cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered in the project area during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to

cultural resources and tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:

- Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.
- Recommendations for avoidance of cultural resources and tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural, and environmental considerations and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project area to avoid cultural resources or tribal cultural resources, modification of the design to eliminate or reduce impacts to cultural resources or tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource.
- Native American representatives from interested culturally affiliated Native American tribes will be invited to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.
- If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a cultural resource or a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and tribes will be invited to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes.
- The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area".

If a cultural resource or a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources or tribal cultural resources:

- Each resource will be evaluated for California Register of Historical Resources (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable.

If a cultural resource or a tribal cultural resource is determined to be eligible for listing in the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City will coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City's invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations will be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of any discovered tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and taking into account ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural

resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.

If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:

- Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context to incorporate the resources with culturally appropriate protection and management criteria.
- Treat the resource with culturally appropriate dignity taking into account the Tribal cultural values and meaning of the resource, including, but not limited to, the following:
- Protect the cultural character and integrity of the resource.
- Protect the traditional use of the resource.
- Protect the confidentiality of the resource.
- Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
- Protect the resource.

Significance Conclusion

Implementation of Mitigation Measures 3.5-1 and 3.5-2 would reduce potential impacts to archaeological resources discovered during project construction activities to a **less-than-significant** level because workers would be trained on identification of and proper handling of cultural resources. In addition, the measures would require the performance of professionally accepted and legally compliant procedures for the discovery of previously undocumented significant historical or archaeological resources.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant with mitigation incorporated. There are no known past cemeteries or burials within the project area. However, because earthmoving activities associated with project construction would occur, there is potential to encounter buried human remains or unknown cemeteries in areas with little or no previous disturbance. This impact would be potentially significant.

Mitigation Measure 3.5-3: Implement Protection Procedures in the Event of Inadvertent Discovery of Human Remains

If an inadvertent discovery of human remains is made at any time during project-related construction activities, the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).

If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in

consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.

Significance Conclusion

Implementation of Mitigation Measure 3.5-3 would reduce potential impacts related to human remains to a **less-than-significant** level by requiring work to stop if suspected human remains are found, communication with the county coroner, and the proper identification and treatment of the remains consistent with the California Health and Safety Code and the California Native American Historical, Cultural, and Sacred Sites Act.

3.6 ENERGY

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

3.6.1 Environmental Setting

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

- Petroleum: Petroleum products (gasoline, diesel, jet fuel) are consumed almost exclusively by the transportation sector, which is responsible for almost 90 percent of the petroleum consumed in the state (EIA 2020). In 2015, a total of 15.1 billion gallons of gasoline were sold in California (CEC 2020). To meet CARB regulations, all gasoline and diesel fuel sold in California for motor vehicles is refined to be a specific blend of motor gasoline called California Reformulated Gasoline (EIA 2020).
- Natural gas: While the majority of natural gas consumers in California are residential and small commercial users, these users consume only about 35 percent of natural gas in the state. Larger volume gas consumers, such as utilities for electricity generation and industrial consumers, although fewer in number, consume the remaining 65 percent of natural gas used in the state (CPUC 2020).
- Electricity and renewables: In 2002, Senate Bill 1078 established a renewables portfolio standard (RPS) program. The program is jointly implemented by the California Public Utilities Commission and the California Energy Commission and requires all load-serving entities to procure 60 percent of their total electricity retail sales from renewable energy sources by 2030. Most retail sellers met or exceeded their 29-percent interim RPS target in 2018, including all large investor-owned utilities, which provide electricity to 75 percent of all utility customers (CPUC 2019; EIA 2019). Sacramento Municipal Utility District (SMUD) is the primary electricity supplier, and Pacific Gas and Electric Company (PG&E) is the primary natural gas supplier for the City of Sacramento and the project area.
- Alternative fuels: Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many alternative transportation fuels (e.g., biodiesel, hydrogen, electricity). Use of alternative fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, Assembly Bill 32 Scoping Plan).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Structures built would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes policies (see 2035 General Plan Energy Resources Goal U 6.1.1) to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers, and recruitment of businesses that research and promote energy conservation and efficiency.

The Master EIR discussed energy conservation and relevant General Plan policies in Section 6.3 (page 6-3). The discussion concluded that with implementation of the General Plan policies and energy regulation (e.g., Title 24) development allowed in the General Plan would not result in the inefficient, wasteful, or unnecessary consumption of energy.

The Master EIR concluded that implementation of state regulation, coordination with energy providers and implementation of General Plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level.

3.6.2 Discussion

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

Less-than-significant impact. Energy would be consumed during project construction to operate and maintain construction equipment and transport construction materials. It also would be consumed for worker commutes. Levels of construction-related fuel consumption were calculated using equipment assumptions consistent with the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CalEEMod) (CAPCOA 2016) and fuel consumption factors derived from the California Air Resources Board's Emission Factor (EMFAC2014). See Appendix A for detailed calculations. An estimated 670 gallons of gasoline and 11,974 gallons of diesel would be consumed during project construction, accounting for both on-site equipment use and off-site vehicle travel for worker commutes and haul trips. This one-time energy expenditure required to construct the project would be nonrecoverable. However, energy needs for project construction would be temporary and would not require additional capacity or increase peak or base period demands for electricity or other forms of energy.

Project operation would require electricity to power a radio/antenna and LED lights for security on the microwave tower and the pumps in the wet wells, as well as the equipment and lighting housed in the electrical building. The backup emergency generator would consume diesel fuel when needed or tested. However, the new pump station would be more energy efficient than the existing Sump 85 pump station because it would be outfitted with all new equipment, including a new generator, electrical equipment, energy-efficient light fixtures, louvers, and plumbing systems. All new equipment would be required to meet the latest California code requirements and the project would comply with the latest building permit requirements. The project would generate minimal vehicle trips during operation because the project would not involve any land use development or require an increase in employees. Thus, the project would not increase the amount of gasoline used for employee trips during operation. For these reasons, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy resources during project construction or operation. This impact would be less than significant.

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

No impact. As discussed above, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy resources. Furthermore, all new equipment used for project operation would be required to meet the latest California code requirements and the building would comply with the most recent building permit requirements. The project would be consistent with City General Plan Policy U 6.1.4, which calls for the improvement in energy efficiency of City facilities. Thus, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project would have no impact.

3.7 GEOLOGY AND SOILS

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

3.7.1 Environmental Setting

SEISMICITY

The project area is not located within the vicinity of an Alquist-Priolo zone. The Sacramento 2035 General Plan Master EIR identifies the City of Sacramento as being subject to potential damage from earthquake ground shaking at a maximum intensity of VII on the Modified Mercalli scale. The closest potentially active faults to the project area include the Foothills Fault System, located approximately 23 miles from Sacramento; the Great Valley fault, located 26 miles from Sacramento; and Concord-Green Valley Fault, located approximately 38 miles from Sacramento. The

Foothills Fault System is considered capable of generating an earthquake with a Richter-Scale magnitude of 6.5; the Great Valley Fault is capable of generating an earthquake with a magnitude of 6.8; and the Concord-Green Valley fault is capable of generating an earthquake with a magnitude 6.9. A major earthquake on any of these faults could cause strong ground shaking in the project area.

REGIONAL GEOLOGY

The project area is located in the City of Sacramento in the southern end of the Sacramento Valley portion of the Great Valley Geomorphic Province. The Great Valley is bordered to the north by the Cascade and the Klamath Ranges, to the west by the Coast Ranges, to the east by the Sierra Nevada Mountain Range, and to the south by the transverse ranges. The valley formed by tilting of Sierran Block with the western side dropping to form the valley and the eastern side being uplifted to the form the Sierra Nevada Mountain Range. The valley is characterized by a thick sequence of sediments derived from erosion of the adjacent Sierra Nevada Mountain Range to the east and the Coast Range to the west. The geologic units in the general project area of the are from the Cenozoic Era, Quaternary Period, and Quaternary Series (City of Sacramento 2020a).

TOPOGRAPHY

The potential for slope instability within the city is minor due to the relatively flat topography of the area. The topography of the project area is generally level (City of Sacramento 2020a).

PROJECT SITE SOILS

Soils underlying the project area are from the Cosumnes silt loam, drained, 0 to 2 percent slopes, San Joaquin fine sandy loam 0 to 3 percent slopes, and San Joaquin-Urban land complex, 0 to 3 percent slopes (Figure 3.6-1). The Cosumnes soil is silt loam with Class D hydrologic characteristics, very slow infiltration rates and somewhat poorly drained. The San Joaquin soil is fine sandy loam with Class D hydrologic characteristics, very slow infiltration rates and moderately well drained (City of Sacramento 2020a).

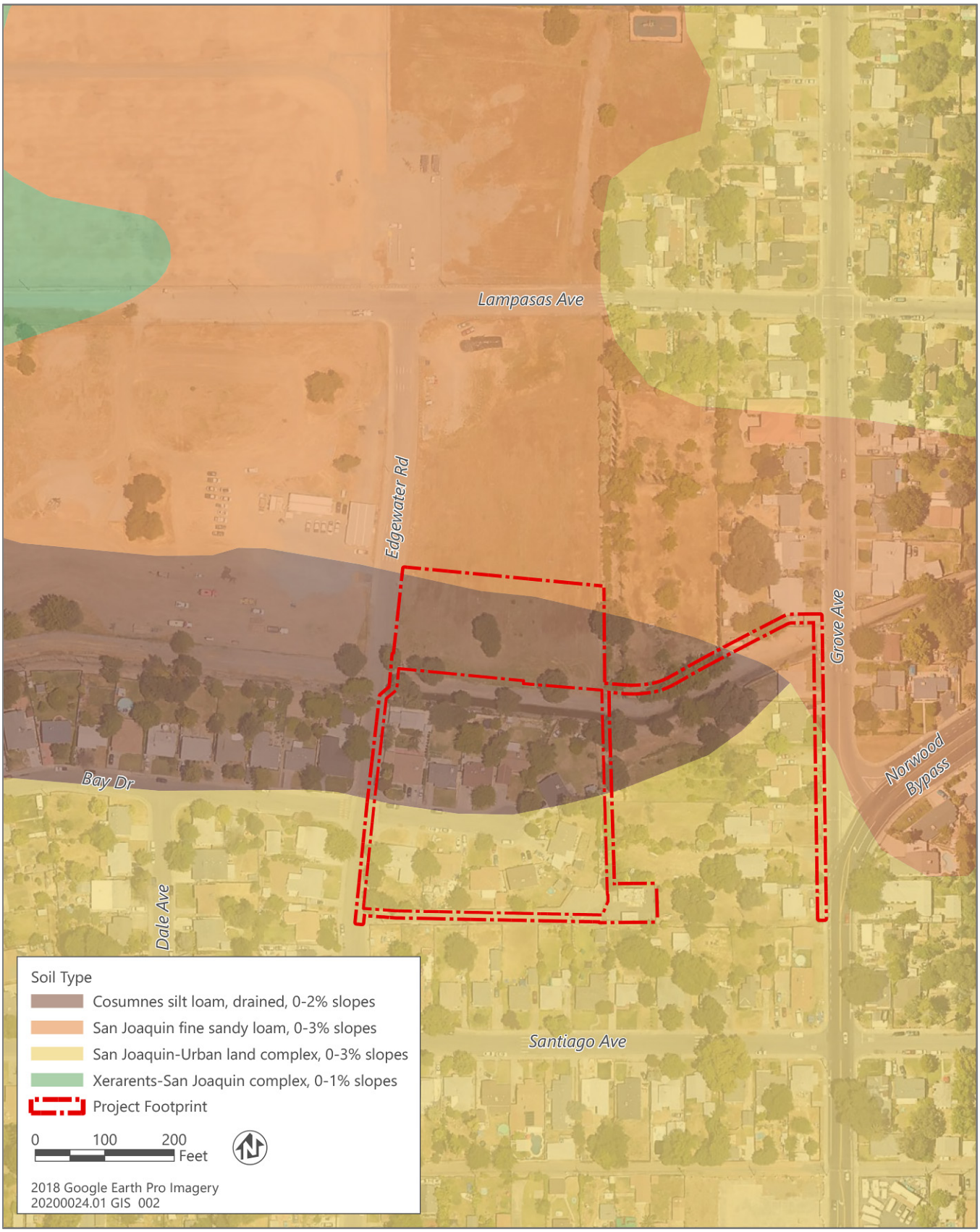
PALEONTOLOGICAL RESOURCES

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

The City of Sacramento is not located in an area considered highly sensitive for paleontological resources present in fossil-bearing soils and rock formations (City of Sacramento 2014:4.5-7). A search of the University of California Museum of Paleontology (UCMP) database was conducted on October 13, 2020. UCMP records indicate no fossils are known from the project area, and mapped as being underlain by late Holocene-age basin deposits with a low paleontological potential (NIC 2020).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Chapter 4.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, and existing mineral resources in the city. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level.



Source: Data downloaded from NRCS in 2018

Figure 3.6-1 Soil Types

Policy EC 1.1.1 requires regular review of the City's seismic and geologic safety standards, and Policy EC 1.1.2 requires geotechnical investigations for project sites to identify and respond to geologic hazards, when present.

The Master EIR evaluated the potential effects of development under the 2035 General Plan on paleontological resources. See Chapter 4.5. General Plan Policy HCR 2.1.16 would require the City to identify and protect paleontological resources in compliance with accepted protocols. The Master EIR concluded that implementation of the 2035 General Plan would have a less-than-significant effect on paleontological resources (Impacts 4.5-5).

3.7.2 Discussion

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

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

No impact. The Alquist-Priolo Act (Public Resources Code Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project area is not located within a fault zone as delineated on an Alquist-Priolo Fault Zoning Map (CGS 2021), and the project area is not located within a seismically-active area. In addition, the project would not include any buildings for human occupancy. Therefore, **no impact** would occur.

ii) Strong seismic ground shaking?

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

iii) Seismic-related ground failure, including liquefaction?

Less-than-significant impact. Liquefaction is possible in areas of loose, sandy soils with a high water content. Although the soils located within the project area are moderately to poorly drained, groundwater depths in the area are not shallow (43 to 62 feet below ground surface) (City of Sacramento 2020a). In addition, as part of the building permit process, a Geotechnical Investigation is required to be submitted with the building permit application and implemented via the building plan review process prior to issuance of the building permit. The Geotechnical Investigation would include site-specific recommendations for general construction procedures; site clearing; site preparation and sub-excavation; engineered fill construction; utility trench backfill; foundation design; interior floor slab support; floor slab moisture penetration resistance; exterior flatwork; pavement design; construction testing and observation; and review of final plans and specifications to ensure that the recommendations within the investigation

are implemented as part of the proposed project. As discussed above under item a) ii), the project would also be required to comply with the City of Sacramento Building Code and the CBC. Implementation of the Sacramento City Code, which requires preparation and implementation of a site-specific Geotechnical Investigation and compliance with the CBC, would reduce potential impacts related to liquefaction to a **less-than-significant** level.

iv) Landslides?

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

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

Less-than-significant impact. Grading and excavation during project construction would result in exposure of soil to potential wind and water erosion until the project area is effectively stabilized and revegetated. The project would disturb approximately 1 acre of land that is not currently paved, and construction projects disturbing 1 acre or more need to obtain coverage under the State Water Resources Control Board's General Construction Stormwater Permit. The general construction permit requires preparation of a detailed stormwater pollution prevention plan (SWPPP) for the construction site that includes best management practices (BMPs) to prevent and control erosion. The general construction permit also requires regular inspections of BMPs before, during, and after storm events.

Compliance with state requirements for controlling construction-related pollution and preparation and implementation of a SWPPP and associated BMPs would reduce project-related erosion impacts to a **less-than-significant** level.

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

Less-than-significant impact. Slope instability includes landslides, debris flows, and rock fall. The city is considered as having low potential for landslides. In addition, the topography of the project area is relatively flat, and landslides and debris flows are not anticipated. Therefore, project-related impacts related to unstable soils would be **less than significant**.

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

Less-than-significant impact. Substantial risk to life or property would generally occur to habitable buildings, which could experience compromised structural integrity because of expansive soils. However, if expansive soils are encountered on-site it could result in damage to the proposed microwave tower or pump station structures. Expansive soils are addressed through standardized foundation engineering practices, and the project would be constructed in compliance with applicable CBC regulations and other City requirements to address expansive soils. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. The project would include relocation of a sewer pump station, construction of a restroom within the new pump station site, and installation of a new forcemain. These facilities would connect to the City's existing sewer system to replace the existing Sump 85 station. No septic tank or alternative waste disposal system would be constructed. Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. Although ground-disturbing activities in fossil-bearing soils and rock formations have the potential to damage or destroy paleontological resources that may be present below the ground surface, a UCMP records search identified no fossils from the project area, and the project area is mapped as being underlain by late Holocene-age basin deposits with a low paleontological potential (NIC 2020). Therefore, paleontological resources are not expected to be encountered during project construction. This impact would be **less than significant**.

3.8 GREENHOUSE GAS EMISSIONS

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

3.8.1 Environmental Setting

Greenhouse gases (GHGs) are gases in the earth's atmosphere that trap heat through a phenomenon called the greenhouse effect. Prominent GHGs that contribute to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The greenhouse effect occurs when solar radiation enters the earth's atmosphere, and GHGs absorb infrared radiation rather than reflect it back into space. This trapping of infrared radiation results in the warming of the atmosphere and is responsible for maintaining a habitable climate on earth. However, GHG emissions from human activities have greatly increased GHG concentrations in the atmosphere and caused levels of warming far above natural levels, resulting in global climate change. It is "extremely likely" that more than half of the observed increase in average global temperature from 1951 to 2010 was caused by anthropogenic (i.e., human-caused) increases in GHG concentrations (IPCC 2014:5).

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

SMAQMD has established mass emission thresholds for determining whether a project's contribution of GHG emissions would be a cumulatively considerable contribution to global climate change. For construction emissions, the SMAQMD has established threshold of significance of 1,100 metric tons of carbon dioxide–equivalent per year ($MTCO_2$/year) (SMAQMD 2020).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR found that GHG emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include ER 6.1.2, ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 CAP, which demonstrates compliance mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals, ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emission

reductions goal. The discussion of GHG emissions and climate change in the 2035 General Plan Master EIR is incorporated by reference in this Initial Study. (CEQA Guidelines Section 15150)

The Master EIR identified numerous policies included in the 2035 General Plan that addressed GHG emissions and climate change. See Draft Master EIR, Chapter 4.14, and pages 4.14-1 et seq. The Master EIR is available online at:

http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.

3.8.2 Discussion

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

Less-than-significant impact. The project would not result in an increase in operational GHG emissions from existing conditions because the project involves replacing an existing pump station, and the new pump station would require the same operational activities and would require less maintenance. Construction of a microwave tower in the project area would result in fewer than five maintenance trips per year. Additionally, the level of GHG emissions associated with the pump station may be nominally less than existing conditions because the new pump station would be outfitted with all new equipment, resulting in higher energy efficiency. The project would also not require an increase in employees from existing conditions.

The project would generate GHGs during construction from the use of heavy-duty construction equipment and vehicle use for worker commutes. This would include construction of a new pump station and the microwave tower, demolition of the existing Sump 85 pump station, and installation of related off-site improvements, including an underground fiber optic line, new manholes, and a forcemain. The project's construction-related GHG emissions were estimated using CalEEMod Version 2016.3.2. A more detailed discussion of this model and the modeling is provided in Section 3.3, "Air Quality," and model outputs are included in Appendix A. Based on this modeling, project-related construction activity would generate a total of 115 $MTCO_2e$ over a period of approximately 42 weeks, which would not exceed SMAQMD's established significance threshold of 1,100 $MTCO_2e$/year. Therefore, the project's contribution of GHG emissions would not be a cumulatively considerable contribution to global climate change and this impact would be **less than significant**.

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

Less-than-significant impact. Plans, policies, and regulations adopted for the purpose of reducing GHG emissions are developed with the purpose of reducing cumulative emissions related, primarily, to long-term operational emissions. Project operation would not conflict with any programs or policies in the City of Sacramento Climate Action Plan, which was incorporated into the 2035 General Plan (City of Sacramento 2015a). As described under item a) above, the project would not result in an increase in operational GHG emissions and the level of GHGs associated with project construction would not exceed the SMAQMD's threshold of 1,100 $MTCO_2e$/year, which was established to support the achievement of statewide GHG emission targets. Thus, the project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs. This impact would be **less than significant**.

3.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X
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?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		X		
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?			X	

3.9.1 Environmental Setting

The project area is located in a residential area bordered by vacant land to the north and east. A Phase I Environmental Site Assessment (Phase I) was prepared for the new pump station site (City of Sacramento 2020a). Based on the historical use of the site and surrounding areas as agricultural land, it is possible that environmentally persistent pesticides and/or nutrients have been applied to crops grown on or around the site historically and these pesticides may still be present in soil or groundwater. However, there are no indications of these types of activities or evidence of on-site agricultural chemical mixing, large quantity storage or materials processing located on the site or surrounding areas. In addition, the Phase I revealed no evidence of recognized environmental conditions in connection with the site (City of Sacramento 2020a).

A data search of various agency lists was conducted for the project area to identify potential hazardous contamination sites. There are three leaking underground storage tank cleanup sites within 0.25-mile of the project area. For two of the sites (Thrifty Oil #432 [T0606700089] and Former Circle-K #1323 [T0606700045]), the cleanup has been completed and the case is closed. The third site Fill-in-Save (T0606700439) was eligible for closure as of 2016 (DTSC 2020, CalEPA 2020, SWRCB 2020).

The nearest airport is Sacramento McClellan Airport, which is a public airport located 4 miles from the project area. The nearest schools are the Noralto Elementary School and Saint Joseph Elementary School, both located approximately 0.45 mile from the project area.

The California Department of Forestry and Fire Protection maintains fire hazard severity zone (FHSZ) maps for the Local Responsibility Area (LRA) and State Responsibility Area (SRA). These areas are mapped based on fuels, terrain, weather, and other relevant factors. The project area is located within the LRA and is not categorized as a "Very High" FHSZ (CAL FIRE 2020).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated effects of development on hazardous materials, emergency response, and aircraft crash hazards. See Chapter 4.6. Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to hazards and hazardous materials during the life of the general plan. Impacts identified related to construction activities and operations were found to be less than significant. Policies included in the 2035 general Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) reduce the identified impacts.

3.9.2 Discussion

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

Less-than-significant impact. Construction of the project would involve the routine transport and handling of hazardous substances such as diesel fuels, lubricants, and solvents. Handling and transport of these materials could result in the exposure of workers to hazardous materials. Construction workers would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations, including California Occupational Safety and Health Administration (Cal/OSHA) and California Department of Toxic Substances Control (DTSC) requirements and manufacturer's instructions, during project construction. No hazardous materials would be stored on-site for operation of the new microwave tower or pump station. The project would be required to implement and comply with existing hazardous materials regulations; therefore, the project would not create significant hazards to the public or environment through the routine transport, use, and disposal of hazardous materials. Therefore, this impact would be less than significant.

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

Less than significant with mitigation incorporated. There are no reported or anticipated sources of hazardous material contamination within the project area. Operation of the microwave tower and pump station would not introduce new hazardous materials into the area. However, it is possible that hazardous materials such as fuels, oils, grease, and lubricants from equipment could be accidentally released during construction. Therefore, construction in the project area, including demolition and excavation of soils, could potentially result in disturbance of previously unknown

contaminants. These actions could result in the exposure of construction workers to hazardous materials. Therefore, this impact would be potentially significant.

Mitigation Measure 3.9-1: Prepare and Implement a Health and Safety Plan

The contractor shall prepare a Health and Safety Plan, which shall be reviewed and approved by the City before initiating any demolition, grading, or other earthmoving activities. This plan shall require measures that will be employed during all demolition and construction activities to protect construction workers and the public from exposure to hazardous materials. These measures could include, but would not be limited to, posting notices, limiting access to the site, air monitoring, and watering. Contractors will be required to comply with state health and safety standards for all demolition work. If necessary, this shall include compliance with the federal OSHA and Cal/OSHA requirements.

In addition, the plan shall include procedures to follow in the event that contaminated soil and/or groundwater or other hazardous materials are generated or encountered during construction. Such procedures could include, but would not be limited to, the following:

- all work shall be halted in the affected area and the type and extent of the contamination shall be determined;
- the project contractor shall notify the City if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation;
- any contaminated areas shall be remediated in accordance with recommendations made by RWQCB and DTSC; and
- remediation activities could include but would not be limited to the excavation of contaminated soil areas and hauling of contaminated soil materials to an appropriate off-site disposal facility, mixing of on-site soils, and capping (i.e., paving or sealing) of contaminated areas.

Significance Conclusion

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

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

No impact. As stated above, the nearest schools are the Noralto Elementary School and Saint Joseph Elementary School, both located approximately 0.45 mile from the project area. There are no schools within 0.25-mile of the project area. Therefore, there would be **no impact**.

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

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

As discussed above, review of regulatory agency databases indicated that there are three leaking underground storage tank cleanup sites within 0.25-mile; however, no records of any hazardous materials were identified for the project area. In addition, the project area is not identified on the Cortese list or other State or county hazardous materials lists. Therefore, there would be **no impact**.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No impact. The nearest airport is Sacramento McClellan Airport, which is a public airport located 4 miles from the project area. There are no public airports within 2 miles of the project area, and the project area is not within an airport land use plans area. The new microwave tower would be a tall structure (i.e., between 90 and 120 feet) that has the potential to pose a hazard to aircraft. Title 14, Part 77 of the Code of Federal Regulations establishes the standards for objects affecting navigable airspace. The Federal Aviation Association (FAA) considers any project that is 200 feet in height or greater to be a potential obstruction to aircraft. Because the microwave tower would be less than 200 feet in height, the tower would not require flashing lights warning lights for aircraft or notification of FAA, and would not be considered a potential obstruction to aircraft. Therefore, there would be **no impact**.

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

Less than significant impact with mitigation incorporated. The City has adopted an Emergency Operations Plan (City of Sacramento 2018). However, the project would not physically interfere with this, or any other emergency response plan. Trucks and equipment traveling to the project area would use Edgewater Road and Grove Avenue. Construction vehicles would stage within the project footprint, and they would not stage near or block any evacuation routes. However, construction adjacent to Edgewater Road and Grove Avenue could temporarily interfere with traffic or result in lane closures, which has the potential to reduce emergency access. This impact would be potentially significant.

Mitigation Measure 3.9-2: Traffic Control Plan

The City will require the contractor(s) to prepare a Traffic Control Plan in accordance with City requirements and professional engineering standards prior to construction. The Traffic Control Plan could include the following requirements:

- Emergency services access to local land uses shall be maintained at all times for the duration of construction activities. Local emergency service providers shall be informed of proposed construction activities and identified haul routes.
- Access for local land uses including residential driveways during construction activities shall be maintained.
- Limit traffic delays to no more than 20 minutes.
- Roadside safety protocols shall be complied with to reduce the risk of accident.
- Use flaggers to direct traffic as necessary.

Significance Conclusion

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

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

Less-than-significant impact. The project area is not in an area designated as having a high potential for wildland fires. Vehicles and other equipment would be used during construction, but the project would adhere to spark-arresting and fire extinguishing requirements. In the long-term, the project would result in construction of a new microwave tower and relocation of the existing Sump 85 pump station, which would not increase the fire risks. In addition, the project would not introduce new residents into a high fire severity zone. Therefore, the project would not expose people or structures to a significant loss, injury, or death involving wildland fires. This impact would be **less than significant**.

3.10 HYDROLOGY AND WATER QUALITY

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

3.10.1 Environmental Setting

SURFACE WATER

The City of Sacramento is located at the confluence of the Sacramento and American Rivers within the Sacramento River Basin. The Sacramento River Basin encompasses about 27,000 square miles and is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta to the southeast. The Sacramento River Basin is the largest river basin in California, capturing, on average, approximately 22 million acre-feet of annual precipitation (City of Sacramento 2014:6-43). The project area is located approximately 1,500 feet east of Steelhead Creek, an offshoot of the Sacramento River, and approximately 1.6 miles north of the American River.

WATER QUALITY

The City operates under a Phase I National Pollution Discharge Elimination System (NPDES) permit for stormwater municipal discharges to surface waters (NPDES No. CAS082597). The permit requires that the City impose water quality and watershed protection measures for all development projects. The intent of the waste discharge requirements in the permit is to attain water quality standards and protection of beneficial uses consistent with the Central Valley Regional Water Quality Control Board's (CVRWQCB) Basin Plan. The NPDES permit prohibits discharges from causing violations of applicable water quality standards or resulting in conditions that create a nuisance or water quality impairment in receiving waters. A key component of the NPDES permit is the implementation of the Stormwater Quality Improvement Plan (SQIP), which consists of six Minimum Control elements 1) public education and outreach, 2) commercial/industrial control, 3) detection and elimination of illicit discharges, 4) construction stormwater control, 5) postconstruction stormwater control for new development and redevelopment, and 6) pollution prevention/good housekeeping for municipal operations. In addition, the City's Land Grading and Erosion Control Ordinance and Stormwater Management and Discharge Control Code provide additional regulation and guidance to prevent degradation of water quality (City of Sacramento 2014:4.7-15). The general stormwater flow direction from the project area is southerly into the Bay Drive Drainage Ditch, which is located immediately south of the new pump station site.

GROUNDWATER

The project area is within the South American Groundwater Subbasin, which is part of the larger Sacramento Valley Groundwater Basin (City of Sacramento 2014:6-48). No groundwater information has been recorded for the project area. However, based on information provided in the SWRCB's GeoTracker database, depth to regional groundwater is approximately 43 to 62 feet below ground service (City of Sacramento 2020a). Since groundwater flow will sometimes follow the general topographic gradient of an area, it is assumed to generally flow northwest towards Steelhead Creek.

FLOODING

The project area is within an area with reduced flood risk (Zone X) as identified on Federal Emergency Management Agency (FEMA) flood maps (FEMA 2015).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Chapter 4.7 of the Master EIR evaluates the potential effects of the 2035 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation related to construction activities (Impacts 4.7-1, 4.7-2) and exposure of people to flood risks (Impacts 4.7-3). Policies included in the 2035 General Plan include a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1), comprehensive flood management (Policy EC 2.1.23), and construction of adequate drainage facilities with new development (Policy ER 1.1.1 to ER 1.1.10) were identified that the Master EIR concluded would reduce all impacts to a less-than-significant level.

3.10.2 Discussion

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

Less-than-significant impact. Based on topography, stormwater from the adjacent parcels could discharge onto the new pump station site in certain areas. Drainage from the project area flows into the City of Sacramento storm drain system and is discharged into the Sacramento River, which is located within the Sacramento River Basin. As such, the applicable water quality standards are listed in the Fifth Edition of the Water Quality Control Plan (Basin Plan) for the

Sacramento River and San Joaquin River Basins (CRWQCB 2018). Construction of the project would occur within the City of Sacramento and would disturb more than 1 acre of land. Therefore, the applicable waste discharge requirements (WDR) are the Municipal Separate Storm Sewer (MS4) stormwater NPDES permit (Order No. R5-2002-0206 and NPDES No. CAS082597 [MS4 Stormwater NPDES Permit]) and the Statewide Construction General NPDES Permit for stormwater runoff (Order No. 99-08–DWQ and NPDES No. CAS000002 [Construction General NPDES Permit]).

To reduce or eliminate construction-related water quality effects, the City of Sacramento's Grading Ordinance requires projects to comply with the City's SQIP. In addition, because the disturbed area exceeds 1 acre or more in size, the City would obtain coverage under the NPDES Construction General Permit and include erosion and sediment control plans with specific BMPs prior to the start of construction. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater and other non-point source runoff. The City's SQIP and the Stormwater Quality Design Manual for the Sacramento Region include BMPs to be implemented to mitigate impacts from new development and redevelopment projects. Construction BMPs that implement the SQIP and Construction General NPDES Permit may include, but are not limited to preparation of an erosion and sediment control plan and a Stormwater Pollution Prevention Plan (SWPPP). Compliance with these permitting requirements would reduce this impact to a **less-than-significant** level.

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

Less-than-significant impact. The project area is underlain by the South American Groundwater Subbasin, which is part of the larger Sacramento Valley Groundwater Basin. The South American River Subbasin is estimated to have a groundwater storage capacity of 4,816,000 acre-feet (DWR 2004:2). No groundwater would be withdrawn during project construction or operation; therefore, the project would not impede sustainable groundwater management of the basin.

The new pump station site is currently vacant and prior to construction would be graded to provide adequate drainage. The remainder of the project area is currently paved. Once graded, the new pump station site would either be paved with concrete or covered with gravel, depending on the final project design. Excavation would be required to install the new project components. The excavation depth for the microwave tower footing would be approximately 2.5 feet. Excavation depths for the fiber optic line would be approximately 2.5 to 3 feet and for the forcemain would be approximately 5 feet or deeper if utilities are encountered. Each wet well would be approximately 25 feet deep and set below grade. Project implementation has the potential to alter groundwater recharge within the new pump station site; however, soils that underlain the new pump station site include Cosumnes and San Joaquin, which have very slow infiltration rates that do not facilitate large amounts of groundwater recharge. In addition, the project would only add approximately 1 acre of impervious surfaces, which would not substantially interfere with groundwater recharge within the groundwater basin. Therefore, project implementation is not expected to result in substantial impacts to groundwater or groundwater recharge. For these reasons, there would be a **less-than-significant** impact on groundwater supplies and groundwater recharge.

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

i) Result in substantial on- or offsite erosion or siltation;

Less-than-significant impact. Project construction and demolition activities would involve excavation and movement of soil, which could result in erosion and siltation. These activities have the potential to cause or increase soil erosion and could accidentally discharge wastes into waterways in runoff. Compliance with existing requirements associated with the Stormwater Management and Control Code, the Grading, Erosion and Sediment Control Ordinance, as well as the MS4 Stormwater NPDES Permit and the Construction General NPDES Permit would reduce potential erosion and siltation so that the project would not result in substantial long-term effects on water quality. In compliance with

the Construction General NPDES Permit, the project would require preparation and implementation of a SWPPP and an erosion and sediment control plan. The project demolition and construction would include BMPs that would reduce and avoid the likelihood of substantial on- or offsite erosion and siltation or discharge of polluted runoff. As a result, this impact would be **less than significant**.

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

Less-than-significant impact. Project construction activities would occur within the project area and replace the existing Sump 85 pump station. The new pump station site is currently undeveloped and after grading is completed, the site would either be paved with concrete or covered with gravel, depending on the final project design. Project implementation has the potential to alter surface runoff due to the addition of pavement or gravel on what is currently an undeveloped site. However, the site is 1 acre and project implementation would not result in a substantial net increase in impervious surfaces that would result in flooding on- or off-site. In addition, Sacramento City Code Section 13.08.145 addresses drainage impacts and requires that when a property contributes drainage to the City's storm drain system, all storm water and surface runoff drainage impacts resulting from the development be reduced to a level such that the development does not affect the function of the storm drain system, and that there is no increase in flooding that adversely affects individuals, streets, structures, infrastructure, or property. Additionally, the project area is located within an area with reduced flood risk (Zone X) and is not subject to frequent flooding (FEMA 2015). Therefore, this impact would be **less than significant**.

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

Less-than-significant impact. The project would include replacing the existing Sump 85 pump station and would not increase the pump station capacity. As discussed in item c) ii) above, development of the new pump station site could increase runoff. However, the site is 1 acre and project implementation would not result in a substantial net increase in impervious surfaces that would contribute to runoff. In addition, Sacramento City Code Section 13.08.145 addresses drainage impacts and requires that when a property contributes drainage to the City's storm drain system, all storm water and surface runoff drainage impacts resulting from the development be reduced to a level that would not affect the function of the storm drain system. Therefore, the project would not exceed existing or planned stormwater capacity or create a substantial increase in runoff. This impact would be **less than significant**.

iv) Impede or redirect flood flows?

Less-than-significant impact. The project would include construction of new facilities; however, the project area is located in an area designated as having a reduced flood risk (Zone X) (FEMA 2015). In addition, the new forcemain would follow Edgewater Road and cross Bay Drive Drainage Ditch adjacent to the road and below the existing culvert. Therefore, the installation of the forcemain not result in disturbance to the bed or bank of the Bay Drive Drainage Ditch. A portion of the fiber optic line would be parallel to Bay Drive Drainage Ditch; however, the project would not directly affect the drainage ditch. Therefore, the project would not impede or redirect flows of any waterways. This impact would be **less than significant**.

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

No impact. The project area is located within an area of reduced flood risk (Zone X) (FEMA 2015). Additionally, the project is in an area of mostly flat terrain with no large open bodies of water. For these reasons, the project area would not be inundated by a tsunami or seiche. There would be **no impact**.

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

Less-than-significant impact. Project construction would be subject to the City's water quality and watershed protection measures as required by the Construction General NPDES Permit and implemented through the SQIP. During operation, the project would generate similar amounts of wastewater or stormwater runoff as the existing Sump 85 pump station, so there would be no conflict with or obstruction of a water quality control plan during project operation. Project operation would not require the use of groundwater. Project implementation would result in a slight increase in potable water use related to the new restroom. However, the increase in potable water use would not be substantial and would not conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan. Therefore, this impact would be **less than significant**.

3.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning. Would the project:				
a) Physically divide an established community?				X
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?				X

3.11.1 Environmental Setting

The project area is within the City of Sacramento. The project area includes vacant land, roadways, and the existing Sump 85 pump station. The area is surrounded by residential development and associated roadways and overhead utilities, vacant land owned by PG&E, and a maintenance yard for Twin Rivers Unified School District.

The 2035 General Plan designates the project area and surrounding area as Traditional Neighborhood Low Density and the zoning is Standard Single Family (R-1) (Figure 3.11-1). This land designation is primarily for low density residential, but also allows for limited neighborhood-serving commercial on lots 2 acres or less and compatible public, quasi-public, and special uses (City of Sacramento 2015b). The Standard Single Family zoning designation is primarily for single-family residential and allows for limited commercial, industrial, and agricultural uses.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR discussed land use consistency and compatibility under the 2035 General Plan. See Master EIR, Chapter 3.1. The Master EIR analyzes the consistency of the proposed Sacramento 2035 General Plan with existing regional land use plans and policies, as well as land use compatibility with adjacent lands. The Master EIR concluded that the proposed land use designations under the 2035 General Plan would not produce excessive noise, light, odors, or traffic that could result in a land use incompatibility with adjacent lands.

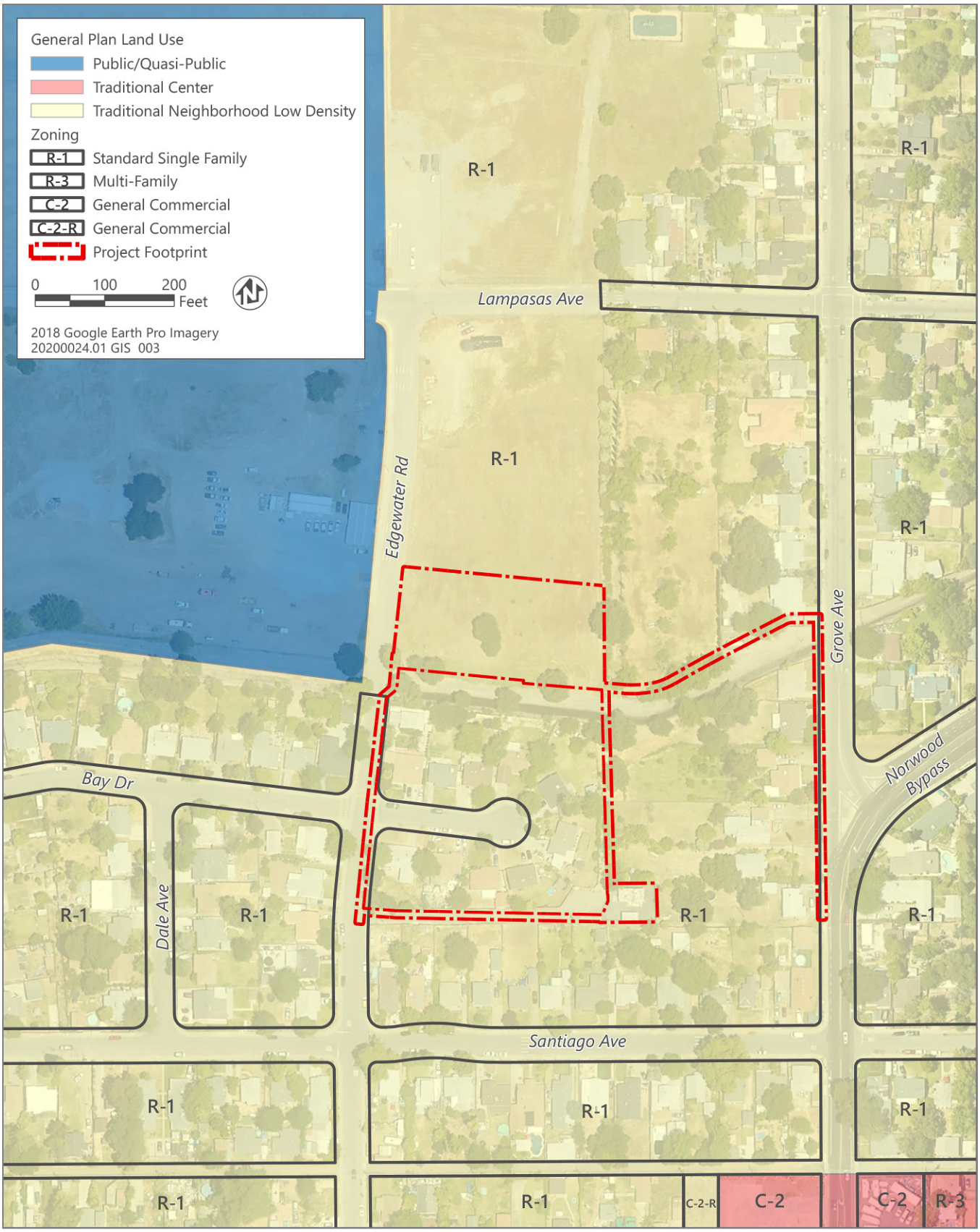
3.11.2 Discussion

a) Physically divide an established community?

No impact. The project area is located within a residential community; however, the proposed pump station is replacing an existing pump station within the same neighborhood and would be compatible with the surrounding neighborhood. In addition, the microwave tower would be consistent with other utilities in the project area. The project would not divide the established community. There would be **no impact**.

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?

No impact. The existing land uses within the project area are consistent with the land use designation and zoning. The project would result in relocation of an existing pump station 0.06 mile north of the existing pump station site within the same neighborhood. Therefore, the project would not result in any changes to the existing land use that would conflict with the existing land use designations for the project area. There would be **no impact**.



Source: Data downloaded from City of Sacramento in 2018

Figure 3.11-1 Land Use and Zoning

3.12 MINERAL RESOURCES

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

3.12.1 Environmental Setting

Existing mineral extraction activities in and around Sacramento include fine (sand) and coarse (gravel) construction aggregates, as well as clay. Other mineral resources include gold. Construction aggregates come from two different sources: hardbed rock sources and river channel (alluvial) sources. Generally, sand, gravel, and clay are used as fill and for construction of highways and roads, streets, urban and suburban developments, canals, aqueducts, and pond linings. There are no active mining operations within the city (City of Sacramento 2015b).

DOC, Division of Mines and Geology has guidelines for the classification and designation of mineral lands, known as mineral resource zones. The project area is designated as MRZ-1 meaning it is an area with a low likelihood of containing significant mineral deposits (City of Sacramento 2015b).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Chapter 4.5 of the Master EIR evaluated the potential effects related to existing mineral resources in the city. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level.

3.12.2 Discussion

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

No impact. The project area is not located within an area of known mineral resources, and most of the project area is already developed. The project would replace vacant land with a microwave tower and pump station; however, the new pump station site is not used for or zoned as a mineral resource area. The existing pump station site would be demolished but would remain as a paved site and there would be no change to the roadways within the project area. Therefore, construction of the project would not affect the availability of known mineral resources that would be of value to the region and the residents of the state, and **no impact** would occur.

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

No impact. There are no locally important mineral resource recovery sites delineated on a local general plan, specific plan, or other land use plan that include the project area. The project area is designated as MRZ-1 meaning it is an area with a low likelihood of containing significant mineral deposits (City of Sacramento 2015b). Therefore, development of the project would have no effect on the availability of known mineral resources, and **no impact** would occur.

3.13 NOISE

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

3.13.1 Environmental Setting

ACOUSTIC FUNDAMENTALS

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

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

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

Various noise descriptors have been developed to describe time-varying noise levels. The noise descriptors used in this chapter include:

- Equivalent Continuous Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq}, is the energy average of sound levels occurring during a 1-hour period.
- Day-Night Level (L_{dn}): L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB "penalty" applied to sound levels occurring during nighttime hours between 10 p.m. and 7 a.m. (Caltrans 2013:2-48; FTA 2018:214).

GROUND VIBRATION

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

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

EXISTING NOISE SOURCES

The existing Sump 85 pump station is located in a single-family residential neighborhood where the most prominent noise source is vehicle traffic along local roadways (e.g., Edgewater Road, Grove Avenue, Dale Avenue, Santiago Avenue). The new pump station site would be constructed north of the existing Sump 85 pump station on vacant land bordered by Edgewater Road to the west; vacant land to the north and east; and the Bay Drive Drainage Ditch to the south. Prominent noise sources in the project vicinity are similar to those at the existing Sump 85 pump station (i.e., traffic noise), along with occasional noise from activity at the nearby Twin Rivers Unified School District maintenance yard.

NOISE- AND VIBRATION-SENSITIVE RECEPTORS

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Additional land uses such as schools, transient lodging, cemeteries, and places of worship are also generally considered sensitive to increases in noise levels. Vibration-sensitive land uses are generally considered to be buildings or structures that could be damaged due to vibration or land uses where vibration levels could interfere with operations or cause human annoyance.

The nearest noise-sensitive receptors to the existing Sump 85 pump station, which will be removed as part of the project, are single-family homes in the Noralto Neighborhood, primarily residences located south of Bay Drive, west of Grove Avenue, and north of Santiago Avenue. The nearest noise-sensitive receptors to the new pump station site are also single-family homes in the Noralto Neighborhood, primarily the residences located south of the Bay Drive Drainage Ditch, west of Grove Avenue, and south of Lampasas Avenue. All residential receptors would also be considered vibration-sensitive land uses because of the potential to cause structural damage to homes and/or annoyance to residents.

LOCAL NOISE REGULATIONS

The City's 2035 General Plan Environmental Constraints Element and the Noise Control Ordinance in the City of Sacramento Municipal Code contain noise policies and standards that are used as thresholds of significance in the evaluation of project-related noise impacts. Consistent with City planning efforts, this analysis considers the following noise and vibration thresholds:

- construction-generated noise levels in excess of City Noise Control Ordinance standards during the more noise-sensitive evening, nighttime, and early-morning hours (6 p.m. to 7 a.m., Monday through Saturday, and between 6 p.m. and 9 a.m. on Sunday);
- long-term, traffic-generated noise levels in excess of the applicable normally acceptable noise standards for land use compatibility as specified in Table EC 1 in the City of Sacramento General Plan Environmental Constraints Element; incremental increase standards specified in Table EC 2 in the City of Sacramento General Plan Environmental Constraints Element; or the City's interior noise standard of 45 L_{dn} at nearby residences;
- long-term, operational noise levels generated by stationary or area sources that exceed the City's interior noise standard of 45 L_{dn} at nearby residences;
- construction-generated vibration levels exceeding Caltrans-recommended standards with respect to the prevention of structural building damage (0.5 in/sec PPV for new residential buildings) or FTA's maximum-acceptable-vibration standard with respect to human response (80 VdB for residential uses) at nearby existing vibration-sensitive land uses during daytime hours; and
- 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, public use airport, or private airstrip, exposure of people residing or working in the project area to excessive noise levels.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE LOCAL POLICIES

The Master EIR evaluated the potential for development under the 2035 General Plan to increase noise levels in the community, especially at noise-sensitive receptors. New noise sources include vehicular traffic, aircraft, railways, light rail, and stationary sources. The general plan policies establish exterior (Policy EC 3.1.1) and interior (Policy EC 3.1.3) noise standards. A variety of policies provide standards for the types of development envisioned in the General Plan including Policy EC 3.1.8, which requires new mixed-use, commercial, and industrial development to mitigate the effects of noise from operations on adjoining sensitive land use. Notwithstanding application of the General Plan policies, noise impacts for exterior noise levels (Impact 4.8-1) and interior noise levels (Impact 4.8-2), and vibration impacts (Impact 4.8-4) were found to be significant and unavoidable. No mitigation measures were recommended.

3.13.2 Discussion

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

Less-than-significant impact. Noise would be generated by the project during construction and operation, which are discussed separately, below.

TEMPORARY CONSTRUCTION NOISE

The operation of heavy equipment during project construction would generate noise, resulting in a temporary increase in noise levels at nearby sensitive receptors. Project construction is anticipated to begin in December 2021 and would be completed over the span of approximately 42 weeks. All staging areas for equipment storage, personnel vehicles, and construction materials would be located within the project footprint. Project construction would include two below grade wet wells and associated piping; an electrical building and installation of electrical equipment (e.g., SMUD transformer and backup generator); a microwave tower; security fencing; off-site improvements, including a manhole, a forcemain along Edgewater Road, and an underground fiber optic line along Bay Drive Ditch Drainage Ditch and Grove Avenue; and demolition of the existing Sump 85 pump station. Construction activities would involve the use of heavy equipment such as dozers, excavators, a boom truck, air compressors, backhoes, forklifts, compactors, graders, a welding machine, and haul trucks. Demolition activities at the existing Sump 85 pump station would require similar pieces of heavy equipment, along with dump trucks, water trucks, and a jack hammer. The loudest pieces of equipment that would be used during construction and demolition would include excavators, dozers, and jack hammers, all of which individually generate 85 dB L_{eq} at 50 feet (FHWA 2006:3). Table 3.13-1 shows the estimated levels of noise exposure at nearby receptors during construction and demolition. Noise modeling assumed simultaneous operation of three pieces of heavy equipment in proximity to each other at the boundary of the specific construction or demolition activity nearest to the receptor. Detailed calculations are provided in Appendix C.

Table 3.13-1 Exterior and Interior Noise Levels at Nearby Receptors during Project Construction and Demolition

Receptor	Construction Type	Approximate Distance from Construction Activity to Receptor (feet)	Exterior Noise Level at Receptor (dB L_{eq})[2]	Indoor Noise Level at Receptor [1,2] (dB L_{eq})
Single-family residences south of the Bay Drive Drainage Ditch	Construction of the new pump station	55	85	61
Single-family residences along Edgewater Road	Construction of the pipeline along Edgewater Road	15	96	72
Single-family residences west of Grove Avenue	Construction of the manhole east of the project area	245	72	48
Single-family residences south of the Bay Drive Drainage Ditch	Construction of the new fiber optic line	88	81	57
Single-family residences west of Grove Avenue	Construction of the new fiber optic line	25	92	68
Single-family residences south of the Bay Drive Drainage Ditch	Construction of the microwave tower	130	78	54
Single-family residences along Bay Drive	Demolition of the existing pump station	60	84	60
Single-family residences along Santiago Avenue	Demolition of the existing pump station	75	82	58

Notes: dB = decibel; L_{eq} = equivalent continuous sound level

[1] Building walls would provide 24 dB of attenuation (EPA 1971:11).

[2] Noise exposure level estimates assume simultaneous operation of three pieces of equipment (a dozer and two excavators) in proximity to each other at the boundary of construction/demolition activity nearest to the receptor. Noise level estimates assume all equipment is properly maintained and fitted with operational noise control device, per manufacturer specifications. See Appendix C for detailed noise modeling and input parameters.

Source: Modeled by Ascent Environmental in 2020

As shown in Table 3.13-1, construction and demolition activity would generate exterior noise levels that range from 72 to 96 dB L_{eq} and interior noise levels that range from 48 to 72 dB L_{eq} at nearby single-family residences. Construction and demolition noise would fluctuate throughout the duration of project construction at individual receptors depending on the phase of construction; the type of construction activities occurring and equipment used on any given day; the distances from construction activity to noise-sensitive receptors; any noise-attenuating features, such as topography, vegetation, and existing structures; and existing ambient noise levels. Construction noise levels at more distant receptors not listed in Table 3.13-1 would be lower because noise levels attenuate over distance.

Although construction activity would result in elevated noise levels at nearby single-family residences, construction noise would be temporary and intermittent and would only occur during daytime hours when residents are less sensitive to noise. Because construction activity would only occur between 7:00 a.m. and 6:00 p.m., Monday through Friday, it would be exempt from the City's daytime noise standards. Thus, because the project would adhere to the applicable City noise standard for construction-generated noise, this impact would be less than significant.

LONG-TERM, OPERATIONAL NOISE

Transportation Noise Sources

After construction is completed, operation of the project would not increase the number of employees or visitors to the project area and would therefore result in minimal, if any, new vehicle trips to and from the area. Consequently, there would be no measurable increase in traffic noise levels, and traffic noise associated with project operation and maintenance would have a less-than-significant impact.

Stationary Noise Sources

The types of noise-generating equipment at the new pump station site would be similar to the equipment at the existing Sump 85 pump station. Operation of the pump station would generate noise primarily from the operation of electrical equipment, including a SMUD transformer and a backup generator housed in the electrical building. The two wet wells would include pumps that would generate noise. However, because the wet wells and pumps would be below grade, similar to the existing Sump 85 pump station, the surrounding ground would serve as a noise barrier that would reduce the ground-level noise in the vicinity of the wet wells. The microwave tower would include a radio/antenna, lighting, and potentially a video camera, none of which would generate noise.

The generator would only be used during emergencies and for periodic testing. Section 8.68.080 of the Sacramento City Code provides an exemption for emergency activities, which, by definition, includes the use of machinery or equipment by private or public utilities when restoring a utility service. Thus, operation of the backup generator would be exempt from City noise standards during emergencies. However, the backup generator would not be exempt from City noise standards during periodic testing. Generators produce a noise level of approximately 70 dB L_{eq} at 50 feet (FHWA 2006). Electrical transformers generate noise mainly due to cooling equipment and fans, generating a noise level of approximately 74 dB L_{eq} at 20 feet (AECOM 2012). Using the loudest operational scenario in which all transformer cooling fans are operating, the backup generator is operating, and accounting for a 24-dB noise reduction provided by the electrical building walls (EPA 1971:11), the electrical transformer and generator would generate a combined exterior noise level of 40 dB L_{eq} at the nearest single-family residence. Additional attenuation would be provided by the walls of the single-family residences for interior noise levels. Noise levels would typically be 5-dB lower because the electrical transformer would usually be the only piece of equipment operating routinely in the electrical building, while testing of the backup generator would only occur occasionally and during daytime hours for a limited period of time. However, even with both pieces of equipment operating, both the exterior and interior noise levels would not exceed City noise standards for residential land uses. Therefore, this impact would be less than significant.

SUMMARY

Because both temporary and long-term noise generated by the project during construction and operation, respectively, would not exceed applicable City noise standards, this impact would be **less than significant**.

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

Less-than-significant impact. Project construction would not involve the use of ground vibration–intensive activities, such as pile driving and blasting. Activities involving pile driving and blasting typically generate the highest vibration levels compared to other construction methods and are, therefore, of greatest concern when evaluating construction-related vibration impacts. Pieces of equipment that generate lower levels of ground vibration, such as excavators, jack hammers, and trucks, would be used during construction. The levels of ground vibration generated by these types of common construction equipment are typical for urban areas. For these reasons, construction-generated vibration would not result in adverse vibration effects to off-site receptors, buildings, or infrastructure. Therefore, this impact would be **less than significant**.

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

No impact. The project is not located within an airport land use plan or within 2 miles of a public airport or public use airport. Additionally, the project is not located within 2 miles of a private airstrip. Sacramento McClellan Airport is the closest airport and is located approximately 4 miles northeast of the project area. Also, the project would not include any new land uses where people would live or work. Thus, the project would have **no impact** regarding the exposure of people residing or working in the project area to excessive aircraft-related noise levels.

3.14 POPULATION AND HOUSING

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

3.14.1 Environmental Setting

According to the U.S. Census Bureau, the City of Sacramento's population totaled 495,011 in 2018 (U.S. Census Bureau 2018a). Total housing units were not reported in 2018 for the city by the U.S Census Bureau; however, the 2035 General Plan Master EIR projects that the city will have approximately 261,000 housing units by 2035 (City of Sacramento 2014). The project area is surrounded by residential development; however, there is no housing within the project area.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE LOCAL POLICIES

The Master EIR discussed population, employment, and housing under the 2035 General Plan. See Master EIR, Chapter 3.2. The Master EIR describes existing levels of and trends in population, employment, and housing in the Policy Area and Sacramento County, including jobs-housing balance. It identifies 2035 Sacramento General Plan Update growth assumptions and analyzes projected population, employment, and housing growth in relation to planned buildout of the Policy Area under the 2035 General Plan Update. The Master EIR concluded that Policies LU 1.1.2 and LU 1.1.3 would ensure that the City regulates the levels of building intensity and population density according to the standards and land use designations set out in the General Plan Update and the City's Zoning Code. The Master EIR also concluded that adequate land is designated in the proposed General Plan Update to accommodate the increase in projected employment slated to occur over the next 20 years. In addition, the Master EIR concludes that the General Plan Update designates adequate land for a mix of residential densities to accommodate the projected increase in housing units contemplated under the Plan.

3.14.2 Discussion

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

No impact. The proposed project does not include the construction of new homes or businesses nor does it extend roads or infrastructure that would lead to population growth. The project would construct a microwave tower and replace an existing pump station and would not increase the capacity of the pump station. Therefore, there would be **no impact** on population growth.

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

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

3.15 PUBLIC SERVICES

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

3.15.1 Environmental Setting

FIRE PROTECTION SERVICES

The Sacramento Fire Department (SFD) provides fire protection services to the project area, as well as the entire city. The project area is within the response zone of Fire Station #20 (SFD 2019). Fire Station #20 is located at 2512 Rio Linda Boulevard, approximately 1 miles east of the project area.

POLICE PROTECTION SERVICES

The Sacramento Police Department (SPD) is principally responsible for providing police protection services in the City of Sacramento, including the project area. The project area is located within the North Command and beat 2B (SPD 2016:8). The North Command is based at the William J. Kinney Police Facility located at 3550 Marysville Boulevard, approximately 2.4 miles northeast of the project area.

SCHOOLS

The project area is served by the Sacramento City Unified School District and the closest public schools to the project area are the Noralto Elementary School and Saint Joseph Elementary School, both located approximately 0.45 mile from the project area.

PARKS AND OTHER PUBLIC FACILITIES

The nearest park is Johnston Park located 0.25 mile from the project area. The park is approximately 25 acres and includes basketball courts, a picnic area, playground, soccer fields, and swimming pool. The park is maintained by the City of Sacramento (City of Sacramento 2020b).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries and emergency services (Chapter 4.10).

The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concluded that effects of development that could occur under the General Plan would be less than significant.

General plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use development of facilities) reduce impacts on schools to a less-than-significant level. (Impacts 4.10-3, 4) Impacts on library facilities were considered less than significant (Impact 4.10-5).

3.15.2 Discussion

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

FIRE PROTECTION

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

POLICE PROTECTION

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

SCHOOLS

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

PARKS

No impact. The project would not provide any new structures that could result in additional residents/employees, which could necessitate new or expanded park facilities. Therefore, the project would have **no impact** on parks.

OTHER PUBLIC FACILITIES

No impact. No other public facilities exist in the project area that could be affected by implementation of the project. Therefore, the project would have **no impact** on other public facilities.

3.16 RECREATION

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

3.16.1 Environmental Setting

The nearest park is Johnston Park located 0.25 mile from the project area. The park is approximately 25 acres and includes basketball courts, a picnic area, playground, soccer fields, and swimming pool. The park is maintained by the City of Sacramento (City of Sacramento 2020b).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Chapter 4.9 of the Master EIR considered the effects of the 2035 General Plan on the City's existing parkland, urban forest, recreational facilities and recreational services. The General Plan identified a goal of providing an integrated park and recreation system in the city (Goal ERC 2.1). New residential development will be required to dedicate land, pay in-lieu fees or otherwise contribute a fair share to the acquisition and development of parks and recreation facilities (Policy ERC 2.2.5). Impacts were considered less than significant after application of the applicable policies. (Impacts 4.9-1 and 4.9-2).

3.16.2 Discussion

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

No impact. The project would not include any new housing or businesses that would increase the population in the project vicinity. Therefore, use of existing neighborhood and regional parks or other recreational facilities would not change as a result of the project. Because the project would not result in the physical deterioration of public recreational facilities, **no impact** would occur.

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

No impact. The project would not increase the population in the project vicinity. Therefore, the project would not require construction of new homes or infrastructure, including parks and recreational facilities. **No impact** would occur.

3.17 TRANSPORTATION

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

3.17.1 Environmental Setting

Regional access to the project area is provided via I-80 and SR 160. The new pump station site and the existing pump station site are accessed by Edgewater Road. Other roadways in the project vicinity include Grove Avenue, Bay Drive, and Lampasas Avenue, all of which are 2-lane residential roadways.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

Transportation and circulation were discussed in the Master EIR in Chapter 4.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian and aviation components. Provisions of the 2035 General Plan that provide substantial guidance include Mobility Goal 1.1, calling for a transportation system that is effectively planned, managed, operated and maintained, promotion of multimodal choices (Policy M 1.2.1), support for state highway expansion and management consistent with the Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS) (Policy M 1.5.6) and development that encourages walking and biking (Policy LU 4.2.1).

While the General Plan includes numerous policies that direct the development of the City's transportation system, the Master EIR concluded that the General Plan development would result in significant and unavoidable effects. See Impacts 4.12-3 (roadway segments in adjacent communities), and Impact 4.12-4 (freeway segments). However, pursuant to Senate Bill 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3, VMT has replaced congestion as the metric for determining transportation impacts under CEQA and a project's effect on automobile delay no longer constitutes a significant impact. Therefore, the level of service (LOS) policies of the 2035 General Plan and the LOS related findings of the Master EIR are no longer applicable under CEQA and thus are not addressed herein.

3.17.2 Discussion

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

Less-than-significant impact. Project construction could temporarily interfere with existing vehicle, transit, bicycle, and pedestrian circulation as it would result in a temporary increase of vehicles on surrounding roadways attributed to worker commutes and materials delivery, which may result in additional traffic or congestion. Overall operations and maintenance activities for the microwave tower and new pump station would be similar to maintenance and operations for the existing Sump 85 pump station and would include wet well and manhole cleaning, pump de-ragging and maintenance, washdown of surge tanks, flushing of drain lines, valve and slide gate operation, and general housekeeping of structural pads, restroom servicing, and maintenance of electrical equipment. Project operation would not generate an increased amount of vehicle, transit, pedestrian, or bicycle use in comparison to the existing Sump 85 pump station, so there would be no conflicts with programs, plans, ordinances, or policies related to circulation. Project construction would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and therefore, this impact would be **less than significant**.

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

Less-than-significant impact. Temporary demolition and construction activities would result in a slight increase in vehicle trips associated with worker commutes and materials delivery. However, these additional trips would only occur during the 36 to 38-week construction period and the 4-week demolition period. During operation, vehicle trips would be similar to existing conditions. Because the project would not change the amount of development projected for the area, the project would be consistent with the population growth and VMT projections in regional and local plans, and would have only a slight increase in VMT during construction, this impact would be **less than significant**.

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

Less-than-significant impact. Project operation would not result in any changes in road geometry or new uses. The ingress and egress for the new pump station site would be designed consistent with City roadway design and safety standards. The project would not result in any geometric design features (e.g., sharp curves or dangerous intersections) therefore, impacts to traffic hazards would be reduced **less than significant**.

d) Result in inadequate emergency access?

Less than significant with mitigation incorporated. Trucks and equipment traveling to the project area would use Edgewater Road and Grove Avenue. Construction vehicles would stage within the project footprint and would not stage near or block any evacuation routes. However, construction adjacent to Edgewater Road and Grove Avenue could temporarily interfere with traffic or result in lane closures, which has the potential to reduce emergency access. This impact would be potentially significant.

Mitigation Measure 3.9-2: Traffic Control Plan

Implement Mitigation Measure 3.9-2 above.

Significance Conclusion

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

3.18 TRIBAL CULTURAL RESOURCES

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

3.18.1 Environmental Setting

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

On October 13, 2020, the City of Sacramento sent notification letters that the project was being addressed under CEQA, as required by PRC 21080.3.1, to the Native American tribes that had previously requested such notifications. Notifications were sent to United Auburn Indian Community (UAIC), Wilton Rancheria, Shingle Springs Band of Miwok Indians, and Buena Vista Rancheria. UAIC responded on November 11, 2020, and declined to consult. No tribes requested consultation, and there are no known resources within the project area considered to be tribal cultural resources as defined in PRC Section 21074.

The cultural resources study (NIC 2020) prepared for the proposed project included a request for an NAHC Sacred Lands File search. The NAHC search indicated that the Sacred Lands File search was positive for the presence of Native American cultural resources in the project vicinity.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources (see Master EIR Chapter 4.4 and Appendix C – Background Report, B. Cultural Resources Appendix), but did not specifically address tribal cultural resources because that resource type had not yet been defined in CEQA at the time the Master EIR was adopted. The Master EIR identified significant and unavoidable effects on historic resources and archaeological resources, some of which could be tribal cultural resources as defined PRC 21074. Ground-disturbing activities resulting from implementation of development under the 2035 General Plan could affect the integrity of an archaeological site (which may be a tribal cultural resource), thereby causing a substantial change in the significance of the resource. General Plan policies identified as reducing such effects on cultural resources that may also be tribal cultural resources include identification of resources on project sites (Policy HCR 2.1.1); implementation of applicable laws and regulations (Policy HCR 2.1.2); consultation with appropriate organizations and individuals including the Native American Heritage Commission and implementation of their consultation guidelines (Policy HCR 2.1.3); enforcement programs to promote the maintenance, rehabilitation, preservation, and interpretation of the City's historic resources (Policy HCR 2.1.4); listing of qualified historic resources under appropriate national, State, and local registers (Policy HCR 2.1.5); consideration of historic and cultural resources in planning studies (Policy HCR 2.1.6); enforcement of compliance with local, State, and federal historic and cultural preservation requirements (Policy HCR 2.1.8); and early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10).

Of relevance to this project are policies that ensure compliance with protocol that protect or mitigate impacts to archaeological resources (Policy HCR 2.1.16) and that encourage preservation and minimization of impacts on cultural resources (Policy HCR 2.1.17).

3.18.2 Discussion

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

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

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

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

Less than significant with mitigation incorporated. No tribes requested consultation pursuant to PRC Section 21074, and no tribal cultural resources have been identified in the project area. In addition, the sensitivity of the project area for cultural resources is considered low. Nevertheless, the possibility remains that tribal cultural resources could be encountered during construction-related ground disturbing activities. This impact is potentially significant.

Mitigation Measure 3.5-1: Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities

Implement Mitigation Measure 3.5-1 above.

Mitigation Measure 3.5-2: In the Event that Cultural Resources or Tribal Cultural Resources are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources

Implement Mitigation Measure 3.5-2 above.

Mitigation Measure 3.5-3: Implement Protection Procedures in the Event of Inadvertent Discovery of Human Remains

Implement Mitigation Measure 3.5-3 above.

Significance Conclusion

Implementation of Mitigation Measures 3.5-1 through 3.5-3 would reduce impacts to tribal cultural resources to a **less-than-significant** level by requiring pre-construction worker Tribal Cultural Resources Awareness Training and, in the case of a discovery, appropriate treatment (including options for data recovery, mapping, capping, or avoidance) and proper care of significant tribal cultural resources.

3.19 UTILITIES AND SERVICE SYSTEMS

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

3.19.1 Environmental Setting

WASTEWATER

Wastewater service in the project area is provided by the City via the existing Sump 85 pump station. The existing Sump 85 pumps wastewater from Basin 85 in north Sacramento to Sacramento County's Regional San Wastewater Treatment Plant in Elk Grove. The existing pump station has a capacity of 9,160 gallons per minute and an estimated capacity of 9.5 million gallons per day.

WATER

The City provides water service in the project area. The City supplies domestic water from a combination of surface water and groundwater sources. Two water treatment plants supply domestic water by diverting water from the American River and Sacramento River. In addition to the surface water diverted from the two rivers, the City operates groundwater supply wells (City of Sacramento 2015).

STORM DRAINAGE

The project area is served by the City's stormwater system. Drainage flows to Bay Drive Drainage Ditch, which flows into Steelhead Creek and eventually the American River. The City owns and operates 105 storm drainage pumping stations throughout the city.

SOLID WASTE

The City collects all residential solid waste for customers within the city. Solid waste collected in the north region of the city is transported to the Sacramento County North Area Recovery Station (NARS). Refuse is then hauled to the Sacramento County Kiefer Landfill (City of Sacramento 2015). Kiefer Landfill is currently sized to satisfy all county landfill disposal needs through 2064.

NATURAL GAS AND ELECTRICITY

The Pacific Gas & Electric Company (PG&E) supplies natural gas to the Sacramento area, including the project area. The Sacramento Municipal Utility District (SMUD) provides electrical service to customers located within the project area, and would provide electricity for the project.

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated the effects of development under the 2035 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas and telecommunications. See Chapter 4.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the General Plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1), but the Master EIR concluded that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity that could require construction of new water supply facilities, would result in a significant and unavoidable effect (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant effect (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the CCR for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

3.19.2 Discussion

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

Less-than-significant impact. The project would include construction of a new microwave tower and replacement of an existing sewer pump station. The project would not result in additional water or wastewater treatment facilities nor would expansion of other existing facilities be required. The microwave tower would result in a very small increase in electricity usage; however, the new pump station would be more energy efficient than the existing Sump 85 pump station. Therefore, the project would not result in an increase in energy usage such that construction of new or expanded electrical facilities would be required. The microwave tower would improve overall communications infrastructure in the project area consistent with City standards. Telecommunication service for the project would be provided by the City and the project would not require construction of other new or expanded telecommunication facilities. The new pump station site currently does not have a stormwater system. The project would grade the site to

drain to the City's stormwater system. The project would result in a small increase in impervious surfaces; however, this would not result in a substantial increase in runoff from the project area or require construction of new storm drain facilities outside of the project footprint. This impact would be **less than significant**.

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

Less-than-significant impact. This project would not require new or additional water supplies for operation. The project may require a small short-term increase in water use during construction. This impact would be **less than significant**.

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

Less-than-significant impact. The proposed project would include replacement of sewer facilities, and the impacts associated with the project are evaluated throughout this IS. The project would not result in an increase in wastewater demand and the new pump station would have the same capacity as the existing pump station. Therefore, the project would not result in inadequate wastewater capacity to serve the project. This impact would be **less than significant**.

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

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

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

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

3.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire. Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones? If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?		X		
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?				X
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
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?			X	

3.20.1 Environmental Setting

As discussed above in Section 3.9, "Hazards and Hazardous Materials," the project area is located within a LRA that is designated as a non-Very High Fire Hazard Severity Zone (non-VHFHSZ) (CAL FIRE 2020).

SUMMARY OF ANALYSIS UNDER THE 2035 GENERAL PLAN MASTER EIR AND APPLICABLE GENERAL PLAN POLICIES

The Master EIR evaluated effects of development on emergency response plans. See Chapter 4.6. Wildfire was added as a new topic in the Environmental Checklist by State CEQA Guidelines amendments going into effect on January 3, 2019. Therefore, the topic was not included in the 2014 Master EIR.

3.20.2 Discussion

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

Less than significant impact with mitigation. See Section 3.9, "Hazards and Hazardous Materials" item f). Construction adjacent to Edgewater Road and Grove Avenue could temporarily interfere with traffic or result in lane closures, which has the potential to reduce emergency access. This impact would be potentially significant.

Mitigation Measure 3.9-2: Traffic Control Plan

Implement Mitigation Measure 3.9-2 above.

Significance Conclusion

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

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

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

c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No impact. The project includes the replacement of an existing pump station and construction of a microwave tower that would not have aboveground guide wires. Therefore, the project does not require the installation of infrastructure that could exacerbate fire risk. The project would not require construction of new roads, fuel breaks, emergency water sources, or power lines. Therefore, there would be **no impact**.

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

Less-than-significant impact. The project is in an area of flat terrain and would not involve the changing of slopes that could expose people to risks of flooding from post-fire slope instability. Implementation of the project would result in a small increase in impervious surfaces within the new pump station site. However, the additional impervious surfaces would not result in substantial runoff or drainage changes that would expose people or structures to significant risks that would increase the likelihood of wildfires. The impact would be **less than significant**.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

3.21.1 Discussion

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

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

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

Although no documented cultural resources are located within the project area, the potential exists to encounter previously undiscovered archaeological resources during construction-related ground disturbing activities. However, adoption and implementation of Mitigation Measures 3.5-1 and 3.5-2 would reduce this potential impact to a less-than-significant level because these measures would require the performance of professionally accepted and legally

compliant procedures for the discovery of previously undocumented significant archaeological resources and training of construction workers to identify cultural resources.

No evidence suggests that any prehistoric or historic-era marked or unmarked interments are present within or on the project area. However, there is a possibility that unmarked previously unknown graves of Native American or Euro-Americans could be present within the project area. Potential disturbance of previously undiscovered human remains during project construction would be a potentially significant impact. Implementation of Mitigation Measure 3.5-3 would reduce the project's potential for disturbance of human remains to a less-than-significant level because actions would be implemented to avoid, move, record, or otherwise treat the remains appropriately, in accordance with pertinent laws and regulations.

Although there are no known tribal cultural resources within the project area, it is possible that yet-undiscovered tribal cultural resources could be encountered or damaged during ground-disturbing construction activities. Implementation of Mitigation Measures 3.5-1 through 3.5-3 would reduce impacts to tribal cultural resources to a less-than-significant level by requiring pre-construction worker Tribal Cultural Resources Awareness Training and, in the case of a discovery, appropriate treatment (including options for data recovery, mapping, capping, or avoidance) and proper care of significant tribal cultural resources.

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

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

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

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

4 COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS

This chapter summarizes the federal environmental laws and regulations that apply to the project and describes the project's compliance with those laws and regulations. The federal regulations addressed in this section are based on guidance from the State Water Resources Control Board (SWRCB) for CEQA-Plus environmental review related to State Revolving Fund loans.

4.1 E1.1 CLEAN AIR ACT

4.1.1 Regulatory Background

The proposed project area is located in the City of Sacramento, within the Sacramento Valley Air Basin. Air quality within the project area is regulated by the U.S. Environmental Protection Agency (EPA) and the California Air Resources board (CARB) at the federal and state levels, respectively, and locally by the Sacramento Metropolitan Air Quality Management District (SMAQMD).

At the federal level, EPA implements the national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), enacted in 1970. The most recent major amendments were made by Congress in 1990. The CAA requires EPA to establish National Ambient Air Quality Standards (NAAQS). EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (i.e., respirable particulate matter with an aerodynamic diameter less than or equal to 10 microns [PM_{10}] and fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns [$PM_{2.5}$]), and lead. The CAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The CAA Amendments added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Each state's SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA reviews all state SIPs to check for consistency with the mandates of the CAA and its amendments and to determine whether implementing them will achieve air quality goals. If EPA determines a SIP to be inadequate, a Federal Implementation Plan that imposes additional control measures may be prepared for nonattainment areas. If the state fails to submit an approvable SIP or to implement the plan within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basins.

On November 30, 1993, EPA promulgated the general conformity regulations, which were established to ensure that federal actions do not cause or contribute to new violations of the NAAQS, do not worsen existing violations of the NAAQS, and do not delay attainment of the NAAQS. These regulations apply to a proposed federal action, except actions covered by federal transportation conformity, in an area designated as a nonattainment or maintenance area with respect to the NAAQS if the total direct and indirect emissions of the relevant criteria pollutant and precursor emissions caused by the proposed action would be equal to or exceed specified *de minimis* amounts. Thus, requiring the federal agency to make a determination regarding general conformity. The manner in which this regulatory information applies to the proposed Sump 85 Reconstruction Project is discussed below.

4.1.2 Affected Environment

EPA designates each county (or portions of counties) within California as attainment, maintenance, or nonattainment based on the area's ability to maintain ambient air concentrations below the applicable NAAQS. Areas are designated as attainment if ambient air concentrations of a criteria pollutant or precursor are below the NAAQS. Areas are designated as nonattainment if ambient air concentrations exceed the NAAQS. Areas previously designated as nonattainment that subsequently demonstrated compliance with the NAAQS are designated as maintenance areas. Sacramento County is currently designated as nonattainment with respect to the NAAQS for ozone and $PM_{2.5}$ (EPA 2020a).

As mentioned above, a general conformity determination is required if a federal action results in the generation of air pollutants for which the total of direct and indirect emissions equals or exceeds the *de minimis* criteria. Different *de minimis* levels apply to different locations. Table 4-1 shows the *de minimis* levels that apply in Sacramento County. It should be noted that because ozone is a secondary pollutant (i.e., it is not emitted directly into the atmosphere, but formed in a photochemical reaction in the atmosphere involving ozone precursors and sunlight), its *de minimis* level is based on the primary emissions of precursor pollutants: oxides of nitrogen (NO_X) and volatile organic compounds (VOCs). If the net emissions of either NO_X or VOCs exceeds the *de minimis* level for ozone, the project is required to prepare an official general conformity determination.

Table 4-1 De Minimis Criteria for Determining Applicability of General Conformity Requirements for Federal Actions in the Sacramento Valley Air Basin

Pollutant	Federal Designation in Sacramento County	General Conformity *De Minimis* Criterion (tons per year)
Ozone	Nonattainment (Moderate)	NA
VOC (as an ozone precursor)		100
NO_x (as an ozone precursor)		100
$PM_{2.5}$	Nonattainment (Moderate)	100

Notes: NA = Not Applicable; VOC = volatile organic compound; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns

Source: EPA 2020a, EPA 2020b.

PROJECT EMISSIONS

Construction and operational emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 computer program (CAPCOA 2016), based on project-specific information, where available; assumptions based on typical construction activities; and default values in CalEEMod. Table 4-2 summarizes the modeled emissions of VOCs, NO_X, and exhaust $PM_{2.5}$ from project construction and demolition activities, as well as operational activities. See Appendix A modeling results for more detail.

Table 4-2 Annual Emissions of Criteria Air Pollutants and Precursors for Project Construction and Operation

Year	Activity	Tons per Year		
		VOC[1]	NO_X	$PM_{2.5}$ Exhaust
2022	Construction and Demolition	0.3	0.7	0.03
2022	Operation	<0.01	0.01	<0.01
	de minimis criterion	100	100	100
	Criterion Exceeded?	No	No	No

[1] Although, EPA has established a *de minimis* criterion for VOCs, emissions are reported as reactive organic gases (ROG) due to the outputs provided by CalEEMod. Most pollutants in CARB's definition of ROG and EPA's definition of VOC overlap, and most ROG emissions are included as a subset of VOCs. Thus, ROG is assumed to be a suitable proxy for VOC for the purposes of this analysis.

Notes: Construction emissions estimates are based on modeling in CalEEMod using equipment assumptions within the CalEEMod model and project-specific parameters.

VOC=volatile organic compounds; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns

Source: Data compiled by Ascent Environmental in 2020.

As shown by the estimates in Table 4-2, project-related emissions would be less than the *de minimis* criteria for the SMAQMD. Therefore, an official general conformity analysis pursuant to the CAA is not required.

4.2 E1.2 COASTAL BARRIERS RESOURCES ACT

The Coastal Barrier Resources Act (PL 97-348) designated various undeveloped coastal barrier islands, depicted by specific maps, for inclusion in the Coastal Barrier Resources System (System). Areas so designated were made ineligible for direct or indirect federal financial assistance that might support development, including flood insurance, except for emergency life-saving activities. Exceptions for certain activities, such as fish and wildlife research, are provided, and National Wildlife Refuges and other, otherwise protected areas are excluded from the System. The System includes relatively undeveloped coastal barriers along the Atlantic and Gulf coasts, as well as the Great Lakes and Puerto Rico and the Virgin Islands.

The project is located within the City of Sacramento, and the project area and surrounding lands are not located within the System. Therefore, compliance with this Act is not applicable.

4.3 E1.3 COASTAL ZONE MANAGEMENT ACT

The Coastal Zone Management Act (PL 92-583), administered by National Oceanic and Atmospheric Administration Fisheries Service's (NOAA Fisheries) Office of Ocean and Coastal Resource Management, provides for management of the nation's coastal resources, including the Great Lakes, and balances economic development with environmental conservation.

The Act outlines two national programs, the National Coastal Zone Management Program and the National Estuarine Research Reserve System. The 34 coastal programs aim to balance competing land and water issues in the coastal zone, while estuarine reserves serve as field laboratories to provide a greater understanding of estuaries and how humans impact them. The Act's overall program objectives remain balanced to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The project area and surrounding lands are not located within California's coastal zone, which generally extends 1,000 yards inland from the mean high tide line; therefore, compliance with this Act is not applicable.

4.4 E1.4 ENDANGERED SPECIES ACT

Pursuant to the federal Endangered Species Act (ESA) (PL 93-205), the U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries have regulatory authority over federally listed species. Under ESA, a permit to "take" a listed species is required for any federal action that may harm an individual of that species. Take is defined under ESA Section 9 as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under federal regulation, take is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. ESA Section 7 outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat. Section 7(a)(2) requires federal agencies to consult with USFWS and/or NOAA Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species.

As discussed in Appendix B, "Special-Status Species Occurrence Tables," of this Initial Study, the Sump 85 Reconstruction Project area does not contain habitat for federally listed species and would not directly or indirectly affect federally listed species, and therefore, no consultation with USFWS or NOAA Fisheries is needed for this project.

4.5 E1.5 ENVIRONMENTAL JUSTICE

Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (59 Federal Register 7629 (1994]), directs federal agencies to identify and address disproportionately high and adverse health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The EO also directs each federal agency to develop a strategy for implementing environmental justice. EO 12898 is also intended to promote nondiscrimination

in federal programs that affect human health and the environment, as well as provide minority and low-income communities access to public information and public participation.

The Council on Environmental Quality (CEQ) has oversight of the federal government's compliance with EO 12898. To facilitate compliance, CEQ prepared and issued, in consultation with EPA, Environmental Justice Guidance under the National Environmental Policy Act (NEPA) (CEQ 1997). According to the CEQ's Environmental Justice Guidance, the first step in conducting an environmental justice analysis is to define minority and low-income populations. Based on these guidelines, a minority population is present in a project area if either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population. By the same rule, a low-income population exists if the project area consists of 50 percent or more people living below the poverty threshold, as defined by the U.S. Census Bureau, or is significantly greater than the poverty percentage of the general population.

The second step of an environmental justice analysis requires a finding of a high or adverse effect. The CEQ guidance indicates that when determining whether the effects are high and adverse, agencies are to consider whether the risks or rates of impact "are significant (as employed by NEPA) or above generally accepted norms." The final step requires a finding that the effect on the minority or low-income population be disproportionately high and adverse. The CEQ offers a non-quantitative definition stating that an effect is disproportionate if it appreciably exceeds the risk or rate to the general population.

The following population characteristics are considered in this analysis:

- race and ethnicity per the 2014-2018 American Community Survey 5-Year Estimates, and
- per capita income as it relates to the federal poverty threshold.

To make a finding that disproportionately high and adverse effects would likely fall on a minority or low-income population, three conditions must be met simultaneously: (1) there must be a minority or low-income population in the affected area, (2) a high and adverse effect must exist, and (3) the effect must be disproportionately high and adverse on the minority or low-income population.

For purposes of this analysis, information on demographics and income and poverty status was obtained for the City of Sacramento and Sacramento County. The data is estimated for 2014-2018 by the U.S. Census Bureau, which, for purposes of this analysis, is considered "existing conditions."

4.5.1 Demographics

Table 4-3 presents the demographics per the 2014-2018 American Community Survey 5-Year Estimates for the City of Sacramento and Sacramento County. During this 5-year range, it is estimated that approximately 47 percent of the population in the project area identified themselves as white; approximately 13 percent identified themselves as black; less than 1 percent identified themselves as American Indian/Alaska Native; and almost 19 percent identified themselves as Asian. Approximately 29 percent of the City's population identified themselves as Hispanic or Latino, which is similar to the County's estimate of 23 percent (U.S. Census Bureau 2018a).

Table 4-3 Demographics: City of Sacramento and Sacramento County

	City of Sacramento		Sacramento County	
	Number	Percent of Total Population	Number	Percent of Total Population
Total Population	495,011	100.0%	1,510,023	100.0%
Race				
White	233,820	47.2%	962,327	63.7%
Black or African American	66,484	13.4%	188,662	12.5%
American Indian and Alaska Native	3,720	0.8%	34,102	2.3%
Asian	93,569	18.9%	282,510	18.7%
Native Hawaiian and Other Pacific Islander	8,524	1.7%	27,331	1.8%
Other Race Not Identified Above	61,516	12.4%	134,906	8.9%
Two or More Races	34,683	7.0%	124,145	8.2%
Hispanic or Latino (of any race)				
Hispanic or Latino	141,828	28.7%	347,025	23.0%
Not Hispanic or Latino	353,183	71.3%	1,162,998	77.0%

Source: U.S. Census Bureau 2018a,b

4.5.2 Income and Poverty Status

Table 4-4 presents household income, per capita income, and poverty status for City of Sacramento and Sacramento County per the 2014-2018 American Community Survey 5-Year Estimates. Median household income was $58,456 in the City, and $63,902 in Sacramento County (U.S. Census Bureau 2018c,d). In 2018, the weighted average federal poverty threshold was $12,784 for one person and $19,985 for a three-person family (U.S. Census Bureau 2018e). Approximately 18.3 percent of individuals in the City were below the poverty level, which was similar to that of the County (approximately 14.3 percent of individuals) (U.S. Census Bureau 2018f).

Table 4-4 Income and Poverty Status: City of Sacramento and Sacramento County

	City of Sacramento		Sacramento County	
	Number	Percent of Total Population	Number	Percent of Total Population
Households	**183,106**	**100.0%**	**536,029**	**100.0%**
Less than $10,000	11,345	6.2%	29,236	5.5%
$10,000 to $14,999	11,781	6.4%	27,434	5.1%
$15,000 to $24,999	17,138	9.4%	45,253	8.4%
$25,000 to $34,999	16,203	8.9%	46,057	8.6%
$35,000 to $49,999	22,474	12.3%	63,279	11.8%
$50,000 to $74,999	32,536	17.8%	93,941	17.5%
$75,000 to $99,999	22,921	12.5%	69,723	13.0%
$100,000 to $149,999	26,702	15.0%	85,746	16.0%
$150,000 to $199,999	11,375	6.2%	40,791	7.6%
$200,000 or more	10,622	5.8%	34,569	6.5%
Median Household Income	$58,456	—	$63,902	—
Per Capita Income	$30,487	—	$31,311	—
Poverty Status – Individuals	—	18.3%	—	14%

Source: U.S. Census Bureau 2018c,d

4.5.3 Impact Evaluation

(1) Is there a Minority or Low-Income Population in the Affected Area?

As described above, in the 2014-2018 American Community Survey, approximately 29 percent of the City's population identified themselves as Hispanic or Latino, which is similar to the County's average (approximately 23 percent) (U.S. Census Bureau 2018a,b). Therefore, for purposes of this analysis, a disproportionately high minority population is not present in the project area or the area served by the project.

Approximately 18.3 percent of individuals in the City were below the poverty level, which was similar to that of the County (approximately 14.3 percent of individuals). Therefore, for purposes of this analysis, a disproportionately high low-income population is not present in the project area or the area served by the project.

According to the EPA, either the county or state percentages can be used when considering the scope of the "general population." A definition of "meaningfully greater" is not given by the CEQ or EPA, although the EPA notes that any affected area that has a percentage of minorities that is above the State's percentage is potentially a minority community and any affected area with a minority percentage at least double that of the state is definitely a minority community under Executive Order 12898.

As discussed above, the percentage of persons of other races, including African Americans and persons of Hispanic origin within the City, is slightly higher than the percentages for Sacramento County, but is not meaningfully greater than the county percentage. In addition, median household income and poverty levels within the project area and the area served by the project are similar to income and poverty levels within the overall county. Therefore, no minority or low-income populations have been identified that would be adversely impacted by the proposed project as determined above. Therefore, in accordance with the provisions of EO 12898 and Federal Highway Administration Order 6640.23, no further Environmental Justice analysis is required.

(2) Is there a High and Adverse Effect? and (3) Is the Effect Disproportionately High and Adverse on the Minority Population?

Reconstruction of the Sump 85 pump station and construction of the microwave tower would improve the reliability and operating efficiency and communications service, respectively, for all customers in the service area, improving service for all customers equally. In addition, there are fewer residences surrounding the new pump station site compared to the existing Sump 85 site; therefore, the pump station would be moved farther from sensitive receptors. Temporary construction impacts associated with the project would occur within the new pump station site, the existing pump station site, and along roadways in the project area. Nearby residences could be subject to construction-related impacts, including increased noise and traffic. However, these impacts would be short-term, and construction would take place when most residents are not expected to be home (i.e., during working hours). In addition, the operation of the new pump station and microwave tower would not affect residences in the surrounding neighborhood. Therefore, construction and operation of the project would not have a disproportionately high and adverse effect on the minority population.

4.6 E1.6 FARMLAND PROTECTION POLICY ACT

The purpose of the federal Farmland Protection Policy Act (FPPA) of 1981 (Public Law 97-98) is to minimize federal contributions to the conversion of farmland to nonagricultural uses by ensuring that federal programs are administered in a manner compatible with state government, local government, and private programs designed to protect farmland. The Natural Resources Conservation Service (NRCS) is the agency primarily responsible for implementing the FPPA.

U.S. Department of Agriculture (USDA) Regulations (7 CFR Part 658) implementing the FPPA requires federal agencies to conduct a farmland conversion impact rating (using USDA Form AD-1006) when a project may convert farmlands

to non-agricultural uses. This impact rating should be done when the impacts of a project will affect farmlands in the following categories:

- prime farmland - the highest quality land for food and fiber production having the best chemical and physical characteristics for producing;
- unique farmland - land capable of yielding high value crops such as citrus fruits, olives; and
- farmlands designated as important by state and local governments, with the approval of the Secretary of Agriculture.

Neither the Act nor the regulations apply if:

- the project site does not contain farmland in categories identified above.
- the project is on prime farmland that is already "committed" to urban development or water storage (applies to prime farmland only – refer to 7 CFR 658.2(a)).
- projects were beyond the planning stage prior to August 6, 1984.
- projects involve grants, loans, or mortgage insurance for purchase or rehabilitation of existing structures.

As discussed in Section 3.2, "Agricultural Resources," of this Initial Study, the project facilities would be located within a developed residential neighborhood, which is designated as Urban and Built-up Land and Other Land pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation. Reconstruction of the Sump 85 pump station and construction of a microwave tower would have no impact related to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

Consultation with NRCS (including submittal of the Farmland Conservation Impact Rating form) does not apply to project sites that do not contain farmland in categories identified above, and therefore is not required for the project.

4.7 E1.7 FLOODPLAIN MANAGEMENT

EO 13690, "The Federal Flood Risk Management Standard" (January 30, 2015) revises EO 11988, "Floodplain Management" (May 24, 1977), and directs federal agencies to take the appropriate actions to reduce risk to federal investments, specifically to "update their flood-risk reduction standards." The goal of this directive is to improve the resilience of communities and federal assets against the impacts of flooding and recognizes the risks and losses due to climate change and other threats.

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRMs) are used to determine if properties are located within Special Flood Hazard Areas. As explained in Section 3.10, "Hydrology and Water Quality," of this Initial Study, the project area is within the reduced flood risk (Zone X) as designated by FEMA. In addition, the project area is not located in a Special Flood Hazard Area, as identified on FIRM panel 06067C0177, dated June 16, 2015 (FEMA 2015). Furthermore, the project would include reconstruction of an existing pump station and construction of a microwave tower and would not include any new residences. Therefore, the project would not result in any additional exposure of people or structures to risk of flooding, and the project would have no impact related to a 100-year flood hazard area or risk of flooding.

4.8 E1.8 NATIONAL HISTORICAL PRESERVATION ACT

Federal protection of resources is legislated by (a) the National Historic Preservation Act (NHPA) of 1966 as amended by 16 U.S. Code 470, (b) the Archaeological Resource Protection Act of 1979, and (c) the Advisory Council on Historical Preservation. These laws and organizations maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Federal and federally-sponsored programs and projects are reviewed pursuant to Section 106 of the NHPA. Section 106 of the NHPA requires federal agencies to consider the effects of proposed federal undertakings on historic properties. NHPA requires federal agencies to initiate consultation with the State Historic Preservation Officer as part of the Section 106 review process.

4.8.1 Determination of Effects

The area of potential effects (APE) is within former swampland, disturbed by agriculture and urban development, and has a low sensitivity for discovery of buried archaeological deposits. One historic-period archaeological feature was identified within the APE; however, the feature is recommended as not eligible for the National Register of Historic Places. Therefore, there are no historic properties within the APE and the project would have No Effect on Historic Properties (NIC 2020).

4.9 ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT

Passed and signed into law in 1974, the Archaeological and Historic Preservation Act (AHPA) amended and expanded the Reservoir Salvage Act of 1960. The AHPA provides for the preservation of historical and archeological data that might otherwise be irreparably lost or destroyed as the result of (1) flooding, the building of access roads, the erection of workmen's communities, the relocation of railroads and highways, and other alterations of the terrain caused by the construction of a dam by any agency of the United States, or by any private person or corporation holding a license issued by any such agency or (2) any alteration of the terrain caused as a result of any federal construction project or federally licensed activity or program.

According to the Advisory Council on Historic Preservation, if a project will affect historic properties that have archeological value, the AHPA may impose additional requirements on an agency. As discussed in Section 3.5, "Cultural Resources," the background literature and North Central Information Center records search did not identify any historic properties within the APE. One historic-period archaeological feature was identified within the APE; however, the feature is recommended not eligible for the National Register of Historic Places. Therefore, there are no historic properties within the project area that have archaeological or historic value and the AHPA does not apply.

4.10 E1.9 MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

In response to growing concern about the status of United States fisheries, Congress passed the Sustainable Fisheries Act of 1996 (Public Law [PL] 104-297) to amend the Magnuson-Stevens Fishery Conservation and Management Act (PL 94-265), the primary law governing marine fisheries management in the Federal waters of the United States. The Magnuson-Stevens Conservation and Management Act, as amended (U.S.C. 180 et seq.), requires that Essential Fish Habitat (EFH) be identified and described in federal fishery management plans. Federal agencies must consult with NOAA Fisheries on any activity which they fund, permit, or carry out, that may adversely affect EFH. NOAA Fisheries is required to provide EFH conservation and enhancement recommendations to the federal agencies. EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity.

As discussed in Section 3.4, "Biological Resources," of this Initial Study, the project area includes a portion of the Bay Drive Drainage Ditch, which carries stormwater from the surrounding residential development, though a pump station, and into lower Arcade Creek. The ditch contains little to no emergent vegetation and does not contain water in all months of the year. Due to the fish passage blockage at the Sump 154 pump station and the lack of perennial water, the ditch does not support a fishery. Therefore, implementation of the Sump 85 Reconstruction Project would not affect fisheries or waters nor the substrates necessary for fisheries.

4.11 E1.10 MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

As discussed in Section 3.4, "Biological Resources," of this Initial Study, the Sump 85 Reconstruction Project area provides potential nesting habitat for burrowing owl, Swainson's hawk, white-tailed kite, common raptors, and other common nesting birds. Any ground-disturbing or other work activities during the nesting season for these species (approximately February 1 to August 31) could result in nest abandonment and the mortality of eggs and chicks. However, implementation of Mitigation Measures 3.4-1 through 3.4-3 would prevent take of MTBA species by requiring nest surveys and non-disturbance buffers around active nests, which would prevent nest abandonment and loss of eggs or young.

4.12 E1.11 PROTECTION OF WETLANDS

The purpose of EO 11990 (May 24, 1977) is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, EO 11990 requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. EO 11990 applies to: acquisition, management, and disposition of federal lands and facilities construction and improvement projects which are undertaken, financed, or assisted by federal agencies; and federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

As discussed in Section 3.4, "Biological Resources," of this Initial Study, implementation of the Sump 85 Reconstruction Project would result in no impact to federally protected wetlands. The Bay Drive Drainage Ditch is likely a channelized natural drainage and therefore may be considered a water of the United States. No other potential wetlands exist within the project area. The new forcemain would follow Edgewater Road and cross Bay Drive Drainage Ditch below the existing culvert. The fiber optic line would follow Grove Avenue to the north side of Bay Drive Drainage Ditch, then extend west down the existing unpaved access road until reaching the new pump station site. Therefore, the project would not result in excavation or fill below the ordinary high-water mark of Bay Drive Drainage Ditch or any other wetlands.

4.13 FISH AND WILDLIFE CONSERVATION ACT

The Fish and Wildlife Conservation Act of 1980 (16 USC 2901 et seq.) encourages federal agencies to conserve and promote conservation of non-game fish and wildlife species and their habitats. In addition, the Fish and Wildlife Conservation Act (16 USC 661 et seq.) requires federal agencies undertaking projects affecting water resources to consult with the USFWS and the state agency responsible for fish and wildlife resources whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water will otherwise be controlled or modified for any purpose whatsoever, including navigation and drainages. The 1988 amendment (Public Law 100-653, Title VIII) to the Fish and Wildlife Conservation Act requires the Secretary of the Interior, through the USFWS, to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973."

The project would not affect or modify any stream or water body; therefore, compliance with this Act is not applicable.

4.14 E1.12 SAFE DRINKING WATER ACT, SOLE SOURCE AQUIFER PROTECTION

The Safe Drinking Water Act (42 USC Section 300f et seq.) was established to protect the quality of drinking water in the United States. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.

The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to the Act require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids.

The project and surrounding lands are not located within a sole source aquifer, as designated by EPA Region 9 (EPA 2020). The project would have no effect on any public water systems or other drinking water sources.

4.15 E1.13 WILD AND SCENIC RIVERS ACT

The Wild and Scenic Rivers Act (16 USC Section 1271 et seq.) establishes a National Wild and Scenic Rivers System for the protection of rivers with important scenic, recreational, fish and wildlife, and other values. Rivers are classified as wild, scenic, or recreational. The act designates specific rivers for inclusion in the System and prescribes the methods and standards by which additional rivers may be added.

The nearest designated wild and scenic river is the Lower American River, located approximately 1.6 miles south of the project area; however, the project area is not visible from the river (BLM et al. 2020).

4.16 CLIMATE CHANGE

4.16.1 Vulnerability

Increases in greenhouse gas (GHG) concentrations in the atmosphere have led to increased global average temperatures (climate change) through the intensification of the greenhouse effect, and associated changes in local, regional, and global average climatic conditions. These changes may translate into a variety of issues and concerns that may affect the project facilities, including but not limited to:

- increased frequency of droughts associated with changes to precipitation patterns,
- increased stormwater runoff associated with changes to precipitation patterns, and
- increased risk of flooding associated with changes to precipitation patterns.

Although uncertainty exists as to the precise levels of these impacts, there is consensus regarding the range, frequency, or intensity of these impacts that can be expected. The proposed project could be subject to potential hazards that could be exacerbated by climate change, such as changes in the amount of wastewater, timing and amount of runoff, and the increased risk of flooding associated with changes to precipitation.

Increases in intense storm events could result increases in effluent related to stormwater runoff. However, as discussed in Section 3.9, "Hydrology and Water Quality," the City has ordinances to address stormwater runoff throughout the city that would reduce the extent and severity of climate change-related impacts related to stormwater.

As discussed in Section 3.9, "Hydrology and Water Quality," the project area is not within a 100-year floodplain. In addition, the new project area is not within a Special Flood Hazard Area. Therefore, the potential for climate change-related impacts from increased risk of flooding associated with changes to precipitation patterns to affect the project facilities is low.

4.16.2 Adaptation

Adaptation measures are measures taken in direct response to vulnerabilities to climate change. The new pump station would be more energy efficient than the existing station with a new generator, electrical equipment, energy efficient lighting fixtures, louvers, HVAC and plumbing systems designed in accordance with the Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy. In addition, the proposed project would be designed to provide adequate stormwater facilities in the event of storms.

4.16.3 Mitigation

Although the effects of climate change on the project facilities is considered less than significant, the project would include measures that would reduce the City's overall contribution to climate change including improved energy efficiency and reduced facility maintenance requirements.

5 ALTERNATIVES

5.1 INTRODUCTION

This chapter includes a discussion of alternatives to the proposed project in compliance with State Water Resources Control Board CEQA-Plus requirements related to State Revolving Fund loans and per U.S. Environmental Protection Agency guidance for environmental information documents related to Special Appropriation Fund Grants. These alternatives are provided to meet the CEQA-Plus requirements and are not required for compliance with CEQA. The proposed project is described in Chapter 2, "Project Description," and evaluated throughout this Initial Study and therefore is not discussed below.

5.1.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the City would continue to operate the existing Sump 85 pump station at the existing location and pump station equipment would only be replaced or repaired on an as needed basis. No demolition would occur at the existing pump station site. A new pump station would not be constructed and the new pump station site would remain vacant. With this alternative, no construction-related impacts would occur and the proposed forcemain and fiber optic line would not be installed. The inspection and maintenance requirements for the existing Sump 85 pump station would continue to increase, resulting in increased costs and City staff time to replace and repair pump station components. Continued use of the existing pump station would also have increased potential for pump station failure and service interruptions. The existing pump station site is not secure and would continue to pose a safety risk to City operators accessing the site.

The No Project Alternative would not achieve any of the project objectives, would result in greater long-term operational impacts, greater potential for service interruptions, and would result in increased operations and maintenance costs.

5.1.2 Alternative 2: Wet Well Conversion Alternative

Under Alternative 2, the City would convert the existing Sump 85 pump station to a wet well system and the pump station would remain on the existing site. This would reduce inspection and maintenance needs and reduce the long-term potential for service interruptions. With this alternative, a new pump station would not be constructed and the new pump station site would remain vacant, which would avoid impacts on the new pump station site including removal of two oak trees. Construction-related impacts for the proposed forcemain and fiber optic line would also not occur with this alternative. There would be no impacts associated with demolition of the existing Sump 85 pump station; however, some construction would be required to convert the existing pump station to a wet well system. In addition, this alternative would require safety improvements to make the existing site secure.

This alternative would meet some of the project objectives; however, there is limited space on the existing site to accommodate an expanded wet well system because of the proximity to adjacent residences. Construction-related impacts such as noise, air quality impacts, and traffic would be greater under this alternative compared to the proposed project because the existing site is surrounded by residences that would be immediately adjacent to the construction activities. This alternative would also require a temporary service interruption to allow for conversion of the pump station.

5.1.3 Alternative 3: New Pump Station at Existing Site Alternative

Under Alternative 3, the City would construct a new pump station adjacent to the existing Sump 85 pump station within the existing pump station site. This would reduce inspection and maintenance needs and reduce the long-term potential for service interruptions. With this alternative, the new pump station site would remain vacant, which would avoid impacts on the new pump station site including removal of two oak trees. Construction-related impacts for the proposed forcemain and fiber optic line would also not occur with this alternative. However, impacts associated with demolition of the existing Sump 85 pump station and construction of a new pump station would still occur under this alternative. In addition, this alternative would require safety improvements to make the existing site secure.

This alternative would meet some of the project objectives; however, there is limited space on the existing site to accommodate a new pump station adjacent to the existing pump station because of the proximity to adjacent residences. In addition, construction-related impacts such as noise, air quality impacts, and traffic would be greater under this alternative compared to the proposed project because the existing site is surrounded by residences that would be immediately adjacent to the construction activities. This alternative may also require a temporary service interruption to allow for the new pump station to be connected at the existing site.

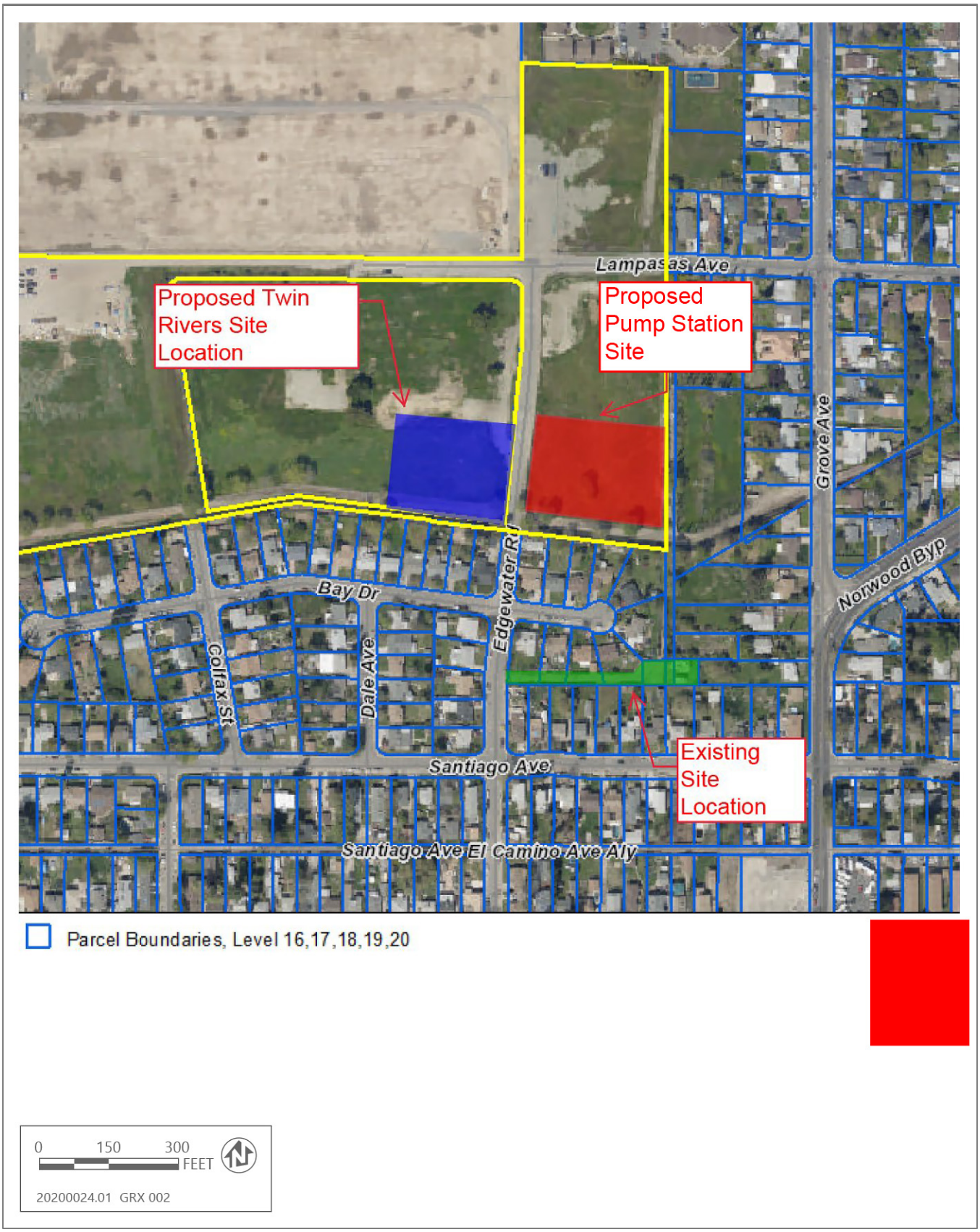
5.1.4 Alternative 4: Twin Rivers Site Alternative

Under Alternative 4, the City would replace the existing Sump 85 pump station and construct a new pump station on the Twin Rivers site immediately west of the new pump station site for the proposed project (Figure 5-1). This site is currently owned by Twin Rivers Unified School District and is vacant. The existing pump station would be demolished and a new forcemain and fiber optic line would be installed under this alternative.

This alternative would meet all of the project objectives; however, it would have greater impacts related to installation of the new forcemain and fiber optic line because the Twin Rivers site is further from the existing pump station and would require additional length to connect into existing facilities. In addition, it would result in all of the same construction- and demolition-related impacts as the proposed project.

5.2 SUMMARY

In summary, the proposed program would achieve all of the project objectives and all potentially significant impacts would be reduced to less than significant with mitigation. Because all of the alternatives discussed above either do not meet all of the project objectives or result in greater environmental impacts compared to the proposed project, the proposed project as described in Chapter 2, "Project Description," was selected as the preferred alternative.



Source: Image produced by Sacramento in 2019

Figure 5-1 Twin Rivers Site Alternative

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6 REFERENCES

1 Introduction

No citations were used in this chapter.

2 Project Description

No citations were used in this chapter.

3 Environmental Checklist

3.1 Aesthetics

California Department of Transportation. 2019. List of eligible and officially designated scenic highways. Available: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed October 29, 2020.

Caltrans. *See* California Department of Transportation.

City of Sacramento. 2014 (August). *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update*. State Clearinghouse No. 2012122006. Sacramento, CA. Prepared by Ascent Environmental, Sacramento, CA.

3.2 Agriculture and Forest Resources

City of Sacramento. 2020a (July 10). *Phase I Environmental Site Assessment Portion of APN 263-0110-026 Sacramento, California*. Prepared by Brown and Caldwell.

Sacramento County. 2021. Sacramento County Open Data. Williamson Act Parcels. Available: https://data-sacramentocounty.opendata.arcgis.com/datasets/199810930ef9465a9a1ae0315e5a7535_0/geoservice?geometry=-121.469%2C38.613%2C-121.453%2C38.616. Accessed February 17, 2021.

3.3 Air Quality

California Air Resources Board. 2019. Maps of State and Federal Area Designations. Available: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations#:~:text=CARB%20makes%20State%20area%20designations,sulfide%2C%20and%20visibility%20reducing%20particles. Accessed: October 7, 2020.

CARB. *See* California Air Resources Board.

EPA. *See* U.S. Environmental Protection Agency.

OEHHA. *See* Office of Environmental Health Hazard Assessment.

Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program - Guidance Manual for Preparation of Health Risk Assessments, Risk Assessment Guidelines*.

Sacramento Metropolitan Air Quality Management District. 2020. Guide to Air Quality Assessment in Sacramento County. Available: http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools. Accessed October 26, 2020.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

U.S. Environmental Protection Agency. 2018. Criteria Air Pollutants. Available: https://www.epa.gov/criteria-air-pollutants. Accessed: October 7, 2020.

3.4 Biological Resources

California Department of Fish and Wildlife. 2012 (March 7). Staff Report on Burrowing Owl Mitigation. California Natural Resources Agency. Sacramento, CA.

California Natural Diversity Database. 2020. Rarefind 5. Commercial Version. Online Subscription Database. Search of the Taylor Monument, Rio Linda, Citrus Heights, Sacramento West, Sacramento East, Carmichael, Clarksburg, Florin, and Elk Grove USGS 7.5' quadrangles. California Natural Heritage Division, California Department of Fish and Wildlife. Sacramento, CA. Accessed, September 2020.

CDFW. *See* California Department of Fish and Wildlife.

CNDDB. *See* California Natural Diversity Database.

England, A.S., J.A. Estep, W. R. Holt. 1995. Nest-site Selection and Reproductive Performance of Urban-Nesting Swainson's Hawks in The Central Valley of California. *Journal of Raptor Research*. Volume 29(3):179-186.

Swainson's Hawk Technical Advisory Committee. 2000 (May 31). *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*.

U.S. Fish and Wildlife Service. 2020. Resource List. Information for Planning and Consultation Database (IPaC). Available: https://ecos.fws.gov/ipac Accessed: September 2020.

U.S. Geological Survey. 1911. Topological Map of the Brighton (Sacramento East) Quadrangle. Reprinted 1947. Available: https://ngmdb.usgs.gov/topoview/. Accessed: September 2020.

USFWS. *See* U.S. Fish and Wildlife Service.

USGS. *See* U.S. Geological Survey.

3.5 Cultural Resources

Natural Investigations Company. 2020 (November). *Cultural Resources Inventory and Effects Assessment for the Sump 85 Relocation Project, City of Sacramento, Sacramento County, California.*

NIC. *See* Natural Investigations Company.

3.6 Energy

California Air Pollution Control Officers Association. 2016. California Emissions Estimator Model Version 2016.3.2.

California Energy Commission. 2020. California Gasoline Data, Facts, and Statistics. Available: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics#:~:text=In%202015%2C%2015.1%20billion%20gallons,Board)%20and%2010%20percent%20ethanol. Accessed October 12, 2020.

California Public Utilities Commission. 2019. California Renewables Portfolio Standard Annual Report. Available: https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/2019%20RPS%20Annual%20Report.pdf. Accessed October 12, 2020.

———. 2020. Natural Gas and California. Available: https://www.cpuc.ca.gov/natural_gas/#:~:text=California's%20natural%20gas%20utilities%20provide%20service%20to%20over%2011%20million%20gas%20meters.&text=Although%20very%20small%20in%20number,core%20customers%20consume%20about%2035%25. Accessed October 12, 2020.

CAPCOA. *See* California Air Pollution Control Officers Association.

CEC. *See* California Energy Commission.

CPUC. *See* California Public Utilities Commission.

EIA. *See* U.S. Energy Information Administration.

U.S. Energy Information Administration. 2019. Investor-Owned Utilities Served 72% of U.S. Electricity Customers in 2017. Available: https://www.eia.gov/todayinenergy/detail.php?id=40913#:~:text=The%20two%20largest%20IOUs%20are,%2C%20and%20municipal%2Drun%20utilities. Accessed October 12, 2020.

———. 2020. California State Profile and Energy Estimates. Available: https://www.eia.gov/state/analysis.php?sid=CA#:~:text=California%20is%20the%20largest%20consumer,used%20in%20the%20transportation%20sector. Accessed October 12, 2020.

3.7 Geology and Soils

California Geologic Survey. 2021. Earthquake Hazard Zones. Available: https://gis.conservation.ca.gov/server/rest/services/CGS_Earthquake_Hazard_Zones/SHP_Fault_Zones/FeatureServer. Accessed February 17, 2021.

CGS. *See* California Geologic Survey.

City of Sacramento. 2014 (August). *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update*. State Clearinghouse No. 2012122006. Sacramento, CA. Prepared by Ascent Environmental, Sacramento, CA.

———. 2020a (July 10). *Phase I Environmental Site Assessment Portion of APN 263-0110-026 Sacramento, California*. Prepared by Brown and Caldwell.

Natural Investigations Company. 2020 (November). *Cultural Resources Inventory and Effects Assessment for the Sump 85 Relocation Project, City of Sacramento, Sacramento County, California.*

NIC. *See* Natural Investigations Company.

3.8 Greenhouse Gas Emissions

City of Sacramento. 2015a. *2035 General Plan*. Available: https://www.cityofsacramento.org/Community-Development/Resources/Online-Library/Sustainability. Accessed: November 3, 2020.

Intergovernmental Panel on Climate Change. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis*. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter06_FINAL.pdf. Accessed October 9, 2020.

———. 2014. *Climate Change 2014 Synthesis Report: Summary for Policymakers*. Available: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. Accessed October 9, 2020.

IPCC. *See* Intergovernmental Panel on Climate Change.

Sacramento Metropolitan Air Quality Management District. 2020 (April). SMAQMD Thresholds of Significance Table. Available: http://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools. Accessed October 9, 2020.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

3.9 Hazards and Hazardous Materials

CalEPA. *See* California Environmental Protection Agency.

CAL FIRE. *See* California Department of Forestry and Fire Protection.

California Department of Forestry and Fire Protection. 2020. California Fire Hazard Severity Zone Viewer. Available: https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414. Accessed February 17, 2021.

California Department of Toxic Substances Control. 2020. EnviroStor Database. Available: https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=2537+Edgewater+Road%2C+sacramento. Accessed October 15, 2020.

California Environmental Protection Agency. 2020. Cortese List Database. Available: https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf. Accessed October 15, 2020.

City of Sacramento. 2018. *City of Sacramento Emergency Operations Plan.* Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Emergency-Services/2018-City-of-Sacramento-Emergency-Operations-Plan.pdf?la=en. Accessed November 5, 2020.

———. 2020a (July 10). *Phase I Environmental Site Assessment Portion of APN 263-0110-026 Sacramento, California*. Prepared by Brown and Caldwell.

DTSC. *See* California Department of Toxic Substances Control.

State Water Resources Control Board. 2020. Geotracker Database. Available: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=2537+Edgewater+Road%2C+sacramento. Accessed October 15, 2020.

SWRCB. *See* State Water Resources Control Board.

3.10 Hydrology and Water Quality

California Department of Water Resources. 2004. *California's Groundwater*. Bulletin 118, South American Subbasin. Last updated February 27, 2004. Sacramento, CA.

California Regional Water Quality Control Board. 2018 (May). The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region, Fifth Edition, the Sacramento River Basin and the San Joaquin River Basin. Rancho Cordova, CA.

City of Sacramento. 2014 (August). *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update*. State Clearinghouse No. 2012122006. Sacramento, CA. Prepared by Ascent Environmental, Sacramento, CA.

———. 2020a. Johnston Park (Carl). Available: https://www.cityofsacramento.org/ParksandRec/Parks/Park-Directory/North-Sacramento/Carl-Johnston-Park. Accessed October 15, 2020.

CRWQCB. *See* California Regional Water Quality Control Board.

Federal Emergency Management Agency. 2015 (June 16). Flood Insurance Rate Map. Map Number 06067C0177. Available: https://msc.fema.gov/portal. Accessed November 2, 2020.

FEMA. *See* Federal Emergency Management Agency.

3.11 Land Use and Planning

City of Sacramento. 2015b (March 3). 2035 General Plan Background Report. Chapter 6. Environmental Resources. Available: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-6---Environmental-Resources.pdf?la=en. Accessed October 15, 2020.

3.12 Mineral Resources

City of Sacramento. 2015b (March 3). 2035 General Plan Background Report. Chapter 6. Environmental Resources. Available: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-6---Environmental-Resources.pdf?la=en. Accessed October 15, 2020.

3.13 Noise

AECOM Technical Services Inc. 2012. Sacramento Municipal Utility District Environmental Noise Assessment.

AECOM. *See* AECOM Technical Services Inc.

California Department of Transportation. 2013 (September). Technical Noise Supplement. California Department of Transportation Division of Environmental Analysis. Sacramento, CA. Prepared by ICF Jones & Stokes.

Caltrans. *See* California Department of Transportation.

EPA. *See* U.S. Environmental Protection Agency.

Federal Highway Administration. 2006 (January). *Roadway Construction Noise Model User's Guide*. Washington, DC. Prepared by Research and Innovative Technology Administration, Cambridge, MA.

Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*. FTA Report No. 0123. Prepared by John A. Volpe National Transportation Systems Center, Cambridge, MA. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed February 28, 2020.

FHWA. *See* Federal Highway Administration.

FTA. *See* Federal Transit Administration.

U.S. Environmental Protection Agency. 1971 (December). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Washington, DC. Prepared by Bolt Baranek and Newman.

3.14 Population and Housing

City of Sacramento. 2014 (August). *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update*. State Clearinghouse No. 2012122006. Sacramento, CA. Prepared by Ascent Environmental, Sacramento, CA.

U.S. Census Bureau. 2018a. 2014-2018 American Community Survey 5-Year. Demographic and Housing Estimates. City of Sacramento. Available: https://data.census.gov/cedsci/table?g=0400000US06_1600000US0664000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2018.DP05. Accessed November 2, 2020.

3.15 Public Services

City of Sacramento. 2020b. Johnston Park (Carl). Available: https://www.cityofsacramento.org/ParksandRec/Parks/Park-Directory/North-Sacramento/Carl-Johnston-Park. Accessed October 15, 2020.

Sacramento Fire Department. 2019. Engine Company First-In Districts and Response Zones - BARB Configuration. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Fire/Maps/Engine-Districts-20120423.pdf?la=en. Accessed June 3, 2019.

Sacramento Police Department. 2016. Sacramento Police Department 2016 Annual Report. Available: https://www.cityofsacramento.org/-/media/Corporate/Files/Police/About-SPD/Annual-Reports/ar16.pdf?la=en. Accessed November 5, 2020.

SFD. *See* Sacramento Fire Department.

SPD. *See* Sacramento Police Department.

3.16 Recreation

City of Sacramento. 2020b. Johnston Park (Carl). Available: https://www.cityofsacramento.org/ParksandRec/Parks/Park-Directory/North-Sacramento/Carl-Johnston-Park. Accessed October 15, 2020.

3.17 Transportation/Traffic

No citations were used in this chapter.

3.18 Tribal Cultural Resources

Natural Investigations Company. 2020 (November). *Cultural Resources Inventory and Effects Assessment for the Sump 85 Relocation Project, City of Sacramento, Sacramento County, California.*

NIC. *See* Natural Investigations Company

3.19 Utilities and Service Systems

City of Sacramento. 2015b (March 3). 2035 General Plan Background Report. Chapter 6. Environmental Resources. Available: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-6---Environmental-Resources.pdf?la=en. Accessed October 15, 2020.

3.20 Wildfire

CAL FIRE. *See* California Department of Forestry and Fire Protection.

California Department of Forestry and Fire Protection. 2020. California Fire Hazard Severity Zone Viewer. Available: https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414. Accessed February 17, 2021.

3.21 Mandatory Findings of Significance

No citations were used in this chapter.

4 Compliance with Federal Environmental Laws and Regulations

BLM et al. *See* U.S. Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service.

California Air Pollution Control Officers Association. 2016. California Emissions Estimator Model Version 2016.3.2.

CAPCOA. *See* California Air Pollution Control Officers Association.

Council on Environmental Quality. 1997. *Environmental Justice Guidance Under the National Environmental Policy Act*. Available: http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-EJGuidance.pdf. Accessed November 2, 2020.

EPA. See United States Environmental Protection Agency.

Federal Emergency Management Agency. 2015 (June 16). Flood Insurance Rate Map. Map Number 06067C0177. Available: https://msc.fema.gov/portal. Accessed November 2, 2020.

Natural Investigations Company. 2020 (November). *Cultural Resources Inventory and Effects Assessment for the Sump 85 Relocation Project, City of Sacramento, Sacramento County, California*.

NIC. *See* Natural Investigations Company.

U.S. Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and U.S. Forest Service. 2020. National Wild and Scenic Rivers System. Available: https://www.rivers.gov/rivers/american-lower.php. Accessed November 2, 2020.

U.S. Census Bureau. 2018a. 2014-2018 American Community Survey 5-Year. Demographic and Housing Estimates. City of Sacramento. Available: https://data.census.gov/cedsci/table?g=0400000US06_1600000US0664000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2018.DP05. Accessed November 2, 2020.

———. 2018b. 2014-2018 American Community Survey 5-Year. Demographic and Housing Estimates. Sacramento County. Available: https://data.census.gov/cedsci/table?g=0400000US06_0500000US06067&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2018.DP05. Accessed November 2, 2020.

———. 2018c. 2014-2018 American Community Survey 5-Year Estimates. Selected Economic Characteristics. City of Sacramento. Available: https://data.census.gov/cedsci/table?g=0400000US06_1600000US0664000&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2018.DP03. Accessed November 2, 2020.

———. 2018d. 2014-2018 American Community Survey 5-Year Estimates. Selected Economic Characteristics. Sacramento County. Available: https://data.census.gov/cedsci/table?g=0400000US06_0500000US06067&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2018.DP03. Accessed November 2, 2020.

———. 2018e. Poverty Thresholds by Size of Family and Number of Children, 2018. Available: https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html. Accessed November 2, 2020.

———. 2018f. 2018. Quick Facts. City of Sacramento and County of Sacramento. Available: https://www.census.gov/quickfacts/fact/table/sacramentocountycalifornia,sacramentocitycalifornia/PST045219. Accessed November 2, 2020.

U.S. Environmental Protection Agency. 2021. Sole Source Aquifer. Available: https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b. Accessed February 17, 2021.

———. 2020a. *Current Nonattainment Counties for All Criteria Pollutants*. Available: https://www3.epa.gov/airquality/greenbook/ancl.html. Accessed: November 2, 2020.

———. 2020b. *De Minimis Tables*. Available: https://www.epa.gov/general-conformity/de-minimis-tables. Accessed: November 2, 2020.

5 Alternatives

No citations were used in this chapter.

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Appendix A

Air Quality, Greenhouse Gases Emissions, and Energy Modeling Data

Sump 85 Relocation Project

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.38	1000sqft	0.03	1,375.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This run is for operational emissions only for the CAA Conformity Determination.

Land Use -

Energy Use -

Stationary Sources - Emergency Generators and Fire Pumps -

Energy Mitigation -

Sump 85 Relocation Project - Sacramento Metropolitan AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	50.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	12.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00

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					
2022	0.0479	0.4119	0.4302	6.9000e-004	2.1700e-003	0.0217	0.0239	7.5000e-004	0.0201	0.0208	0.0000	60.6916	60.6916	0.0182	0.0000	61.1475
Maximum	**0.0479**	**0.4119**	**0.4302**	**6.9000e-004**	**2.1700e-003**	**0.0217**	**0.0239**	**7.5000e-004**	**0.0201**	**0.0208**	**0.0000**	**60.6916**	**60.6916**	**0.0182**	**0.0000**	**61.1475**

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					
2022	0.0479	0.4119	0.4302	6.9000e-004	2.1700e-003	0.0217	0.0239	7.5000e-004	0.0201	0.0208	0.0000	60.6915	60.6915	0.0182	0.0000	61.1474
Maximum	**0.0479**	**0.4119**	**0.4302**	**6.9000e-004**	**2.1700e-003**	**0.0217**	**0.0239**	**7.5000e-004**	**0.0201**	**0.0208**	**0.0000**	**60.6915**	**60.6915**	**0.0182**	**0.0000**	**61.1474**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.2452	0.2452
2	4-3-2022	7-2-2022	0.2117	0.2117
		Highest	0.2452	0.2452

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	6.0100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	4.0000e-005
Energy	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	8.2164	8.2164	3.2000e-004	1.0000e-004	8.2558
Mobile	2.1700e-003	9.6300e-003	0.0264	9.0000e-005	7.4700e-003	7.0000e-005	7.5400e-003	2.0000e-003	7.0000e-005	2.0700e-003	0.0000	7.8524	7.8524	3.7000e-004	0.0000	7.8616
Stationary	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Waste						0.0000	0.0000		0.0000	0.0000	0.3471	0.0000	0.3471	0.0205	0.0000	0.8600
Water						0.0000	0.0000		0.0000	0.0000	0.1129	0.4258	0.5387	4.1000e-004	2.5000e-004	0.6234
Total	**8.9400e-003**	**0.0137**	**0.0302**	**1.0000e-004**	**7.4700e-003**	**3.2000e-004**	**7.7900e-003**	**2.0000e-003**	**3.2000e-004**	**2.3200e-003**	**0.4600**	**16.7231**	**17.1831**	**0.0216**	**3.5000e-004**	**17.8300**

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	6.0100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	4.0000e-005
Energy	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	7.8799	7.8799	3.1000e-004	1.0000e-004	7.9179
Mobile	2.1700e-003	9.6300e-003	0.0264	9.0000e-005	7.4700e-003	7.0000e-005	7.5400e-003	2.0000e-003	7.0000e-005	2.0700e-003	0.0000	7.8524	7.8524	3.7000e-004	0.0000	7.8616
Stationary	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Waste						0.0000	0.0000		0.0000	0.0000	0.3471	0.0000	0.3471	0.0205	0.0000	0.8600
Water						0.0000	0.0000		0.0000	0.0000	0.1129	0.4258	0.5387	4.1000e-004	2.5000e-004	0.6234
Total	**8.9400e-003**	**0.0137**	**0.0302**	**1.0000e-004**	**7.4700e-003**	**3.2000e-004**	**7.7900e-003**	**2.0000e-003**	**3.2000e-004**	**2.3200e-003**	**0.4600**	**16.3865**	**16.8466**	**0.0216**	**3.5000e-004**	**17.4921**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.01**	**1.96**	**0.05**	**0.00**	**1.90**

3.0 Construction Detail

Construction Phase

Sump 85 Relocation Project - Sacramento Metropolitan AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/19/2022	5	2	
4	Building Construction	Building Construction	1/20/2022	6/8/2022	5	100	
5	Paving	Paving	6/9/2022	6/15/2022	5	5	
6	Architectural Coating	Architectural Coating	6/16/2022	6/22/2022	5	5	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,063; Non-Residential Outdoor: 688; 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	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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
Demolition	4	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	1.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**		**1.6900e-003**	**1.6900e-003**		**1.6100e-003**	**1.6100e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3030	0.3030	1.0000e-005	0.0000	0.3032
Total	**1.6000e-004**	**1.0000e-004**	**1.1600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3030**	**0.3030**	**1.0000e-005**	**0.0000**	**0.3032**

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	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	**3.5500e-003**	**0.0321**	**0.0374**	**6.0000e-005**		**1.6900e-003**	**1.6900e-003**		**1.6100e-003**	**1.6100e-003**	**0.0000**	**5.2068**	**5.2068**	**9.6000e-004**	**0.0000**	**5.2308**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3030	0.3030	1.0000e-005	0.0000	0.3032
Total	**1.6000e-004**	**1.0000e-004**	**1.1600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3030**	**0.3030**	**1.0000e-005**	**0.0000**	**0.3032**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**2.7000e-004**	**1.3000e-004**	**4.0000e-004**	**3.0000e-005**	**1.2000e-004**	**1.5000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0152
Total	**1.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0000**	**0.0152**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	**2.9000e-004**	**3.4700e-003**	**1.9800e-003**	**0.0000**	**2.7000e-004**	**1.3000e-004**	**4.0000e-004**	**3.0000e-005**	**1.2000e-004**	**1.5000e-004**	**0.0000**	**0.4275**	**0.4275**	**1.4000e-004**	**0.0000**	**0.4310**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	6.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0152
Total	**1.0000e-005**	**1.0000e-005**	**6.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0000**	**0.0152**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	**7.1000e-004**	**6.4100e-003**	**7.4700e-003**	**1.0000e-005**	**7.5000e-004**	**3.4000e-004**	**1.0900e-003**	**4.1000e-004**	**3.2000e-004**	**7.3000e-004**	**0.0000**	**1.0414**	**1.0414**	**1.9000e-004**	**0.0000**	**1.0462**

3.4 Grading - 2022

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	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0606	0.0606	0.0000	0.0000	0.0606
Total	**3.0000e-005**	**2.0000e-005**	**2.3000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0606**	**0.0606**	**0.0000**	**0.0000**	**0.0606**

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	**7.1000e-004**	**6.4100e-003**	**7.4700e-003**	**1.0000e-005**	**7.5000e-004**	**3.4000e-004**	**1.0900e-003**	**4.1000e-004**	**3.2000e-004**	**7.3000e-004**	**0.0000**	**1.0414**	**1.0414**	**1.9000e-004**	**0.0000**	**1.0462**

3.4 Grading - 2022

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	3.0000e-005	2.0000e-005	2.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0606	0.0606	0.0000	0.0000	0.0606
Total	**3.0000e-005**	**2.0000e-005**	**2.3000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0606**	**0.0606**	**0.0000**	**0.0000**	**0.0606**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0739	50.0739	0.0162	0.0000	50.4787
Total	**0.0343**	**0.3513**	**0.3576**	**5.7000e-004**		**0.0186**	**0.0186**		**0.0171**	**0.0171**	**0.0000**	**50.0739**	**50.0739**	**0.0162**	**0.0000**	**50.4787**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3030	0.3030	1.0000e-005	0.0000	0.3032
Total	**1.6000e-004**	**1.0000e-004**	**1.1600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3030**	**0.3030**	**1.0000e-005**	**0.0000**	**0.3032**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0343	0.3513	0.3576	5.7000e-004		0.0186	0.0186		0.0171	0.0171	0.0000	50.0738	50.0738	0.0162	0.0000	50.4787
Total	**0.0343**	**0.3513**	**0.3576**	**5.7000e-004**		**0.0186**	**0.0186**		**0.0171**	**0.0171**	**0.0000**	**50.0738**	**50.0738**	**0.0162**	**0.0000**	**50.4787**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3030	0.3030	1.0000e-005	0.0000	0.3032
Total	**1.6000e-004**	**1.0000e-004**	**1.1600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3030**	**0.3030**	**1.0000e-005**	**0.0000**	**0.3032**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6200e-003**	**0.0148**	**0.0176**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.3492**	**2.3492**	**6.8000e-004**	**0.0000**	**2.3663**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	9.0000e-005	1.0500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2727	0.2727	1.0000e-005	0.0000	0.2729
Total	**1.5000e-004**	**9.0000e-005**	**1.0500e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2727**	**0.2727**	**1.0000e-005**	**0.0000**	**0.2729**

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	1.6200e-003	0.0148	0.0176	3.0000e-005		7.4000e-004	7.4000e-004		6.9000e-004	6.9000e-004	0.0000	2.3492	2.3492	6.8000e-004	0.0000	2.3663
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6200e-003**	**0.0148**	**0.0176**	**3.0000e-005**		**7.4000e-004**	**7.4000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.3492**	**2.3492**	**6.8000e-004**	**0.0000**	**2.3663**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	9.0000e-005	1.0500e-003	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2727	0.2727	1.0000e-005	0.0000	0.2729
Total	**1.5000e-004**	**9.0000e-005**	**1.0500e-003**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2727**	**0.2727**	**1.0000e-005**	**0.0000**	**0.2729**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**6.8900e-003**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.7 Architectural Coating - 2022

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.3800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	3.5200e-003	4.5300e-003	1.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	0.6383	0.6383	4.0000e-005	0.0000	0.6394
Total	**6.8900e-003**	**3.5200e-003**	**4.5300e-003**	**1.0000e-005**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**0.6383**	**0.6383**	**4.0000e-005**	**0.0000**	**0.6394**

3.7 Architectural Coating - 2022

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.1700e-003	9.6300e-003	0.0264	9.0000e-005	7.4700e-003	7.0000e-005	7.5400e-003	2.0000e-003	7.0000e-005	2.0700e-003	0.0000	7.8524	7.8524	3.7000e-004	0.0000	7.8616
Unmitigated	2.1700e-003	9.6300e-003	0.0264	9.0000e-005	7.4700e-003	7.0000e-005	7.5400e-003	2.0000e-003	7.0000e-005	2.0700e-003	0.0000	7.8524	7.8524	3.7000e-004	0.0000	7.8616

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	9.58	1.82	0.94	20,020	20,020
Total	9.58	1.82	0.94	20,020	20,020

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	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	5.2523	5.2523	2.6000e-004	5.0000e-005	5.2747
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	5.5888	5.5888	2.7000e-004	6.0000e-005	5.6126
NaturalGas Mitigated	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6276	2.6276	5.0000e-005	5.0000e-005	2.6432
NaturalGas Unmitigated	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6276	2.6276	5.0000e-005	5.0000e-005	2.6432

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	49238.8	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6276	2.6276	5.0000e-005	5.0000e-005	2.6432
Total		**2.7000e-004**	**2.4100e-003**	**2.0300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.6276**	**2.6276**	**5.0000e-005**	**5.0000e-005**	**2.6432**

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	49238.8	2.7000e-004	2.4100e-003	2.0300e-003	1.0000e-005		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	2.6276	2.6276	5.0000e-005	5.0000e-005	2.6432
Total		**2.7000e-004**	**2.4100e-003**	**2.0300e-003**	**1.0000e-005**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**2.6276**	**2.6276**	**5.0000e-005**	**5.0000e-005**	**2.6432**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	20872.5	5.5888	2.7000e-004	6.0000e-005	5.6126
Total		**5.5888**	**2.7000e-004**	**6.0000e-005**	**5.6126**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	19615.8	5.2523	2.6000e-004	5.0000e-005	5.2747
Total		**5.2523**	**2.6000e-004**	**5.0000e-005**	**5.2747**

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	6.0100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	4.0000e-005
Unmitigated	6.0100e-003	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	4.0000e-005

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	6.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	4.0000e-005
Total	**6.0100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**4.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.3700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	4.0000e-005
Total	**6.0100e-003**	**0.0000**	**2.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**4.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.5387	4.1000e-004	2.5000e-004	0.6234
Unmitigated	0.5387	4.1000e-004	2.5000e-004	0.6234

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.319125 / 0	0.5387	4.1000e-004	2.5000e-004	0.6234
Total		**0.5387**	**4.1000e-004**	**2.5000e-004**	**0.6234**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.319125 / 0	0.5387	4.1000e-004	2.5000e-004	0.6234
Total		**0.5387**	**4.1000e-004**	**2.5000e-004**	**0.6234**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.3471	0.0205	0.0000	0.8600
Unmitigated	0.3471	0.0205	0.0000	0.8600

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.71	0.3471	0.0205	0.0000	0.8600
Total		**0.3471**	**0.0205**	**0.0000**	**0.8600**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.71	0.3471	0.0205	0.0000	0.8600
Total		**0.3471**	**0.0205**	**0.0000**	**0.8600**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	12	50	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (50 - 75 HP)	4.9000e-004	1.6100e-003	1.7900e-003	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2285	0.2285	3.0000e-005	0.0000	0.2293
Total	**4.9000e-004**	**1.6100e-003**	**1.7900e-003**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.2285**	**0.2285**	**3.0000e-005**	**0.0000**	**0.2293**

11.0 Vegetation

Sump 85 Relocation Project

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	47.38	1000sqft	1.09	47,381.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sump 85 Relocation Project - Sacramento Metropolitan AQMD Air District, Annual

Project Characteristics - This run is for construction emissions only.

Land Use -

Construction Phase - Phasing conservatively assumes that corresponding phases of onsite and offsite construction would occur simultaneously. Microwave tower construction would occur after all other construction activities have concluded.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment -

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment -

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Grading - Total acres graded is differs for onsite and offsite work.

Trips and VMT - Worker trip numbers were provided by the applicant. It is assumed that a small number of vendor trips would be required during construction of the onsite building, water utility infrastructure, and microwave tower, as well as during offsite construction of the pipeline. Total hauling trips were calculated based on the total cubic yards of soil/gravel/asphalt which woudl be imported and exported for the project.

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	NumDays	200.00	31.00
tblConstructionPhase	NumDays	4.00	8.00
tblConstructionPhase	NumDays	4.00	8.00
tblConstructionPhase	NumDays	200.00	31.00

tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	NumDays	200.00	11.00
tblConstructionPhase	PhaseEndDate	12/12/2022	1/6/2022
tblConstructionPhase	PhaseEndDate	11/14/2022	3/8/2022
tblConstructionPhase	PhaseEndDate	1/28/2022	1/6/2022
tblConstructionPhase	PhaseEndDate	2/7/2022	3/2/2022
tblConstructionPhase	PhaseEndDate	11/28/2022	3/22/2022
tblConstructionPhase	PhaseEndDate	2/1/2022	1/18/2022
tblConstructionPhase	PhaseStartDate	11/29/2022	1/3/2022
tblConstructionPhase	PhaseStartDate	2/8/2022	2/17/2022
tblConstructionPhase	PhaseStartDate	2/2/2022	1/19/2022
tblConstructionPhase	PhaseStartDate	11/15/2022	3/9/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	1/7/2022
tblGrading	AcresOfGrading	2.00	1.00
tblGrading	AcresOfGrading	4.00	1.00
tblGrading	AcresOfGrading	2.00	0.09
tblGrading	AcresOfGrading	0.00	0.09
tblGrading	MaterialExported	0.00	258.09
tblGrading	MaterialImported	0.00	258.09
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	65.00	16.00
tblTripsAndVMT	VendorTripNumber	8.00	1.00
tblTripsAndVMT	VendorTripNumber	8.00	2.00
tblTripsAndVMT	VendorTripNumber	8.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	16.00

tblTripsAndVMT	WorkerTripNumber	20.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	16.00

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					
2022	0.3038	0.6462	0.6917	1.3500e-003	0.0528	0.0293	0.0821	0.0262	0.0279	0.0542	0.0000	114.3307	114.3307	0.0251	0.0000	114.9588
Maximum	**0.3038**	**0.6462**	**0.6917**	**1.3500e-003**	**0.0528**	**0.0293**	**0.0821**	**0.0262**	**0.0279**	**0.0542**	**0.0000**	**114.3307**	**114.3307**	**0.0251**	**0.0000**	**114.9588**

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					
2022	0.3038	0.6462	0.6917	1.3500e-003	0.0281	0.0293	0.0574	0.0130	0.0279	0.0409	0.0000	114.3306	114.3306	0.0251	0.0000	114.9586
Maximum	**0.3038**	**0.6462**	**0.6917**	**1.3500e-003**	**0.0281**	**0.0293**	**0.0574**	**0.0130**	**0.0279**	**0.0409**	**0.0000**	**114.3306**	**114.3306**	**0.0251**	**0.0000**	**114.9586**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**46.76**	**0.00**	**30.07**	**50.61**	**0.00**	**24.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.9186	0.9186
2	4-3-2022	7-2-2022	0.0161	0.0161
		Highest	0.9186	0.9186

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2071	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1800e-003	1.1800e-003	0.0000	0.0000	1.2500e-003
Energy	9.1500e-003	0.0832	0.0699	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003	0.0000	283.1278	283.1278	0.0112	3.6200e-003	284.4857
Mobile	0.0749	0.3319	0.9082	2.9400e-003	0.2573	2.5700e-003	0.2598	0.0690	2.4000e-003	0.0714	0.0000	270.5849	270.5849	0.0126	0.0000	270.9006
Waste						0.0000	0.0000		0.0000	0.0000	11.9257	0.0000	11.9257	0.7048	0.0000	29.5455
Water						0.0000	0.0000		0.0000	0.0000	3.8765	14.6177	18.4942	0.0141	8.5800e-003	21.4021
Total	**0.2911**	**0.4151**	**0.9787**	**3.4400e-003**	**0.2573**	**8.8900e-003**	**0.2661**	**0.0690**	**8.7200e-003**	**0.0777**	**15.8022**	**568.3316**	**584.1338**	**0.7427**	**0.0122**	**606.3352**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2071	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1800e-003	1.1800e-003	0.0000	0.0000	1.2500e-003
Energy	9.1500e-003	0.0832	0.0699	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003	0.0000	283.1278	283.1278	0.0112	3.6200e-003	284.4857
Mobile	0.0749	0.3319	0.9082	2.9400e-003	0.2573	2.5700e-003	0.2598	0.0690	2.4000e-003	0.0714	0.0000	270.5849	270.5849	0.0126	0.0000	270.9006
Waste						0.0000	0.0000		0.0000	0.0000	11.9257	0.0000	11.9257	0.7048	0.0000	29.5455
Water						0.0000	0.0000		0.0000	0.0000	3.8765	14.6177	18.4942	0.0141	8.5800e-003	21.4021
Total	**0.2911**	**0.4151**	**0.9787**	**3.4400e-003**	**0.2573**	**8.8900e-003**	**0.2661**	**0.0690**	**8.7200e-003**	**0.0777**	**15.8022**	**568.3316**	**584.1338**	**0.7427**	**0.0122**	**606.3352**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Onsite Site Preparation	Site Preparation	1/3/2022	1/6/2022	5	4	
2	Offsite Site Preparation	Site Preparation	1/3/2022	1/6/2022	5	4	
3	Onsite Grading	Grading	1/7/2022	1/18/2022	5	8	
4	Offsite Trenching	Grading	1/7/2022	1/18/2022	5	8	
5	Building Construction	Building Construction	1/19/2022	3/2/2022	5	31	
6	Pipeline/Fiber Optic Construction	Building Construction	1/19/2022	3/2/2022	5	31	
7	Onsite Paving	Paving	2/17/2022	3/8/2022	5	14	
8	Offsite Paving	Paving	2/17/2022	3/8/2022	5	14	
9	Architectural Coating	Architectural Coating	3/9/2022	3/22/2022	5	10	
10	Microwave Tower Construction	Building Construction	3/23/2022	4/6/2022	5	11	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 71,072; Non-Residential Outdoor: 23,691; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Microwave Tower Construction	Off-Highway Trucks	1	8.00	402	0.38
Offsite Trenching	Graders	0	6.00	187	0.41
Offsite Trenching	Rubber Tired Dozers	0	6.00	247	0.40
Offsite Site Preparation	Air Compressors	0	6.00	78	0.48
Offsite Site Preparation	Cement and Mortar Mixers	0	6.00	9	0.56
Onsite Site Preparation	Concrete/Industrial Saws	0	8.00	81	0.73

Onsite Paving	Generator Sets	0	8.00	84	0.74
Onsite Paving	Cranes	0	6.00	231	0.29
Onsite Paving	Forklifts	0	6.00	89	0.20
Onsite Grading	Graders	1	8.00	187	0.41
Offsite Site Preparation	Pavers	0	6.00	130	0.42
Offsite Site Preparation	Rollers	0	7.00	80	0.38
Onsite Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Onsite Paving	Rubber Tired Dozers	0	6.00	247	0.40
Onsite Paving	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Onsite Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Onsite Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Offsite Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Onsite Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Onsite Paving	Graders	0	6.00	187	0.41
Offsite Site Preparation	Paving Equipment	0	8.00	132	0.36
Onsite Grading	Rubber Tired Dozers	1	7.00	247	0.40
Onsite Paving	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Onsite Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Microwave Tower Construction	Cranes	0	6.00	231	0.29
Building Construction	Cranes	0	6.00	231	0.29
Pipeline/Fiber Optic Construction	Cranes	0	6.00	231	0.29
Microwave Tower Construction	Forklifts	0	6.00	89	0.20
Building Construction	Forklifts	1	6.00	89	0.20
Pipeline/Fiber Optic Construction	Forklifts	0	6.00	89	0.20
Microwave Tower Construction	Generator Sets	0	8.00	84	0.74

Building Construction	Generator Sets	1	8.00	84	0.74
Pipeline/Fiber Optic Construction	Generator Sets	1	8.00	84	0.74
Onsite Site Preparation	Graders	1	8.00	187	0.41
Offsite Site Preparation	Graders	1	8.00	187	0.41
Onsite Paving	Pavers	1	6.00	130	0.42
Offsite Paving	Pavers	1	6.00	130	0.42
Onsite Paving	Paving Equipment	1	8.00	132	0.36
Offsite Paving	Paving Equipment	1	8.00	132	0.36
Onsite Paving	Rollers	1	7.00	80	0.38
Offsite Paving	Rollers	1	7.00	80	0.38
Offsite Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Microwave Tower Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pipeline/Fiber Optic Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Offsite Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Microwave Tower Construction	Welders	3	8.00	46	0.45
Building Construction	Welders	3	8.00	46	0.45
Pipeline/Fiber Optic Construction	Welders	3	8.00	46	0.45
Offsite Trenching	Excavators	2	8.00	158	0.38
Offsite Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline/Fiber Optic Construction	Off-Highway Trucks	1	8.00	402	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Onsite Site Preparation	3	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Onsite Grading	3	16.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Onsite Paving	5	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Onsite Paving	5	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Site Preparation	3	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Site Preparation	3	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Microwave Tower Construction	5	10.00	1.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	16.00	2.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline/Fiber Optic Construction	6	16.00	2.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Paving	5	10.00	0.00	4.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Trenching	3	16.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Onsite Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0126	0.0000	0.0126	6.6800e-003	0.0000	6.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8300e-003	0.0315	0.0151	4.0000e-005		1.3500e-003	1.3500e-003		1.2400e-003	1.2400e-003	0.0000	3.2106	3.2106	1.0400e-003	0.0000	3.2366
Total	**2.8300e-003**	**0.0315**	**0.0151**	**4.0000e-005**	**0.0126**	**1.3500e-003**	**0.0139**	**6.6800e-003**	**1.2400e-003**	**7.9200e-003**	**0.0000**	**3.2106**	**3.2106**	**1.0400e-003**	**0.0000**	**3.2366**

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	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**6.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1212**	**0.1212**	**0.0000**	**0.0000**	**0.1213**

3.2 Onsite Site Preparation - 2022

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					5.6600e-003	0.0000	5.6600e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8300e-003	0.0315	0.0151	4.0000e-005		1.3500e-003	1.3500e-003		1.2400e-003	1.2400e-003	0.0000	3.2106	3.2106	1.0400e-003	0.0000	3.2366
Total	**2.8300e-003**	**0.0315**	**0.0151**	**4.0000e-005**	**5.6600e-003**	**1.3500e-003**	**7.0100e-003**	**3.0000e-003**	**1.2400e-003**	**4.2400e-003**	**0.0000**	**3.2106**	**3.2106**	**1.0400e-003**	**0.0000**	**3.2366**

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	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**6.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1212**	**0.1212**	**0.0000**	**0.0000**	**0.1213**

3.3 Offsite Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0106	0.0000	0.0106	5.8000e-003	0.0000	5.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6200e-003	0.0293	0.0142	3.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.0231	3.0231	9.8000e-004	0.0000	3.0475
Total	**2.6200e-003**	**0.0293**	**0.0142**	**3.0000e-005**	**0.0106**	**1.2500e-003**	**0.0118**	**5.8000e-003**	**1.1500e-003**	**6.9500e-003**	**0.0000**	**3.0231**	**3.0231**	**9.8000e-004**	**0.0000**	**3.0475**

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	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**6.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1212**	**0.1212**	**0.0000**	**0.0000**	**0.1213**

3.3 Offsite Site Preparation - 2022

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					4.7600e-003	0.0000	4.7600e-003	2.6100e-003	0.0000	2.6100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6200e-003	0.0293	0.0142	3.0000e-005		1.2500e-003	1.2500e-003		1.1500e-003	1.1500e-003	0.0000	3.0231	3.0231	9.8000e-004	0.0000	3.0475
Total	**2.6200e-003**	**0.0293**	**0.0142**	**3.0000e-005**	**4.7600e-003**	**1.2500e-003**	**6.0100e-003**	**2.6100e-003**	**1.1500e-003**	**3.7600e-003**	**0.0000**	**3.0231**	**3.0231**	**9.8000e-004**	**0.0000**	**3.0475**

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	6.0000e-005	4.0000e-005	4.7000e-004	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**6.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1212**	**0.1212**	**0.0000**	**0.0000**	**0.1213**

3.4 Onsite Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0216	0.0000	0.0216	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2500e-003	0.0585	0.0284	7.0000e-005		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	6.0461	6.0461	1.9600e-003	0.0000	6.0950
Total	**5.2500e-003**	**0.0585**	**0.0284**	**7.0000e-005**	**0.0216**	**2.4900e-003**	**0.0241**	**0.0116**	**2.2900e-003**	**0.0139**	**0.0000**	**6.0461**	**6.0461**	**1.9600e-003**	**0.0000**	**6.0950**

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	2.1000e-004	1.3000e-004	1.4900e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3879	0.3879	1.0000e-005	0.0000	0.3881
Total	**2.1000e-004**	**1.3000e-004**	**1.4900e-003**	**0.0000**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3879**	**0.3879**	**1.0000e-005**	**0.0000**	**0.3881**

3.4 Onsite Grading - 2022

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					9.7200e-003	0.0000	9.7200e-003	5.2400e-003	0.0000	5.2400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2500e-003	0.0585	0.0284	7.0000e-005		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	6.0461	6.0461	1.9600e-003	0.0000	6.0950
Total	**5.2500e-003**	**0.0585**	**0.0284**	**7.0000e-005**	**9.7200e-003**	**2.4900e-003**	**0.0122**	**5.2400e-003**	**2.2900e-003**	**7.5300e-003**	**0.0000**	**6.0461**	**6.0461**	**1.9600e-003**	**0.0000**	**6.0950**

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	2.1000e-004	1.3000e-004	1.4900e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3879	0.3879	1.0000e-005	0.0000	0.3881
Total	**2.1000e-004**	**1.3000e-004**	**1.4900e-003**	**0.0000**	**4.7000e-004**	**0.0000**	**4.7000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3879**	**0.3879**	**1.0000e-005**	**0.0000**	**0.3881**

3.5 Offsite Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2800e-003	0.0209	0.0350	5.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	4.7220	4.7220	1.5300e-003	0.0000	4.7602
Total	**2.2800e-003**	**0.0209**	**0.0350**	**5.0000e-005**	**1.0000e-004**	**1.0500e-003**	**1.1500e-003**	**1.0000e-005**	**9.6000e-004**	**9.7000e-004**	**0.0000**	**4.7220**	**4.7220**	**1.5300e-003**	**0.0000**	**4.7602**

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	5.0000e-005	1.9300e-003	4.6000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5977	0.5977	3.0000e-005	0.0000	0.5985
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	2.1000e-004	1.3000e-004	1.4900e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3879	0.3879	1.0000e-005	0.0000	0.3881
Total	**2.6000e-004**	**2.0600e-003**	**1.9500e-003**	**1.0000e-005**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.9856**	**0.9856**	**4.0000e-005**	**0.0000**	**0.9867**

3.5 Offsite Trenching - 2022

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					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2800e-003	0.0209	0.0350	5.0000e-005		1.0500e-003	1.0500e-003		9.6000e-004	9.6000e-004	0.0000	4.7220	4.7220	1.5300e-003	0.0000	4.7601
Total	**2.2800e-003**	**0.0209**	**0.0350**	**5.0000e-005**	**5.0000e-005**	**1.0500e-003**	**1.1000e-003**	**1.0000e-005**	**9.6000e-004**	**9.7000e-004**	**0.0000**	**4.7220**	**4.7220**	**1.5300e-003**	**0.0000**	**4.7601**

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	5.0000e-005	1.9300e-003	4.6000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5977	0.5977	3.0000e-005	0.0000	0.5985
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	2.1000e-004	1.3000e-004	1.4900e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3879	0.3879	1.0000e-005	0.0000	0.3881
Total	**2.6000e-004**	**2.0600e-003**	**1.9500e-003**	**1.0000e-005**	**6.0000e-004**	**1.0000e-005**	**6.1000e-004**	**1.7000e-004**	**1.0000e-005**	**1.7000e-004**	**0.0000**	**0.9856**	**0.9856**	**4.0000e-005**	**0.0000**	**0.9867**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0212	0.1452	0.1753	2.7000e-004		7.1100e-003	7.1100e-003		6.9600e-003	6.9600e-003	0.0000	22.2510	22.2510	3.0000e-003	0.0000	22.3259
Total	**0.0212**	**0.1452**	**0.1753**	**2.7000e-004**		**7.1100e-003**	**7.1100e-003**		**6.9600e-003**	**6.9600e-003**	**0.0000**	**22.2510**	**22.2510**	**3.0000e-003**	**0.0000**	**22.3259**

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	9.0000e-005	3.0100e-003	7.8000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7210	0.7210	4.0000e-005	0.0000	0.7220
Worker	8.0000e-004	5.0000e-004	5.7700e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.5030	1.5030	4.0000e-005	0.0000	1.5040
Total	**8.9000e-004**	**3.5100e-003**	**6.5500e-003**	**3.0000e-005**	**2.0000e-003**	**2.0000e-005**	**2.0200e-003**	**5.3000e-004**	**2.0000e-005**	**5.6000e-004**	**0.0000**	**2.2240**	**2.2240**	**8.0000e-005**	**0.0000**	**2.2260**

3.6 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0212	0.1452	0.1753	2.7000e-004		7.1100e-003	7.1100e-003		6.9600e-003	6.9600e-003	0.0000	22.2510	22.2510	3.0000e-003	0.0000	22.3259
Total	**0.0212**	**0.1452**	**0.1753**	**2.7000e-004**		**7.1100e-003**	**7.1100e-003**		**6.9600e-003**	**6.9600e-003**	**0.0000**	**22.2510**	**22.2510**	**3.0000e-003**	**0.0000**	**22.3259**

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	9.0000e-005	3.0100e-003	7.8000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7210	0.7210	4.0000e-005	0.0000	0.7220
Worker	8.0000e-004	5.0000e-004	5.7700e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.5030	1.5030	4.0000e-005	0.0000	1.5040
Total	**8.9000e-004**	**3.5100e-003**	**6.5500e-003**	**3.0000e-005**	**2.0000e-003**	**2.0000e-005**	**2.0200e-003**	**5.3000e-004**	**2.0000e-005**	**5.6000e-004**	**0.0000**	**2.2240**	**2.2240**	**8.0000e-005**	**0.0000**	**2.2260**

3.7 Pipeline/Fiber Optic Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0281	0.1951	0.2139	4.6000e-004		8.5600e-003	8.5600e-003		8.2900e-003	8.2900e-003	0.0000	38.6741	38.6741	8.3100e-003	0.0000	38.8818
Total	**0.0281**	**0.1951**	**0.2139**	**4.6000e-004**		**8.5600e-003**	**8.5600e-003**		**8.2900e-003**	**8.2900e-003**	**0.0000**	**38.6741**	**38.6741**	**8.3100e-003**	**0.0000**	**38.8818**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4500e-003	3.5000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4483	0.4483	3.0000e-005	0.0000	0.4489
Vendor	9.0000e-005	3.0100e-003	7.8000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7210	0.7210	4.0000e-005	0.0000	0.7220
Worker	8.0000e-004	5.0000e-004	5.7700e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.5030	1.5030	4.0000e-005	0.0000	1.5040
Total	**9.3000e-004**	**4.9600e-003**	**6.9000e-003**	**3.0000e-005**	**2.1000e-003**	**2.0000e-005**	**2.1300e-003**	**5.6000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.6723**	**2.6723**	**1.1000e-004**	**0.0000**	**2.6749**

3.7 Pipeline/Fiber Optic Construction - 2022

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	0.0281	0.1951	0.2139	4.6000e-004		8.5600e-003	8.5600e-003		8.2900e-003	8.2900e-003	0.0000	38.6741	38.6741	8.3100e-003	0.0000	38.8818
Total	**0.0281**	**0.1951**	**0.2139**	**4.6000e-004**		**8.5600e-003**	**8.5600e-003**		**8.2900e-003**	**8.2900e-003**	**0.0000**	**38.6741**	**38.6741**	**8.3100e-003**	**0.0000**	**38.8818**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4500e-003	3.5000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4483	0.4483	3.0000e-005	0.0000	0.4489
Vendor	9.0000e-005	3.0100e-003	7.8000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7210	0.7210	4.0000e-005	0.0000	0.7220
Worker	8.0000e-004	5.0000e-004	5.7700e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.5030	1.5030	4.0000e-005	0.0000	1.5040
Total	**9.3000e-004**	**4.9600e-003**	**6.9000e-003**	**3.0000e-005**	**2.1000e-003**	**2.0000e-005**	**2.1300e-003**	**5.6000e-004**	**2.0000e-005**	**5.9000e-004**	**0.0000**	**2.6723**	**2.6723**	**1.1000e-004**	**0.0000**	**2.6749**

3.8 Onsite Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.6700e-003	0.0460	0.0597	9.0000e-005		2.3500e-003	2.3500e-003		2.1700e-003	2.1700e-003	0.0000	7.9996	7.9996	2.5300e-003	0.0000	8.0630
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6700e-003**	**0.0460**	**0.0597**	**9.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**7.9996**	**7.9996**	**2.5300e-003**	**0.0000**	**8.0630**

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	2.3000e-004	1.4000e-004	1.6300e-003	0.0000	9.6000e-004	0.0000	9.6000e-004	2.5000e-004	0.0000	2.5000e-004	0.0000	0.4242	0.4242	1.0000e-005	0.0000	0.4245
Total	**2.3000e-004**	**1.4000e-004**	**1.6300e-003**	**0.0000**	**9.6000e-004**	**0.0000**	**9.6000e-004**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**0.4242**	**0.4242**	**1.0000e-005**	**0.0000**	**0.4245**

3.8 Onsite Paving - 2022

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	4.6700e-003	0.0460	0.0597	9.0000e-005		2.3500e-003	2.3500e-003		2.1700e-003	2.1700e-003	0.0000	7.9996	7.9996	2.5300e-003	0.0000	8.0630
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.6700e-003**	**0.0460**	**0.0597**	**9.0000e-005**		**2.3500e-003**	**2.3500e-003**		**2.1700e-003**	**2.1700e-003**	**0.0000**	**7.9996**	**7.9996**	**2.5300e-003**	**0.0000**	**8.0630**

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	2.3000e-004	1.4000e-004	1.6300e-003	0.0000	9.6000e-004	0.0000	9.6000e-004	2.5000e-004	0.0000	2.5000e-004	0.0000	0.4242	0.4242	1.0000e-005	0.0000	0.4245
Total	**2.3000e-004**	**1.4000e-004**	**1.6300e-003**	**0.0000**	**9.6000e-004**	**0.0000**	**9.6000e-004**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**0.4242**	**0.4242**	**1.0000e-005**	**0.0000**	**0.4245**

3.9 Offsite Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8100e-003	0.0474	0.0616	9.0000e-005		2.4300e-003	2.4300e-003		2.2400e-003	2.2400e-003	0.0000	8.2387	8.2387	2.6100e-003	0.0000	8.3040
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8100e-003**	**0.0474**	**0.0616**	**9.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2400e-003**	**2.2400e-003**	**0.0000**	**8.2387**	**8.2387**	**2.6100e-003**	**0.0000**	**8.3040**

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-005	4.8000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1494	0.1494	1.0000e-005	0.0000	0.1496
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	2.3000e-004	1.4000e-004	1.6300e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4242	0.4242	1.0000e-005	0.0000	0.4245
Total	**2.4000e-004**	**6.2000e-004**	**1.7500e-003**	**0.0000**	**5.4000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5737**	**0.5737**	**2.0000e-005**	**0.0000**	**0.5741**

3.9 Offsite Paving - 2022

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	4.8100e-003	0.0474	0.0616	9.0000e-005		2.4300e-003	2.4300e-003		2.2400e-003	2.2400e-003	0.0000	8.2387	8.2387	2.6100e-003	0.0000	8.3040
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.8100e-003**	**0.0474**	**0.0616**	**9.0000e-005**		**2.4300e-003**	**2.4300e-003**		**2.2400e-003**	**2.2400e-003**	**0.0000**	**8.2387**	**8.2387**	**2.6100e-003**	**0.0000**	**8.3040**

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-005	4.8000e-004	1.2000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1494	0.1494	1.0000e-005	0.0000	0.1496
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	2.3000e-004	1.4000e-004	1.6300e-003	0.0000	5.1000e-004	0.0000	5.2000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4242	0.4242	1.0000e-005	0.0000	0.4245
Total	**2.4000e-004**	**6.2000e-004**	**1.7500e-003**	**0.0000**	**5.4000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5737**	**0.5737**	**2.0000e-005**	**0.0000**	**0.5741**

3.10 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2196					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.2206**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3030	0.3030	1.0000e-005	0.0000	0.3032
Total	**1.6000e-004**	**1.0000e-004**	**1.1600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3030**	**0.3030**	**1.0000e-005**	**0.0000**	**0.3032**

3.10 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2196					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.2206**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.0000e-004	1.1600e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3030	0.3030	1.0000e-005	0.0000	0.3032
Total	**1.6000e-004**	**1.0000e-004**	**1.1600e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3030**	**0.3030**	**1.0000e-005**	**0.0000**	**0.3032**

3.11 Microwave Tower Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.1500e-003	0.0531	0.0557	1.3000e-004		2.2300e-003	2.2300e-003		2.1300e-003	2.1300e-003	0.0000	10.6144	10.6144	2.8000e-003	0.0000	10.6844
Total	**8.1500e-003**	**0.0531**	**0.0557**	**1.3000e-004**		**2.2300e-003**	**2.2300e-003**		**2.1300e-003**	**2.1300e-003**	**0.0000**	**10.6144**	**10.6144**	**2.8000e-003**	**0.0000**	**10.6844**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.3000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1279	0.1279	1.0000e-005	0.0000	0.1281
Worker	1.8000e-004	1.1000e-004	1.2800e-003	0.0000	4.0000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3333	0.3333	1.0000e-005	0.0000	0.3335
Total	**2.0000e-004**	**6.4000e-004**	**1.4200e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4613**	**0.4613**	**2.0000e-005**	**0.0000**	**0.4616**

3.11 Microwave Tower Construction - 2022

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	8.1500e-003	0.0531	0.0557	1.3000e-004		2.2300e-003	2.2300e-003		2.1300e-003	2.1300e-003	0.0000	10.6144	10.6144	2.8000e-003	0.0000	10.6844
Total	**8.1500e-003**	**0.0531**	**0.0557**	**1.3000e-004**		**2.2300e-003**	**2.2300e-003**		**2.1300e-003**	**2.1300e-003**	**0.0000**	**10.6144**	**10.6144**	**2.8000e-003**	**0.0000**	**10.6844**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	5.3000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1279	0.1279	1.0000e-005	0.0000	0.1281
Worker	1.8000e-004	1.1000e-004	1.2800e-003	0.0000	4.0000e-004	0.0000	4.1000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3333	0.3333	1.0000e-005	0.0000	0.3335
Total	**2.0000e-004**	**6.4000e-004**	**1.4200e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.4613**	**0.4613**	**2.0000e-005**	**0.0000**	**0.4616**

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	0.0749	0.3319	0.9082	2.9400e-003	0.2573	2.5700e-003	0.2598	0.0690	2.4000e-003	0.0714	0.0000	270.5849	270.5849	0.0126	0.0000	270.9006
Unmitigated	0.0749	0.3319	0.9082	2.9400e-003	0.2573	2.5700e-003	0.2598	0.0690	2.4000e-003	0.0714	0.0000	270.5849	270.5849	0.0126	0.0000	270.9006

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	330.25	62.54	32.22	689,853	689,853
Total	330.25	62.54	32.22	689,853	689,853

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	192.5847	192.5847	9.4600e-003	1.9600e-003	193.4046
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	192.5847	192.5847	9.4600e-003	1.9600e-003	193.4046
NaturalGas Mitigated	9.1500e-003	0.0832	0.0699	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003	0.0000	90.5431	90.5431	1.7400e-003	1.6600e-003	91.0812
NaturalGas Unmitigated	9.1500e-003	0.0832	0.0699	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003	0.0000	90.5431	90.5431	1.7400e-003	1.6600e-003	91.0812

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	1.69671e+006	9.1500e-003	0.0832	0.0699	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003	0.0000	90.5431	90.5431	1.7400e-003	1.6600e-003	91.0812
Total		**9.1500e-003**	**0.0832**	**0.0699**	**5.0000e-004**		**6.3200e-003**	**6.3200e-003**		**6.3200e-003**	**6.3200e-003**	**0.0000**	**90.5431**	**90.5431**	**1.7400e-003**	**1.6600e-003**	**91.0812**

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	1.69671e+006	9.1500e-003	0.0832	0.0699	5.0000e-004		6.3200e-003	6.3200e-003		6.3200e-003	6.3200e-003	0.0000	90.5431	90.5431	1.7400e-003	1.6600e-003	91.0812
Total		**9.1500e-003**	**0.0832**	**0.0699**	**5.0000e-004**		**6.3200e-003**	**6.3200e-003**		**6.3200e-003**	**6.3200e-003**	**0.0000**	**90.5431**	**90.5431**	**1.7400e-003**	**1.6600e-003**	**91.0812**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	719244	192.5847	9.4600e-003	1.9600e-003	193.4046
Total		**192.5847**	**9.4600e-003**	**1.9600e-003**	**193.4046**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	719244	192.5847	9.4600e-003	1.9600e-003	193.4046
Total		**192.5847**	**9.4600e-003**	**1.9600e-003**	**193.4046**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2071	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1800e-003	1.1800e-003	0.0000	0.0000	1.2500e-003
Unmitigated	0.2071	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1800e-003	1.1800e-003	0.0000	0.0000	1.2500e-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	0.0220					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1800e-003	1.1800e-003	0.0000	0.0000	1.2500e-003
Total	**0.2071**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1800e-003**	**1.1800e-003**	**0.0000**	**0.0000**	**1.2500e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0220					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1851					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1800e-003	1.1800e-003	0.0000	0.0000	1.2500e-003
Total	**0.2071**	**1.0000e-005**	**6.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1800e-003**	**1.1800e-003**	**0.0000**	**0.0000**	**1.2500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.4942	0.0141	8.5800e-003	21.4021
Unmitigated	18.4942	0.0141	8.5800e-003	21.4021

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.9566 / 0	18.4942	0.0141	8.5800e-003	21.4021
Total		**18.4942**	**0.0141**	**8.5800e-003**	**21.4021**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	10.9566 / 0	18.4942	0.0141	8.5800e-003	21.4021
Total		**18.4942**	**0.0141**	**8.5800e-003**	**21.4021**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.9257	0.7048	0.0000	29.5455
Unmitigated	11.9257	0.7048	0.0000	29.5455

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	58.75	11.9257	0.7048	0.0000	29.5455
Total		**11.9257**	**0.7048**	**0.0000**	**29.5455**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	58.75	11.9257	0.7048	0.0000	29.5455
Total		**11.9257**	**0.7048**	**0.0000**	**29.5455**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sump 85 Relocation Project

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	47.38	1000sqft	1.09	47,381.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Sump 85 Relocation Project - Sacramento Metropolitan AQMD Air District, Summer

Project Characteristics - This run is for construction emissions only.

Land Use -

Construction Phase - Phasing conservatively assumes that corresponding phases of onsite and offsite construction would occur simultaneously. Microwave tower construction would occur after all other construction activities have concluded.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment -

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Off-road Equipment -

Off-road Equipment - Equipment was based on the type of construction that would occur in the given phase.

Grading - Total acres graded is differs for onsite and offsite work.

Trips and VMT - Worker trip numbers were provided by the applicant. It is assumed that a small number of vendor trips would be required during construction of the onsite building, water utility infrastructure, and microwave tower, as well as during offsite construction of the pipeline. Total hauling trips were calculated based on the total cubic yards of soil/gravel/asphalt which woudl be imported and exported for the project.

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	NumDays	200.00	31.00
tblConstructionPhase	NumDays	4.00	8.00
tblConstructionPhase	NumDays	4.00	8.00
tblConstructionPhase	NumDays	200.00	31.00

tblConstructionPhase	NumDays	10.00	14.00
tblConstructionPhase	NumDays	200.00	11.00
tblConstructionPhase	PhaseEndDate	12/12/2022	1/6/2022
tblConstructionPhase	PhaseEndDate	11/14/2022	3/8/2022
tblConstructionPhase	PhaseEndDate	1/28/2022	1/6/2022
tblConstructionPhase	PhaseEndDate	2/7/2022	3/2/2022
tblConstructionPhase	PhaseEndDate	11/28/2022	3/22/2022
tblConstructionPhase	PhaseEndDate	2/1/2022	1/18/2022
tblConstructionPhase	PhaseStartDate	11/29/2022	1/3/2022
tblConstructionPhase	PhaseStartDate	2/8/2022	2/17/2022
tblConstructionPhase	PhaseStartDate	2/2/2022	1/19/2022
tblConstructionPhase	PhaseStartDate	11/15/2022	3/9/2022
tblConstructionPhase	PhaseStartDate	1/29/2022	1/7/2022
tblGrading	AcresOfGrading	2.00	1.00
tblGrading	AcresOfGrading	4.00	1.00
tblGrading	AcresOfGrading	2.00	0.09
tblGrading	AcresOfGrading	0.00	0.09
tblGrading	MaterialExported	0.00	258.09
tblGrading	MaterialImported	0.00	258.09
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	65.00	16.00
tblTripsAndVMT	VendorTripNumber	8.00	1.00
tblTripsAndVMT	VendorTripNumber	8.00	2.00
tblTripsAndVMT	VendorTripNumber	8.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	4.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	16.00

tblTripsAndVMT	WorkerTripNumber	20.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	16.00

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					
2022	44.1646	35.9258	44.0050	0.0796	11.7987	1.6984	13.0969	6.2945	1.6185	7.4888	0.0000	7,433.6337	7,433.6337	1.6324	0.0000	7,474.4446
Maximum	**44.1646**	**35.9258**	**44.0050**	**0.0796**	**11.7987**	**1.6984**	**13.0969**	**6.2945**	**1.6185**	**7.4888**	**0.0000**	**7,433.6337**	**7,433.6337**	**1.6324**	**0.0000**	**7,474.4446**

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					
2022	44.1646	35.9258	44.0050	0.0796	5.4294	1.6984	6.7276	2.8636	1.6185	4.0580	0.0000	7,433.6336	7,433.6336	1.6324	0.0000	7,474.4446
Maximum	**44.1646**	**35.9258**	**44.0050**	**0.0796**	**5.4294**	**1.6984**	**6.7276**	**2.8636**	**1.6185**	**4.0580**	**0.0000**	**7,433.6336**	**7,433.6336**	**1.6324**	**0.0000**	**7,474.4446**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.98**	**0.00**	**48.63**	**54.51**	**0.00**	**45.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1347	4.0000e-005	4.8500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0104	0.0104	3.0000e-005		0.0111
Energy	0.0501	0.4557	0.3828	2.7300e-003		0.0346	0.0346		0.0346	0.0346		546.8859	546.8859	0.0105	0.0100	550.1358
Mobile	0.6844	2.3150	7.4736	0.0232	1.9373	0.0186	1.9559	0.5179	0.0174	0.5353		2,347.0953	2,347.0953	0.1043		2,349.7030
Total	**1.8693**	**2.7708**	**7.8613**	**0.0259**	**1.9373**	**0.0533**	**1.9906**	**0.5179**	**0.0521**	**0.5700**		**2,893.9916**	**2,893.9916**	**0.1148**	**0.0100**	**2,899.8498**

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	1.1347	4.0000e-005	4.8500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0104	0.0104	3.0000e-005		0.0111
Energy	0.0501	0.4557	0.3828	2.7300e-003		0.0346	0.0346		0.0346	0.0346		546.8859	546.8859	0.0105	0.0100	550.1358
Mobile	0.6844	2.3150	7.4736	0.0232	1.9373	0.0186	1.9559	0.5179	0.0174	0.5353		2,347.0953	2,347.0953	0.1043		2,349.7030
Total	**1.8693**	**2.7708**	**7.8613**	**0.0259**	**1.9373**	**0.0533**	**1.9906**	**0.5179**	**0.0521**	**0.5700**		**2,893.9916**	**2,893.9916**	**0.1148**	**0.0100**	**2,899.8498**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Onsite Site Preparation	Site Preparation	1/3/2022	1/6/2022	5	4	
2	Offsite Site Preparation	Site Preparation	1/3/2022	1/6/2022	5	4	
3	Onsite Grading	Grading	1/7/2022	1/18/2022	5	8	
4	Offsite Trenching	Grading	1/7/2022	1/18/2022	5	8	
5	Building Construction	Building Construction	1/19/2022	3/2/2022	5	31	
6	Pipeline/Fiber Optic Construction	Building Construction	1/19/2022	3/2/2022	5	31	
7	Onsite Paving	Paving	2/17/2022	3/8/2022	5	14	
8	Offsite Paving	Paving	2/17/2022	3/8/2022	5	14	
9	Architectural Coating	Architectural Coating	3/9/2022	3/22/2022	5	10	
10	Microwave Tower Construction	Building Construction	3/23/2022	4/6/2022	5	11	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 71,072; Non-Residential Outdoor: 23,691; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Sump 85 Relocation Project - Sacramento Metropolitan AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Microwave Tower Construction	Off-Highway Trucks	1	8.00	402	0.38
Offsite Trenching	Graders	0	6.00	187	0.41
Offsite Trenching	Rubber Tired Dozers	0	6.00	247	0.40
Offsite Site Preparation	Air Compressors	0	6.00	78	0.48
Offsite Site Preparation	Cement and Mortar Mixers	0	6.00	9	0.56
Onsite Site Preparation	Concrete/Industrial Saws	0	8.00	81	0.73
Onsite Paving	Generator Sets	0	8.00	84	0.74
Onsite Paving	Cranes	0	6.00	231	0.29
Onsite Paving	Forklifts	0	6.00	89	0.20
Onsite Grading	Graders	1	8.00	187	0.41
Offsite Site Preparation	Pavers	0	6.00	130	0.42
Offsite Site Preparation	Rollers	0	7.00	80	0.38
Onsite Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Onsite Paving	Rubber Tired Dozers	0	6.00	247	0.40
Onsite Paving	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Onsite Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Onsite Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Offsite Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Onsite Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Onsite Paving	Graders	0	6.00	187	0.41
Offsite Site Preparation	Paving Equipment	0	8.00	132	0.36
Onsite Grading	Rubber Tired Dozers	1	7.00	247	0.40
Onsite Paving	Welders	0	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Onsite Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Offsite Paving	Cement and Mortar Mixers	1	6.00	9	0.56

Microwave Tower Construction	Cranes	0	6.00	231	0.29
Building Construction	Cranes	0	6.00	231	0.29
Pipeline/Fiber Optic Construction	Cranes	0	6.00	231	0.29
Microwave Tower Construction	Forklifts	0	6.00	89	0.20
Building Construction	Forklifts	1	6.00	89	0.20
Pipeline/Fiber Optic Construction	Forklifts	0	6.00	89	0.20
Microwave Tower Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Generator Sets	1	8.00	84	0.74
Pipeline/Fiber Optic Construction	Generator Sets	1	8.00	84	0.74
Onsite Site Preparation	Graders	1	8.00	187	0.41
Offsite Site Preparation	Graders	1	8.00	187	0.41
Onsite Paving	Pavers	1	6.00	130	0.42
Offsite Paving	Pavers	1	6.00	130	0.42
Onsite Paving	Paving Equipment	1	8.00	132	0.36
Offsite Paving	Paving Equipment	1	8.00	132	0.36
Onsite Paving	Rollers	1	7.00	80	0.38
Offsite Paving	Rollers	1	7.00	80	0.38
Offsite Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Microwave Tower Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pipeline/Fiber Optic Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Offsite Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Microwave Tower Construction	Welders	3	8.00	46	0.45
Building Construction	Welders	3	8.00	46	0.45
Pipeline/Fiber Optic Construction	Welders	3	8.00	46	0.45
Offsite Trenching	Excavators	2	8.00	158	0.38
Offsite Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Pipeline/Fiber Optic Construction	Off-Highway Trucks	1	8.00	402	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Onsite Site Preparation	3	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Onsite Grading	3	16.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Onsite Paving	5	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Onsite Paving	5	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Site Preparation	3	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Site Preparation	3	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	10.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Microwave Tower Construction	5	10.00	1.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	16.00	2.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline/Fiber Optic Construction	6	16.00	2.00	12.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Paving	5	10.00	0.00	4.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Trenching	3	16.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Onsite Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2872	0.0000	6.2872	3.3389	0.0000	3.3389			0.0000			0.0000
Off-Road	1.4168	15.7269	7.5417	0.0183		0.6747	0.6747		0.6207	0.6207		1,769.5532	1,769.5532	0.5723		1,783.8610
Total	**1.4168**	**15.7269**	**7.5417**	**0.0183**	**6.2872**	**0.6747**	**6.9619**	**3.3389**	**0.6207**	**3.9596**		**1,769.5532**	**1,769.5532**	**0.5723**		**1,783.8610**

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	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.0761**	**5.0000e-004**	**0.0766**	**0.0202**	**4.6000e-004**	**0.0206**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.2 Onsite Site Preparation - 2022

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					2.8293	0.0000	2.8293	1.5025	0.0000	1.5025			0.0000			0.0000
Off-Road	1.4168	15.7269	7.5417	0.0183		0.6747	0.6747		0.6207	0.6207	0.0000	1,769.5532	1,769.5532	0.5723		1,783.8610
Total	**1.4168**	**15.7269**	**7.5417**	**0.0183**	**2.8293**	**0.6747**	**3.5039**	**1.5025**	**0.6207**	**2.1232**	**0.0000**	**1,769.5532**	**1,769.5532**	**0.5723**		**1,783.8610**

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	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.0761**	**5.0000e-004**	**0.0766**	**0.0202**	**4.6000e-004**	**0.0206**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.3 Offsite Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.2932	0.0000	5.2932	2.8990	0.0000	2.8990			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.2932**	**0.6225**	**5.9157**	**2.8990**	**0.5727**	**3.4718**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

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	0.0374	0.0185	0.2755	7.4000e-004	0.1422	5.0000e-004	0.1427	0.0364	4.6000e-004	0.0369		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.1422**	**5.0000e-004**	**0.1427**	**0.0364**	**4.6000e-004**	**0.0369**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.3 Offsite Site Preparation - 2022

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					2.3819	0.0000	2.3819	1.3046	0.0000	1.3046			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**2.3819**	**0.6225**	**3.0045**	**1.3046**	**0.5727**	**1.8773**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

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	0.0374	0.0185	0.2755	7.4000e-004	0.1422	5.0000e-004	0.1427	0.0364	4.6000e-004	0.0369		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.1422**	**5.0000e-004**	**0.1427**	**0.0364**	**4.6000e-004**	**0.0369**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.4 Onsite Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.4019	0.0000	5.4019	2.9108	0.0000	2.9108			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.4019**	**0.6225**	**6.0244**	**2.9108**	**0.5727**	**3.4835**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

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	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0599**	**0.0295**	**0.4408**	**1.1900e-003**	**0.1217**	**8.0000e-004**	**0.1225**	**0.0323**	**7.4000e-004**	**0.0330**		**118.2386**	**118.2386**	**2.9300e-003**		**118.3119**

3.4 Onsite Grading - 2022

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					2.4309	0.0000	2.4309	1.3098	0.0000	1.3098			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**2.4309**	**0.6225**	**3.0534**	**1.3098**	**0.5727**	**1.8826**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

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	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0599**	**0.0295**	**0.4408**	**1.1900e-003**	**0.1217**	**8.0000e-004**	**0.1225**	**0.0323**	**7.4000e-004**	**0.0330**		**118.2386**	**118.2386**	**2.9300e-003**		**118.3119**

3.5 Offsite Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0253	0.0000	0.0253	3.3100e-003	0.0000	3.3100e-003			0.0000			0.0000
Off-Road	0.5696	5.2296	8.7482	0.0134		0.2620	0.2620		0.2410	0.2410		1,301.2695	1,301.2695	0.4209		1,311.7909
Total	**0.5696**	**5.2296**	**8.7482**	**0.0134**	**0.0253**	**0.2620**	**0.2872**	**3.3100e-003**	**0.2410**	**0.2443**		**1,301.2695**	**1,301.2695**	**0.4209**		**1,311.7909**

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	0.0132	0.4684	0.1125	1.5500e-003	0.0348	1.5300e-003	0.0363	9.5200e-003	1.4600e-003	0.0110		165.7945	165.7945	9.2700e-003		166.0264
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	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0731**	**0.4979**	**0.5533**	**2.7400e-003**	**0.1565**	**2.3300e-003**	**0.1588**	**0.0418**	**2.2000e-003**	**0.0440**		**284.0331**	**284.0331**	**0.0122**		**284.3383**

3.5 Offsite Trenching - 2022

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					0.0114	0.0000	0.0114	1.4900e-003	0.0000	1.4900e-003			0.0000			0.0000
Off-Road	0.5696	5.2296	8.7482	0.0134		0.2620	0.2620		0.2410	0.2410	0.0000	1,301.2695	1,301.2695	0.4209		1,311.7909
Total	**0.5696**	**5.2296**	**8.7482**	**0.0134**	**0.0114**	**0.2620**	**0.2733**	**1.4900e-003**	**0.2410**	**0.2425**	**0.0000**	**1,301.2695**	**1,301.2695**	**0.4209**		**1,311.7909**

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	0.0132	0.4684	0.1125	1.5500e-003	0.0348	1.5300e-003	0.0363	9.5200e-003	1.4600e-003	0.0110		165.7945	165.7945	9.2700e-003		166.0264
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	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0731**	**0.4979**	**0.5533**	**2.7400e-003**	**0.1565**	**2.3300e-003**	**0.1588**	**0.0418**	**2.2000e-003**	**0.0440**		**284.0331**	**284.0331**	**0.0122**		**284.3383**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3689	9.3649	11.3072	0.0177		0.4586	0.4586		0.4490	0.4490		1,582.4201	1,582.4201	0.2131		1,587.7465
Total	**1.3689**	**9.3649**	**11.3072**	**0.0177**		**0.4586**	**0.4586**		**0.4490**	**0.4490**		**1,582.4201**	**1,582.4201**	**0.2131**		**1,587.7465**

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	5.7300e-003	0.1910	0.0473	4.9000e-004	0.0120	4.8000e-004	0.0125	3.4600e-003	4.6000e-004	3.9200e-003		51.8394	51.8394	2.7800e-003		51.9088
Worker	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0656**	**0.2205**	**0.4881**	**1.6800e-003**	**0.1337**	**1.2800e-003**	**0.1350**	**0.0358**	**1.2000e-003**	**0.0369**		**170.0780**	**170.0780**	**5.7100e-003**		**170.2207**

3.6 Building Construction - 2022

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	1.3689	9.3649	11.3072	0.0177		0.4586	0.4586		0.4490	0.4490	0.0000	1,582.4201	1,582.4201	0.2131		1,587.7465
Total	**1.3689**	**9.3649**	**11.3072**	**0.0177**		**0.4586**	**0.4586**		**0.4490**	**0.4490**	**0.0000**	**1,582.4201**	**1,582.4201**	**0.2131**		**1,587.7465**

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	5.7300e-003	0.1910	0.0473	4.9000e-004	0.0120	4.8000e-004	0.0125	3.4600e-003	4.6000e-004	3.9200e-003		51.8394	51.8394	2.7800e-003		51.9088
Worker	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0656**	**0.2205**	**0.4881**	**1.6800e-003**	**0.1337**	**1.2800e-003**	**0.1350**	**0.0358**	**1.2000e-003**	**0.0369**		**170.0780**	**170.0780**	**5.7100e-003**		**170.2207**

3.7 Pipeline/Fiber Optic Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8121	12.5874	13.8006	0.0298		0.5521	0.5521		0.5350	0.5350		2,750.3823	2,750.3823	0.5908		2,765.1522
Total	**1.8121**	**12.5874**	**13.8006**	**0.0298**		**0.5521**	**0.5521**		**0.5350**	**0.5350**		**2,750.3823**	**2,750.3823**	**0.5908**		**2,765.1522**

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	2.5500e-003	0.0907	0.0218	3.0000e-004	6.7300e-003	3.0000e-004	7.0300e-003	1.8400e-003	2.8000e-004	2.1300e-003		32.0893	32.0893	1.7900e-003		32.1341
Vendor	5.7300e-003	0.1910	0.0473	4.9000e-004	0.0120	4.8000e-004	0.0125	3.4600e-003	4.6000e-004	3.9200e-003		51.8394	51.8394	2.7800e-003		51.9088
Worker	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0681**	**0.3112**	**0.5098**	**1.9800e-003**	**0.1405**	**1.5800e-003**	**0.1421**	**0.0376**	**1.4800e-003**	**0.0391**		**202.1673**	**202.1673**	**7.5000e-003**		**202.3549**

3.7 Pipeline/Fiber Optic Construction - 2022

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	1.8121	12.5874	13.8006	0.0298		0.5521	0.5521		0.5350	0.5350	0.0000	2,750.3823	2,750.3823	0.5908		2,765.1522
Total	**1.8121**	**12.5874**	**13.8006**	**0.0298**		**0.5521**	**0.5521**		**0.5350**	**0.5350**	**0.0000**	**2,750.3823**	**2,750.3823**	**0.5908**		**2,765.1522**

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	2.5500e-003	0.0907	0.0218	3.0000e-004	6.7300e-003	3.0000e-004	7.0300e-003	1.8400e-003	2.8000e-004	2.1300e-003		32.0893	32.0893	1.7900e-003		32.1341
Vendor	5.7300e-003	0.1910	0.0473	4.9000e-004	0.0120	4.8000e-004	0.0125	3.4600e-003	4.6000e-004	3.9200e-003		51.8394	51.8394	2.7800e-003		51.9088
Worker	0.0599	0.0295	0.4408	1.1900e-003	0.1217	8.0000e-004	0.1225	0.0323	7.4000e-004	0.0330		118.2386	118.2386	2.9300e-003		118.3119
Total	**0.0681**	**0.3112**	**0.5098**	**1.9800e-003**	**0.1405**	**1.5800e-003**	**0.1421**	**0.0376**	**1.4800e-003**	**0.0391**		**202.1673**	**202.1673**	**7.5000e-003**		**202.3549**

3.8 Onsite Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6671	6.5643	8.5263	0.0132		0.3362	0.3362		0.3101	0.3101		1,259.7240	1,259.7240	0.3991		1,269.7015
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6671**	**6.5643**	**8.5263**	**0.0132**		**0.3362**	**0.3362**		**0.3101**	**0.3101**		**1,259.7240**	**1,259.7240**	**0.3991**		**1,269.7015**

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	0.0374	0.0185	0.2755	7.4000e-004	0.1422	5.0000e-004	0.1427	0.0364	4.6000e-004	0.0369		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.1422**	**5.0000e-004**	**0.1427**	**0.0364**	**4.6000e-004**	**0.0369**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.8 Onsite Paving - 2022

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	0.6671	6.5643	8.5263	0.0132		0.3362	0.3362		0.3101	0.3101	0.0000	1,259.7240	1,259.7240	0.3991		1,269.7015
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6671**	**6.5643**	**8.5263**	**0.0132**		**0.3362**	**0.3362**		**0.3101**	**0.3101**	**0.0000**	**1,259.7240**	**1,259.7240**	**0.3991**		**1,269.7015**

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	0.0374	0.0185	0.2755	7.4000e-004	0.1422	5.0000e-004	0.1427	0.0364	4.6000e-004	0.0369		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.1422**	**5.0000e-004**	**0.1427**	**0.0364**	**4.6000e-004**	**0.0369**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.9 Offsite Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205		1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6877**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**		**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

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	1.8800e-003	0.0669	0.0161	2.2000e-004	4.9700e-003	2.2000e-004	5.1900e-003	1.3600e-003	2.1000e-004	1.5700e-003		23.6849	23.6849	1.3200e-003		23.7181
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	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0393**	**0.0854**	**0.2916**	**9.6000e-004**	**0.0810**	**7.2000e-004**	**0.0818**	**0.0215**	**6.7000e-004**	**0.0222**		**97.5841**	**97.5841**	**3.1500e-003**		**97.6630**

3.9 Offsite Paving - 2022

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	0.6877	6.7738	8.8060	0.0135		0.3474	0.3474		0.3205	0.3205	0.0000	1,297.3789	1,297.3789	0.4113		1,307.6608
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6877**	**6.7738**	**8.8060**	**0.0135**		**0.3474**	**0.3474**		**0.3205**	**0.3205**	**0.0000**	**1,297.3789**	**1,297.3789**	**0.4113**		**1,307.6608**

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	1.8800e-003	0.0669	0.0161	2.2000e-004	4.9700e-003	2.2000e-004	5.1900e-003	1.3600e-003	2.1000e-004	1.5700e-003		23.6849	23.6849	1.3200e-003		23.7181
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	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0393**	**0.0854**	**0.2916**	**9.6000e-004**	**0.0810**	**7.2000e-004**	**0.0818**	**0.0215**	**6.7000e-004**	**0.0222**		**97.5841**	**97.5841**	**3.1500e-003**		**97.6630**

3.10 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.9227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**44.1272**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.0761**	**5.0000e-004**	**0.0766**	**0.0202**	**4.6000e-004**	**0.0206**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.10 Architectural Coating - 2022

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					
Archit. Coating	43.9227					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**44.1272**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0374**	**0.0185**	**0.2755**	**7.4000e-004**	**0.0761**	**5.0000e-004**	**0.0766**	**0.0202**	**4.6000e-004**	**0.0206**		**73.8991**	**73.8991**	**1.8300e-003**		**73.9450**

3.11 Microwave Tower Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4822	9.6591	10.1247	0.0232		0.4052	0.4052		0.3881	0.3881		2,127.3477	2,127.3477	0.5612		2,141.3776
Total	**1.4822**	**9.6591**	**10.1247**	**0.0232**		**0.4052**	**0.4052**		**0.3881**	**0.3881**		**2,127.3477**	**2,127.3477**	**0.5612**		**2,141.3776**

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	2.8700e-003	0.0955	0.0236	2.4000e-004	6.0200e-003	2.4000e-004	6.2600e-003	1.7300e-003	2.3000e-004	1.9600e-003		25.9197	25.9197	1.3900e-003		25.9544
Worker	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0403**	**0.1139**	**0.2991**	**9.8000e-004**	**0.0821**	**7.4000e-004**	**0.0828**	**0.0219**	**6.9000e-004**	**0.0226**		**99.8188**	**99.8188**	**3.2200e-003**		**99.8994**

3.11 Microwave Tower Construction - 2022

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	1.4822	9.6591	10.1247	0.0232		0.4052	0.4052		0.3881	0.3881	0.0000	2,127.3477	2,127.3477	0.5612		2,141.3776
Total	**1.4822**	**9.6591**	**10.1247**	**0.0232**		**0.4052**	**0.4052**		**0.3881**	**0.3881**	**0.0000**	**2,127.3477**	**2,127.3477**	**0.5612**		**2,141.3776**

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	2.8700e-003	0.0955	0.0236	2.4000e-004	6.0200e-003	2.4000e-004	6.2600e-003	1.7300e-003	2.3000e-004	1.9600e-003		25.9197	25.9197	1.3900e-003		25.9544
Worker	0.0374	0.0185	0.2755	7.4000e-004	0.0761	5.0000e-004	0.0766	0.0202	4.6000e-004	0.0206		73.8991	73.8991	1.8300e-003		73.9450
Total	**0.0403**	**0.1139**	**0.2991**	**9.8000e-004**	**0.0821**	**7.4000e-004**	**0.0828**	**0.0219**	**6.9000e-004**	**0.0226**		**99.8188**	**99.8188**	**3.2200e-003**		**99.8994**

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	0.6844	2.3150	7.4736	0.0232	1.9373	0.0186	1.9559	0.5179	0.0174	0.5353		2,347.0953	2,347.0953	0.1043		2,349.7030
Unmitigated	0.6844	2.3150	7.4736	0.0232	1.9373	0.0186	1.9559	0.5179	0.0174	0.5353		2,347.0953	2,347.0953	0.1043		2,349.7030

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	330.25	62.54	32.22	689,853	689,853
Total	330.25	62.54	32.22	689,853	689,853

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0501	0.4557	0.3828	2.7300e-003		0.0346	0.0346		0.0346	0.0346		546.8859	546.8859	0.0105	0.0100	550.1358
NaturalGas Unmitigated	0.0501	0.4557	0.3828	2.7300e-003		0.0346	0.0346		0.0346	0.0346		546.8859	546.8859	0.0105	0.0100	550.1358

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	4648.53	0.0501	0.4557	0.3828	2.7300e-003		0.0346	0.0346		0.0346	0.0346		546.8859	546.8859	0.0105	0.0100	550.1358
Total		**0.0501**	**0.4557**	**0.3828**	**2.7300e-003**		**0.0346**	**0.0346**		**0.0346**	**0.0346**		**546.8859**	**546.8859**	**0.0105**	**0.0100**	**550.1358**

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	4.64853	0.0501	0.4557	0.3828	2.7300e-003		0.0346	0.0346		0.0346	0.0346		546.8859	546.8859	0.0105	0.0100	550.1358
Total		**0.0501**	**0.4557**	**0.3828**	**2.7300e-003**		**0.0346**	**0.0346**		**0.0346**	**0.0346**		**546.8859**	**546.8859**	**0.0105**	**0.0100**	**550.1358**

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	1.1347	4.0000e-005	4.8500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0104	0.0104	3.0000e-005		0.0111
Unmitigated	1.1347	4.0000e-005	4.8500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0104	0.0104	3.0000e-005		0.0111

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	0.1203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5000e-004	4.0000e-005	4.8500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0104	0.0104	3.0000e-005		0.0111
Total	**1.1347**	**4.0000e-005**	**4.8500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0104**	**0.0104**	**3.0000e-005**		**0.0111**

6.2 Area by SubCategory

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					
Architectural Coating	0.1203					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0140					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.5000e-004	4.0000e-005	4.8500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0104	0.0104	3.0000e-005		0.0111
Total	**1.1347**	**4.0000e-005**	**4.8500e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0104**	**0.0104**	**3.0000e-005**		**0.0111**

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sump 85 Relocation Project

Sacramento Metropolitan AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.58	1000sqft	0.08	3,580.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This modeling run is being used to estimate demolition only.

Land Use -

Construction Phase -

Off-road Equipment - Equipment based on type of demolition activities required for the project.

Off-road Equipment - Equipment based on type of demolition activities required for the project.

Demolition -

Trips and VMT - There would be a maximum of 5 workers per day during demolition of the existing pump station.

Vehicle Trips - This modeling run does not account for operational emissions.

Energy Use -

Sump 85 Relocation Project - Sacramento Metropolitan AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblTripsAndVMT	WorkerTripNumber	13.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	5.00

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					
2022	5.4600e-003	0.0496	0.0625	1.1000e-004	2.9400e-003	2.4700e-003	5.4200e-003	7.9000e-004	2.3500e-003	3.1400e-003	0.0000	9.3301	9.3301	1.9300e-003	0.0000	9.3783
Maximum	**5.4600e-003**	**0.0496**	**0.0625**	**1.1000e-004**	**2.9400e-003**	**2.4700e-003**	**5.4200e-003**	**7.9000e-004**	**2.3500e-003**	**3.1400e-003**	**0.0000**	**9.3301**	**9.3301**	**1.9300e-003**	**0.0000**	**9.3783**

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					
2022	5.4600e-003	0.0496	0.0625	1.1000e-004	2.9400e-003	2.4700e-003	5.4200e-003	7.9000e-004	2.3500e-003	3.1400e-003	0.0000	9.3300	9.3300	1.9300e-003	0.0000	9.3783
Maximum	**5.4600e-003**	**0.0496**	**0.0625**	**1.1000e-004**	**2.9400e-003**	**2.4700e-003**	**5.4200e-003**	**7.9000e-004**	**2.3500e-003**	**3.1400e-003**	**0.0000**	**9.3300**	**9.3300**	**1.9300e-003**	**0.0000**	**9.3783**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-11-2022	9-30-2022	0.0461	0.0461
		Highest	0.0461	0.0461

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0157	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	9.0000e-005
Energy	6.9000e-004	6.2800e-003	5.2800e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	21.3925	21.3925	8.5000e-004	2.7000e-004	21.4951
Mobile	5.6600e-003	0.0251	0.0686	2.2000e-004	0.0194	1.9000e-004	0.0196	5.2100e-003	1.8000e-004	5.3900e-003	0.0000	20.4448	20.4448	9.5000e-004	0.0000	20.4686
Waste						0.0000	0.0000		0.0000	0.0000	0.9013	0.0000	0.9013	0.0533	0.0000	2.2329
Water						0.0000	0.0000		0.0000	0.0000	0.2929	1.1045	1.3974	1.0600e-003	6.5000e-004	1.6171
Total	**0.0220**	**0.0314**	**0.0740**	**2.6000e-004**	**0.0194**	**6.7000e-004**	**0.0201**	**5.2100e-003**	**6.6000e-004**	**5.8700e-003**	**1.1942**	**42.9419**	**44.1361**	**0.0561**	**9.2000e-004**	**45.8138**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0157	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	9.0000e-005
Energy	6.9000e-004	6.2800e-003	5.2800e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	21.3925	21.3925	8.5000e-004	2.7000e-004	21.4951
Mobile	5.6600e-003	0.0251	0.0686	2.2000e-004	0.0194	1.9000e-004	0.0196	5.2100e-003	1.8000e-004	5.3900e-003	0.0000	20.4448	20.4448	9.5000e-004	0.0000	20.4686
Waste						0.0000	0.0000		0.0000	0.0000	0.9013	0.0000	0.9013	0.0533	0.0000	2.2329
Water						0.0000	0.0000		0.0000	0.0000	0.2929	1.1045	1.3974	1.0600e-003	6.5000e-004	1.6171
Total	**0.0220**	**0.0314**	**0.0740**	**2.6000e-004**	**0.0194**	**6.7000e-004**	**0.0201**	**5.2100e-003**	**6.6000e-004**	**5.8700e-003**	**1.1942**	**42.9419**	**44.1361**	**0.0561**	**9.2000e-004**	**45.8138**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/11/2022	7/22/2022	5	10	
2	Grading	Grading	7/26/2022	7/27/2022	5	2	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 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
Demolition	Excavators	1	8.00	158	0.38
Grading	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

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
Demolition	5	5.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8400e-003	0.0000	1.8400e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5600e-003	0.0410	0.0536	9.0000e-005		2.1200e-003	2.1200e-003		2.0100e-003	2.0100e-003	0.0000	7.4748	7.4748	1.6900e-003	0.0000	7.5172
Total	**4.5600e-003**	**0.0410**	**0.0536**	**9.0000e-005**	**1.8400e-003**	**2.1200e-003**	**3.9600e-003**	**2.8000e-004**	**2.0100e-003**	**2.2900e-003**	**0.0000**	**7.4748**	**7.4748**	**1.6900e-003**	**0.0000**	**7.5172**

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	5.0000e-005	1.9300e-003	4.6000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5977	0.5977	3.0000e-005	0.0000	0.5985
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	8.0000e-005	5.0000e-005	5.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1515	0.1515	0.0000	0.0000	0.1516
Total	**1.3000e-004**	**1.9800e-003**	**1.0400e-003**	**1.0000e-005**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**9.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**0.7492**	**0.7492**	**3.0000e-005**	**0.0000**	**0.7501**

3.2 Demolition - 2022

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					1.8400e-003	0.0000	1.8400e-003	2.8000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5600e-003	0.0410	0.0536	9.0000e-005		2.1200e-003	2.1200e-003		2.0100e-003	2.0100e-003	0.0000	7.4748	7.4748	1.6900e-003	0.0000	7.5172
Total	**4.5600e-003**	**0.0410**	**0.0536**	**9.0000e-005**	**1.8400e-003**	**2.1200e-003**	**3.9600e-003**	**2.8000e-004**	**2.0100e-003**	**2.2900e-003**	**0.0000**	**7.4748**	**7.4748**	**1.6900e-003**	**0.0000**	**7.5172**

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	5.0000e-005	1.9300e-003	4.6000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5977	0.5977	3.0000e-005	0.0000	0.5985
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	8.0000e-005	5.0000e-005	5.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1515	0.1515	0.0000	0.0000	0.1516
Total	**1.3000e-004**	**1.9800e-003**	**1.0400e-003**	**1.0000e-005**	**3.1000e-004**	**1.0000e-005**	**3.2000e-004**	**9.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**0.7492**	**0.7492**	**3.0000e-005**	**0.0000**	**0.7501**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	6.6900e-003	7.7000e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.3000e-004	3.3000e-004	0.0000	1.0757	1.0757	2.0000e-004	0.0000	1.0806
Total	**7.5000e-004**	**6.6900e-003**	**7.7000e-003**	**1.0000e-005**	**7.5000e-004**	**3.5000e-004**	**1.1000e-003**	**4.1000e-004**	**3.3000e-004**	**7.4000e-004**	**0.0000**	**1.0757**	**1.0757**	**2.0000e-004**	**0.0000**	**1.0806**

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	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0303	0.0303	0.0000	0.0000	0.0303
Total	**2.0000e-005**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0303**	**0.0303**	**0.0000**	**0.0000**	**0.0303**

3.3 Grading - 2022

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					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5000e-004	6.6900e-003	7.7000e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.3000e-004	3.3000e-004	0.0000	1.0757	1.0757	2.0000e-004	0.0000	1.0806
Total	**7.5000e-004**	**6.6900e-003**	**7.7000e-003**	**1.0000e-005**	**7.5000e-004**	**3.5000e-004**	**1.1000e-003**	**4.1000e-004**	**3.3000e-004**	**7.4000e-004**	**0.0000**	**1.0757**	**1.0757**	**2.0000e-004**	**0.0000**	**1.0806**

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	2.0000e-005	1.0000e-005	1.2000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0303	0.0303	0.0000	0.0000	0.0303
Total	**2.0000e-005**	**1.0000e-005**	**1.2000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0303**	**0.0303**	**0.0000**	**0.0000**	**0.0303**

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	5.6600e-003	0.0251	0.0686	2.2000e-004	0.0194	1.9000e-004	0.0196	5.2100e-003	1.8000e-004	5.3900e-003	0.0000	20.4448	20.4448	9.5000e-004	0.0000	20.4686
Unmitigated	5.6600e-003	0.0251	0.0686	2.2000e-004	0.0194	1.9000e-004	0.0196	5.2100e-003	1.8000e-004	5.3900e-003	0.0000	20.4448	20.4448	9.5000e-004	0.0000	20.4686

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	24.95	4.73	2.43	52,124	52,124
Total	24.95	4.73	2.43	52,124	52,124

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14.5513	14.5513	7.1000e-004	1.5000e-004	14.6132
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14.5513	14.5513	7.1000e-004	1.5000e-004	14.6132
NaturalGas Mitigated	6.9000e-004	6.2800e-003	5.2800e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8412	6.8412	1.3000e-004	1.3000e-004	6.8819
NaturalGas Unmitigated	6.9000e-004	6.2800e-003	5.2800e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8412	6.8412	1.3000e-004	1.3000e-004	6.8819

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	128200	6.9000e-004	6.2800e-003	5.2800e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8412	6.8412	1.3000e-004	1.3000e-004	6.8819
Total		**6.9000e-004**	**6.2800e-003**	**5.2800e-003**	**4.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**6.8412**	**6.8412**	**1.3000e-004**	**1.3000e-004**	**6.8819**

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	128200	6.9000e-004	6.2800e-003	5.2800e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8412	6.8412	1.3000e-004	1.3000e-004	6.8819
Total		**6.9000e-004**	**6.2800e-003**	**5.2800e-003**	**4.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**	**0.0000**	**6.8412**	**6.8412**	**1.3000e-004**	**1.3000e-004**	**6.8819**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	54344.4	14.5513	7.1000e-004	1.5000e-004	14.6132
Total		**14.5513**	**7.1000e-004**	**1.5000e-004**	**14.6132**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	54344.4	14.5513	7.1000e-004	1.5000e-004	14.6132
Total		**14.5513**	**7.1000e-004**	**1.5000e-004**	**14.6132**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0157	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	9.0000e-005
Unmitigated	0.0157	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	9.0000e-005

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	1.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.0156**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0140					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.0000e-005	9.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.0156**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.3974	1.0600e-003	6.5000e-004	1.6171
Unmitigated	1.3974	1.0600e-003	6.5000e-004	1.6171

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.827875 / 0	1.3974	1.0600e-003	6.5000e-004	1.6171
Total		**1.3974**	**1.0600e-003**	**6.5000e-004**	**1.6171**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.827875 / 0	1.3974	1.0600e-003	6.5000e-004	1.6171
Total		**1.3974**	**1.0600e-003**	**6.5000e-004**	**1.6171**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.9013	0.0533	0.0000	2.2329
Unmitigated	0.9013	0.0533	0.0000	2.2329

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.44	0.9013	0.0533	0.0000	2.2329
Total		**0.9013**	**0.0533**	**0.0000**	**2.2329**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	4.44	0.9013	0.0533	0.0000	2.2329
Total		**0.9013**	**0.0533**	**0.0000**	**2.2329**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Sump 85 Relocation Project

Sacramento Metropolitan AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	3.58	1000sqft	0.08	3,580.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - This modeling run is being used to estimate demolition only.

Land Use -

Construction Phase -

Off-road Equipment - Equipment based on type of demolition activities required for the project.

Off-road Equipment - Equipment based on type of demolition activities required for the project.

Demolition -

Trips and VMT - There would be a maximum of 5 workers per day during demolition of the existing pump station.

Vehicle Trips - This modeling run does not account for operational emissions.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblTripsAndVMT	WorkerTripNumber	13.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	5.00

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					
2022	0.9411	8.5747	10.9522	0.0188	0.7908	0.4249	1.1393	0.4239	0.4030	0.7574	0.0000	1,817.5029	1,817.5029	0.3820	0.0000	1,827.0518
Maximum	**0.9411**	**8.5747**	**10.9522**	**0.0188**	**0.7908**	**0.4249**	**1.1393**	**0.4239**	**0.4030**	**0.7574**	**0.0000**	**1,817.5029**	**1,817.5029**	**0.3820**	**0.0000**	**1,827.0518**

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					
2022	0.9411	8.5747	10.9522	0.0188	0.7908	0.4249	1.1393	0.4239	0.4030	0.7574	0.0000	1,817.5029	1,817.5029	0.3820	0.0000	1,827.0518
Maximum	**0.9411**	**8.5747**	**10.9522**	**0.0188**	**0.7908**	**0.4249**	**1.1393**	**0.4239**	**0.4030**	**0.7574**	**0.0000**	**1,817.5029**	**1,817.5029**	**0.3820**	**0.0000**	**1,827.0518**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0857	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.8000e-004	7.8000e-004	0.0000		8.4000e-004
Energy	3.7900e-003	0.0344	0.0289	2.1000e-004		2.6200e-003	2.6200e-003		2.6200e-003	2.6200e-003		41.3215	41.3215	7.9000e-004	7.6000e-004	41.5670
Mobile	0.0517	0.1749	0.5647	1.7500e-003	0.1464	1.4000e-003	0.1478	0.0391	1.3100e-003	0.0404		177.3412	177.3412	7.8800e-003		177.5382
Total	**0.1412**	**0.2094**	**0.5940**	**1.9600e-003**	**0.1464**	**4.0200e-003**	**0.1504**	**0.0391**	**3.9300e-003**	**0.0431**		**218.6634**	**218.6634**	**8.6700e-003**	**7.6000e-004**	**219.1060**

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	0.0857	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.8000e-004	7.8000e-004	0.0000		8.4000e-004
Energy	3.7900e-003	0.0344	0.0289	2.1000e-004		2.6200e-003	2.6200e-003		2.6200e-003	2.6200e-003		41.3215	41.3215	7.9000e-004	7.6000e-004	41.5670
Mobile	0.0517	0.1749	0.5647	1.7500e-003	0.1464	1.4000e-003	0.1478	0.0391	1.3100e-003	0.0404		177.3412	177.3412	7.8800e-003		177.5382
Total	**0.1412**	**0.2094**	**0.5940**	**1.9600e-003**	**0.1464**	**4.0200e-003**	**0.1504**	**0.0391**	**3.9300e-003**	**0.0431**		**218.6634**	**218.6634**	**8.6700e-003**	**7.6000e-004**	**219.1060**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/11/2022	7/22/2022	5	10	
2	Grading	Grading	7/26/2022	7/27/2022	5	2	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 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
Demolition	Excavators	1	8.00	158	0.38
Grading	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

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
Demolition	5	5.00	0.00	16.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3674	0.0000	0.3674	0.0556	0.0000	0.0556			0.0000			0.0000
Off-Road	0.9118	8.1908	10.7245	0.0172		0.4234	0.4234		0.4016	0.4016		1,647.9178	1,647.9178	0.3736		1,657.2582
Total	**0.9118**	**8.1908**	**10.7245**	**0.0172**	**0.3674**	**0.4234**	**0.7908**	**0.0556**	**0.4016**	**0.4572**		**1,647.9178**	**1,647.9178**	**0.3736**		**1,657.2582**

3.2 Demolition - 2022

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	0.0106	0.3747	0.0900	1.2400e-003	0.0278	1.2200e-003	0.0291	7.6100e-003	1.1700e-003	8.7800e-003		132.6356	132.6356	7.4200e-003		132.8211
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	0.0187	9.2300e-003	0.1378	3.7000e-004	0.0380	2.5000e-004	0.0383	0.0101	2.3000e-004	0.0103		36.9496	36.9496	9.2000e-004		36.9725
Total	**0.0293**	**0.3839**	**0.2278**	**1.6100e-003**	**0.0659**	**1.4700e-003**	**0.0673**	**0.0177**	**1.4000e-003**	**0.0191**		**169.5852**	**169.5852**	**8.3400e-003**		**169.7936**

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					0.3674	0.0000	0.3674	0.0556	0.0000	0.0556			0.0000			0.0000
Off-Road	0.9118	8.1908	10.7245	0.0172		0.4234	0.4234		0.4016	0.4016	0.0000	1,647.9178	1,647.9178	0.3736		1,657.2582
Total	**0.9118**	**8.1908**	**10.7245**	**0.0172**	**0.3674**	**0.4234**	**0.7908**	**0.0556**	**0.4016**	**0.4572**	**0.0000**	**1,647.9178**	**1,647.9178**	**0.3736**		**1,657.2582**

3.2 Demolition - 2022

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	0.0106	0.3747	0.0900	1.2400e-003	0.0278	1.2200e-003	0.0291	7.6100e-003	1.1700e-003	8.7800e-003		132.6356	132.6356	7.4200e-003		132.8211
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	0.0187	9.2300e-003	0.1378	3.7000e-004	0.0380	2.5000e-004	0.0383	0.0101	2.3000e-004	0.0103		36.9496	36.9496	9.2000e-004		36.9725
Total	**0.0293**	**0.3839**	**0.2278**	**1.6100e-003**	**0.0659**	**1.4700e-003**	**0.0673**	**0.0177**	**1.4000e-003**	**0.0191**		**169.5852**	**169.5852**	**8.3400e-003**		**169.7936**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7535	6.6900	7.7007	0.0125		0.3483	0.3483		0.3333	0.3333		1,185.7897	1,185.7897	0.2158		1,191.1857
Total	**0.7535**	**6.6900**	**7.7007**	**0.0125**	**0.7528**	**0.3483**	**1.1010**	**0.4138**	**0.3333**	**0.7471**		**1,185.7897**	**1,185.7897**	**0.2158**		**1,191.1857**

3.3 Grading - 2022

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	0.0187	9.2300e-003	0.1378	3.7000e-004	0.0380	2.5000e-004	0.0383	0.0101	2.3000e-004	0.0103		36.9496	36.9496	9.2000e-004		36.9725
Total	**0.0187**	**9.2300e-003**	**0.1378**	**3.7000e-004**	**0.0380**	**2.5000e-004**	**0.0383**	**0.0101**	**2.3000e-004**	**0.0103**		**36.9496**	**36.9496**	**9.2000e-004**		**36.9725**

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.7535	6.6900	7.7007	0.0125		0.3483	0.3483		0.3333	0.3333	0.0000	1,185.7897	1,185.7897	0.2158		1,191.1857
Total	**0.7535**	**6.6900**	**7.7007**	**0.0125**	**0.7528**	**0.3483**	**1.1010**	**0.4138**	**0.3333**	**0.7471**	**0.0000**	**1,185.7897**	**1,185.7897**	**0.2158**		**1,191.1857**

3.3 Grading - 2022

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	0.0187	9.2300e-003	0.1378	3.7000e-004	0.0380	2.5000e-004	0.0383	0.0101	2.3000e-004	0.0103		36.9496	36.9496	9.2000e-004		36.9725
Total	**0.0187**	**9.2300e-003**	**0.1378**	**3.7000e-004**	**0.0380**	**2.5000e-004**	**0.0383**	**0.0101**	**2.3000e-004**	**0.0103**		**36.9496**	**36.9496**	**9.2000e-004**		**36.9725**

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	0.0517	0.1749	0.5647	1.7500e-003	0.1464	1.4000e-003	0.1478	0.0391	1.3100e-003	0.0404		177.3412	177.3412	7.8800e-003		177.5382
Unmitigated	0.0517	0.1749	0.5647	1.7500e-003	0.1464	1.4000e-003	0.1478	0.0391	1.3100e-003	0.0404		177.3412	177.3412	7.8800e-003		177.5382

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	24.95	4.73	2.43	52,124	52,124
Total	24.95	4.73	2.43	52,124	52,124

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	10.00	5.00	6.50	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.7900e-003	0.0344	0.0289	2.1000e-004		2.6200e-003	2.6200e-003		2.6200e-003	2.6200e-003		41.3215	41.3215	7.9000e-004	7.6000e-004	41.5670
NaturalGas Unmitigated	3.7900e-003	0.0344	0.0289	2.1000e-004		2.6200e-003	2.6200e-003		2.6200e-003	2.6200e-003		41.3215	41.3215	7.9000e-004	7.6000e-004	41.5670

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	351.232	3.7900e-003	0.0344	0.0289	2.1000e-004		2.6200e-003	2.6200e-003		2.6200e-003	2.6200e-003		41.3215	41.3215	7.9000e-004	7.6000e-004	41.5670
Total		**3.7900e-003**	**0.0344**	**0.0289**	**2.1000e-004**		**2.6200e-003**	**2.6200e-003**		**2.6200e-003**	**2.6200e-003**		**41.3215**	**41.3215**	**7.9000e-004**	**7.6000e-004**	**41.5670**

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	0.351232	3.7900e-003	0.0344	0.0289	2.1000e-004		2.6200e-003	2.6200e-003		2.6200e-003	2.6200e-003		41.3215	41.3215	7.9000e-004	7.6000e-004	41.5670
Total		**3.7900e-003**	**0.0344**	**0.0289**	**2.1000e-004**		**2.6200e-003**	**2.6200e-003**		**2.6200e-003**	**2.6200e-003**		**41.3215**	**41.3215**	**7.9000e-004**	**7.6000e-004**	**41.5670**

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	0.0857	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.8000e-004	7.8000e-004	0.0000		8.4000e-004
Unmitigated	0.0857	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.8000e-004	7.8000e-004	0.0000		8.4000e-004

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	9.0900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.8000e-004	7.8000e-004	0.0000		8.4000e-004
Total	**0.0857**	**0.0000**	**3.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.8000e-004**	**7.8000e-004**	**0.0000**		**8.4000e-004**

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					
Architectural Coating	9.0900e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.8000e-004	7.8000e-004	0.0000		8.4000e-004
Total	**0.0857**	**0.0000**	**3.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.8000e-004**	**7.8000e-004**	**0.0000**		**8.4000e-004**

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Instructions: Input all construction equipment by each phase and phase length and use CalEEMod outputs for amount, usage hours, horsepower, and load factor.

Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Onsite Site Preparation	Graders	1	8	187	0.41	4	123
Onsite Site Preparation	Rubber Tired Dozers	1	7	247	0.4	4	138
Onsite Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37	4	57
Onsite Grading	Graders	1	6.00	187	0.41	8	184
Onsite Grading	Rubber Tired Dozers	1	6.00	247	0.4	8	237
Onsite Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37	8	100
Building Construction	Forklifts	1	6.00	89	0.20	31	166
Building Construction	Generator Sets	1	8.00	84	0.74	31	771
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37	31	334
Building Construction	Welders	3	8.00	46	0.45	31	770
Onsite Paving	Cement Mixer	1	6.00	9	0.56	14	21
Onsite Paving	Paver	1	6.00	130	0.42	14	229
Onsite Paving	Paving Equipment	1	8.00	132	0.36	14	266
Onsite Paving	Roller	1	7.00	80	0.38	14	149
Onsite Paving	Tractors/Loaders/Backhoes	3	8.00	97	0.37	14	603
Architectural Coating	Air Compressors	1	6.00	78	0.48	10	112
Offsite Site Preparation	Graders	1	8	187	0.41	4	123
Offsite Site Preparation	Rubber Tired Dozers	1	7	247	0.4	4	138
Offsite Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37	4	57
Offsite Trenching	Excavators	2	8.00	158	0.38	8	384
Offsite Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37	8	115
Pipeline/Fiber Optic Construction	Generator Sets	1	8.00	84	0.74	31	771
Pipeline/Fiber Optic Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37	31	334
Pipeline/Fiber Optic Construction	Welders	3	8.00	46	0.45	31	770
Pipeline/Fiber Optic Construction	Off-highway Truck	1	8.00	402	0.38	31	1,894
Offsite Paving	Cement Mixer	1	6.00	9	0.56	14	21
Offsite Paving	Paver	1	6.00	130	0.42	14	229
Offsite Paving	Paving Equipment	1	8.00	132	0.36	14	266
Offsite Paving	Roller	1	7.00	80	0.38	14	149
Offsite Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37	14	201
Demolition	Concrete/Industrial Saw	1	8.00	81	0.73	12	284
Demolition	Excavators	1	8.00	158	0.38	12	288
Demolition	Rubber Tired Dozers	1	1.00	247	0.40	12	59
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37	12	258
Microwave Tower Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37	11	118
Microwave Tower Construction	Welders	3	8.00	46	0.45	11	273
Microwave Tower Construction	Off-highway Truck	1	8.00	402	0.38	11	672
						TOTAL	11,667

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Hauling Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	**Total gallons of gasoline**	**Total gallons of diesel**
Onsite Site Preparation	10	0	0	4	40	0	0	10.00	6.50	20.00	400	0.00	-	14	0
Onsite Grading	16	0	0	8	128	0	0	10.00	6.50	20.00	1280	0.00	-	46	0
Building Construction	16	2	0	31	496	62	0	10.00	6.50	20.00	4960	403.00	-	177	66
Onsite Paving	10		0	14	140	0	0	10.00	6.50	20.00	1400	0.00	-	50	0
Architectural Coating	10	0	0	10	100	0	0	10.00	6.50	20.00	1000	0.00	-	36	0
Offsite Site Preparation	10	0	0	4	40	0	0	10.00	6.50	20.00	400	0.00	-	14	0
Offsite Trenching	16	0	2	8	128	0	16	10.00	6.50	20.00	1280	0.00	320.00	46	53
Pipeline/Fiber Optic Construction	16	2	0.4	31	496	62	12.4	10.00	6.50	20.00	4960	403.00	248.00	177	107
Offsite Paving	10	0	0.3	14	140	0	4.2	10.00	6.50	20.00	1400	0.00	84.00	50	14
Demolition	5	0	1.4	12	60	0	16.8	10.00	6.50	20.00	600	0.00	336.00	21	55
Microwave Tower Construction	10	1	0.0	11	110	11	0	10.00	6.50	20.00	1100	71.50	-	39.3	11.76
													TOTAL	670	307

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Instructions: Input EMFAC run for LDA, LDT1, LTD2 for gas, and T7 tractor construction for diesel into template below.

EMFAC2014 (v1.0.7) Emissions Inventory
Region Type: County
Region: Sacramento
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Miles per gallon
Sacramento	2022	LDA	Aggregated	Aggregated	GAS	559,174	20,248,239	3,522,071	656.9	30.82
Sacramento	2022	LDA	Aggregated	Aggregated	DSL	5,917	225,217	36,915	5.5	40.91
Sacramento	2022	LDA	Aggregated	Aggregated	ELEC	19,510	952,999	126,939	-	-
Sacramento	2022	LDT1	Aggregated	Aggregated	GAS	43,888	1,478,453	264,367	57.3	25.81
Sacramento	2022	LDT1	Aggregated	Aggregated	DSL	163	3,374	833	0.1	27.54
Sacramento	2022	LDT1	Aggregated	Aggregated	ELEC	51	1,411	302	-	-
Sacramento	2022	LDT2	Aggregated	Aggregated	GAS	207,640	7,880,531	1,303,733	342.4	23.02
Sacramento	2022	LDT2	Aggregated	Aggregated	DSL	344	14,646	2,201	0.5	31.44
Sacramento	2022	T7 tractor construction	Aggregated	Aggregated	DSL	154	13,713	-	2.3	6.08

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Fuel Efficiency Calculation

	Value	Units
Gasoline consumption by LDA, LDT 1, and LDT 2	1,056,608	gallons/day
VMT for LDA, LDT1, and LDT 2	29,607,222	miles/day
Gasoline fuel efficiency	28.02	miles/gallon
Diesel consumption by T7 tractor construction	2,255.8	gallons/day
VMT for T7 tractor construction	13,713	miles/day
Diesel fuel efficiency	6.08	miles/gallon

Appendix B

Special-Status Species
Occurrence Tables

Table B-1 Special-Status Botanical Species Known to Occur in the Project Region and their Potential for Occurrence in the Project Area

Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence[2]
	Federal	State	CRPR		
Ferris' milk-vetch *Astragalus tener* var. *ferrisiae*			1B.1	Wetland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. 16–246 feet in elevation. Blooms April–May.	**Not expected to occur:** No wetland or alkaline flat habitat within the project footprint.
Bristly sedge *Carex comosa*			2B.1	Wetland. Lake margins, wet places; site below sea level is on a Delta island. 16–2,050 feet in elevation. Blooms May -September.	**Not expected to occur:** No wetland habitat within the project footprint.
Pappose tarplant *Centromadia parryi* ssp. *parryi*			1B.2	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernally mesic, often alkaline sites. 7 – 1,378 feet in elevation. Blooms May - November.	**Not expected to occur:** No vernally mesic grassland habitat within the project footprint.
Peruvian dodder *Cuscuta obtusiflora* var. *glandulosa*			2B.2	Wetland. Freshwater marsh. 49–919 feet in elevation. Blooms July–October.	**Not expected to occur:** No wetland or marsh or swamp habitat within the project footprint.
Dwarf downingia *Downingia pusilla*			2B.2	Wetland. Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 3–1,608 feet in elevation. Blooms March–May.	**Not expected to occur:** No vernal pool or other wetland habitat within the project footprint.
Boggs Lake hedge-hyssop *Gratiola heterosepala*		E	1B.2	Wetland. Clay soils; usually in vernal pools, sometimes on lake margins. 33–7,792 feet in elevation. Blooms April–August.	**Not expected to occur:** No vernal pool or lake habitat within the project footprint.
Woolly rose-mallow *Hibiscus lasiocarpos* var. *occidentalis*			1B.2	Wetland. Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0–509 feet in elevation. Blooms June–September.	**Not expected to occur:** No marsh or swamp habitat within the project site. The banks of the ditch within the project footprint are maintained free of vegetation and do not provide habitat for the species.
Ahart's dwarf rush *Juncus leiospermus* var. *ahartii*			1B.2	Vernal pools and swales in areas of low cover of competing vegetation; most often on gopher turnings along margins of pools or swales. 98–328 feet in elevation. Blooms March–May.	**Not expected to occur:** No vernal pool or swale habitat within the project footprint.
Alkali-sink goldfields *Lasthenia chrysantha*			1B.1	Alkaline vernal pools. 0–656 feet in elevation. Blooms February–June.	**Not expected to occur:** No alkaline vernal pool habitat within the project footprint.
Legenere *Legenere limosa*			1B.1	Relatively deep and wet vernal pools. 3–2,887 feet in elevation. Blooms April–June.	**Not expected to occur:** No vernal pool habitat within the project footprint.
Heckard's pepper-grass *Lepidium latipes* var. *heckardii*			1B.2	Alkaline soils in valley and foothill grassland at vernal pool edges. 3–98 feet in elevation. Blooms March–May.	**Not expected to occur:** No valley and foothill grassland with vernal pools or alkaline soils within the project footprint.

Species	Status[1]			Habitat and Blooming Period	Potential for Occurrence[2]
	Federal	State	CRPR		
Mason's lilaeopsis *Lilaeopsis masonii*			1B.1	Wetland. Flooded tidal zones on mud-banks and flats along erosional creek-banks, sloughs, and rivers with freshwater marsh, brackish marsh, or riparian scrub influenced by saline water. 0–33 feet in elevation. Blooms April–November.	**Not expected to occur:** No marsh, or riparian scrub habitat within the project footprint.
Slender Orcutt grass *Orcuttia tenuis*	T	E	1B.1	Vernal pools, wetland. Often in gravelly substrate. 82–5,758 feet in elevation. Blooms May–September (October).	**Not expected to occur:** No vernal pool habitat within the project footprint.
Sacramento Orcutt grass *Orcuttia viscida*	E	E	1B.1	Vernal pools, wetland. 49–279 feet in elevation. Blooms April–July (September).	**Not expected to occur:** No vernal pool habitat within the project footprint.
Sanford's arrowhead *Sagittaria sanfordii*			1B.2	Wetland. In standing or slow-moving freshwater ponds, marshes, and ditches. 0–2,133 feet in elevation. Blooms May–October (November).	**Not expected to occur:** No freshwater marsh or swamp habitat within the project footprint. The channel and banks of the ditch within the project footrprint are maintained free of vegetation and do not provide habitat for the species.
Suisun Marsh aster *Symphyotrichum lentum*			1B.2	Wetland. Marshes and swamps (brackish and freshwater). Most often seen along sloughs with Phragmites, Scirpus, blackberry, Typha, etc. 0–98 feet in elevation. Generally known from lower elevations in Delta waterways. Blooms (April), May–November.	**Not expected to occur:** No marsh or swamp habitat within the project footprint. The banks of the ditch within the project footprint are maintained free of vegetation and do not provide habitat for the species.
Saline clover *Trifolium hydrophilum*			1B.2	Wetland Salt marshes and in alkaline soils in moist valley and foothill grasslands and vernal pools. 0–984 feet in elevation. Blooms April–June.	**Not expected to occur:** No marsh, swamp, or vernal pool habitat within the project footprint.

Notes: CRPR = California Rare Plant Rank; CNPS California Native Plant Society; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act;

[1] Legal Status Definitions

Federal :
E Endangered (legally protected by ESA)
T Threatened (legally protected by ESA)

State:
E Endangered (legally protected by CESA)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks
0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present within the project footprint due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available within the project footprint; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, was observed within the project footprint during reconnaissance surveys, or was reported by others.

Sources: CNDDB 2020

Table B-2 Special-Status Animal Species Documented to Occur in the Project Region and their Potential for Occurrence in the Project Area

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T		Riparian scrub. Occurs only in the Central Valley of California and Sierra Nevada Foothills in association with blue elderberry (Sambucus nigra ssp. caerulea). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	**Not expected to occur:** No elderberry shrubs observed within the project footprint during reconnaissance surveys.
Vernal pool fairy shrimp *Branchinecta lynchi*	T		Vernal pools. Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**Not expected to occur:** No vernal pool habitat within the project footprint.
Vernal pool tadpole shrimp *Lepidurus packardi*	E		Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**Not expected to occur:** No vernal pool habitat on the project footprint.
Fish				
Delta smelt *Hypomesus transpacificus*	T	E	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. Seldom found at salinities > 10 ppt. Most often at salinities < 2ppt.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a barrier to fish movement into the ditch.
Chinook salmon - Central Valley spring-run ESU *Oncorhynchus tshawytscha* pop. 6	T	T	Sacramento/San Joaquin flowing waters. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 C are lethal to adults. Federal listing refers to populations spawning in Sacramento River and tributaries.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a barrier to fish movement into the ditch.
Chinook salmon - Sacramento River winter-run ESU *Oncorhynchus tshawytscha* pop. 7	E	E	Sacramento/San Joaquin flowing waters. Sacramento River below Keswick Dam. Spawns in the Sacramento River, but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 C for spawning.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a barrier to fish movement into the ditch.
Longfin smelt *Spirinchus thaleichthys*	C	SC	Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
				barrier to fish movement into the ditch.
Sacramento perch *Archoplites interruptus*		SC	Aquatic, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters. Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley. Prefers warm water. Aquatic vegetation is essential for young. Tolerates wide range of physio-chemical water conditions.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a barrier to fish movement into the ditch.
Sacramento splittail *Pogonichthys macrolepidotus*		SC	Aquatic, estuary, freshwater marsh, Sacramento/San Joaquin flowing waters. Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. Slow moving river sections, dead end sloughs. Requires flooded vegetation for spawning and foraging for young.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a barrier to fish movement into the ditch.
Steelhead - Central Valley DPS *Oncorhynchus mykiss irideus* pop. 11	T		Aquatic, Sacramento/San Joaquin flowing waters. Populations in the Sacramento and San Joaquin rivers and their tributaries.	**Not expected to occur:** The ditch within the project footprint does not contain suitable habitat for the species due to the seasonal nature of the waterway. In addition, the stormwater gates downstream are a barrier to fish movement into the ditch.
Amphibians and Reptiles				
California tiger salamander *Ambystoma californiense*	T	T	Cismontane woodland, meadow and seep, riparian woodland, valley and foothill grassland, vernal pool, and wetlands. Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**Not expected to occur:** Extensive surveys in Sacramento County have not detected California tiger salamander north of the Cosumnes River (69 FR 47212, August 4, 2004) and there is no suitable aquatic breeding habitat in the project vicinity.
California red-legged frog *Rana draytonii*	T	SC	Aquatic, artificial flowing waters, artificial standing waters, freshwater marsh, marsh and swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters. Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	**Not expected to occur:** The ditch within the project footprint is seasonal and does not contain sufficient emergent vegetation or permanent pools. Project footprint is outside of the known range of the species (USFWS 2002).
Giant gartersnake *Thamnophis gigas*	T	T	Marsh and swamp, riparian scrub, wetland. Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	**Not expected to occur:** The ditch within the project footprint seasonally flows into Arcade Creek and then into Steelhead Creek.

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
				These creeks contain potentially suitable habitat for giant garter snake; however, there are no recorded occurrences within these creeks, and stormwater gates downstream from the project are a barrier to giant garter snake movement into the ditch. Furthermore, the ditch does not contain sufficient emergent vegetation for foraging and cover, and is seasonal. Therefore, the project footprint does not contain suitable habitat for the species.
Western pond turtle *Actinemys marmorata*		SC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	**Not expected to occur:** The ditch within the project footprint is seasonal, does not contain sufficient emergent vegetation, and is highly disturbed. Therefore, the project footprint is not likely suitable habitat for the species.
Western spadefoot *Spea hammondii*		SC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	**Not expected to occur:** The project footprint and other adjacent undeveloped parcels do not contain vernal pool habitat that is needed for breeding. Therefore, the project footprint is not suitable upland habitat.
Birds				
Bank swallow *Riparia riparia*		T	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	**Not expected to occur:** The project footprint does not contain banks and cliffs suitable for nesting. There are no known nesting habitats in the vicinity of the project footprint.
Burrowing owl *Athene cunicularia*		SC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	**Could occur:** The ruderal vegetation on the project footprint provides potential nesting and foraging habitat for burrowing owl; although no ground squirrel burrows were observed during a site visit in June 2020.
California black rail *Laterallus jamaicensis coturniculus*		T FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**Not expected to occur:** The ditch within the project footprint does not contain sufficient emergent vegetation and is therefore not suitable habitat for the species.
Golden eagle *Aquila chrysaetos*		FP	Broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodlands, upper montane coniferous forest, and valley	**Not expected to occur:** The location of the project footprint adjacent to residential development and the disturbed nature of the footprint

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
			and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	makes it only marginally suitable for foraging. The trees within the footprint are not suitable for the nests of this large bird.
Least Bell's vireo *Vireo bellii pusillus*	E	E	Riparian forest, riparian scrub, riparian woodland. Summer resident of Southern California in low riparian vegetation in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, and mesquite.	**Not expected to occur:** The project footprint does not contain riparian vegetation and is therefore not suitable habitat for the species.
Purple martin *Progne subis*		SC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	**Not expected to occur:** The project footprint does not contain large trees, snags, or human-made structures that would be suitable nesting habitat for the species.
Song sparrow ("Modesto" population) *Melospiza melodia*		SC	Emergent freshwater marshes, riparian willow thickets, riparian forests of valley oak (*Quercus lobata*), and vegetated irrigation canals and levees.	**Not expected to occur:** The ditch within the project footprint does not contain sufficient emergent vegetation or riparian habitat for nesting, foraging and cover and is therefore, not suitable habitat for the species.
Swainson's hawk *Buteo swainsoni*		T	Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland. Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Could occur:** The human disturbance within the project footprint and size of the trees on site makes the habitat only marginally suitable for nesting; however, Swainson's hawks are known to nest in residential areas. Due to potentially suitable nesting habitat in the vicinity, the project footprint may be used for foraging by Swainson's hawk.
Tricolored blackbird *Agelaius tricolor*		T, SC	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	**Not expected to occur:** The ditch within the project footprint does not contain sufficient emergent vegetation, blackberries, or other habitat for nesting. The ruderal vegetation within the project footprint does not provide suitable foraging habitat.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	T	E	Riparian forest nester along the broad, lower flood-bottoms of larger river systems. Nests in riparian forests of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**Not expected to occur:** The project footprint does not contain riparian vegetation and is therefore not suitable habitat for the species.
White-tailed kite *Elanus leucurus*		FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Could occur:** The human disturbance on the site and size of the trees on the project footprint makes the habitat only marginally suitable for nesting; however, potential suitable

Species	Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
				nesting habitat is located within 0.5 mile west of the project footprint along Steelhead Creek. Due to potentially suitable nesting habitat in the vicinity, the site may be used for foraging by white-tailed kite.
Yellow-headed blackbird *Xanthocephalus xanthocephalus*		SC	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	**Not expected to occur:** The ditch on the project footprint does not contain emergent vegetation that would be suitable for nesting.
Mammals				
American badger *Taxidea taxus*		SC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Not expected to occur:** Disturbance within the project footprint, including mowing of ruderal vegetation and other maintenance activities, in addition to the location of the site adjacent to residential development, makes the habitat unsuitable for American badger dens.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service; ESU = Evolutionary Significant Unit; DPS= Distinct Population Segment

[1] Legal Status Definitions

Federal:

E Endangered (legally protected)
T Threatened (legally protected)
C Candidate (legally protected)

State:
FP Fully protected (legally protected)
SC Species of special concern (no formal protection other than CEQA consideration)
E Endangered (legally protected)
T Threatened (legally protected)

Other:
[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present within the project footprint due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available within the project footprint; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, has been reported by others.

Source: CNDDB 2020

Appendix C

Noise Modeling Data

Construction Source Noise Prediction Model

Construction Type	Receptor	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold		125	55.0
Construction of the new pump station	Residences south of Bay Drive Ditch	55	85.0
Construction of pipeline along Edgewater Road	Residences along Edgewater Road	15	96.2
Construction of manhole east of project site	Residences west of Grove Avenue	245	72.0
Construciton of fiber optic cable	Residences south of Bay Drive Ditch	88	80.9
Construciton of fiber optic cable	Residences west of Grove Avenue	25	91.8
Demolition of existing pump station	Residences along Bay Drive	60	84.2
Demolition of existing pump station	Residences along Santiago Avenue	75	82.3
Construction of microwave tower	Residences south of Bay Drive Ditch	130	77.5

Equipment	Reference Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Dozer	85	0.4
Excavator	85	0.4
Excavator	85	0.4

Ground Type	hard
Source Height	8
Receiver Height	5
Ground Factor[2]	0.00

Predicted Noise Level [3]	L_{eq} dBA at 50 feet[3]
Dozer	81.0
Excavator	81.0
Excavator	81.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
85.8

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

[2] Based on Table 4-26 from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 86).

[3] Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2018 (pg 176 and 177).

$L_{eq}(equip) = E.L.+10*\log (U.F.) - 20*\log (D/50) - 10*G*\log (D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2018: pg 86); and

D = Distance from source to receiver.

Addition of Noise Levels from Multiple Sources at a Discrete Receptor

OBJECTIVE: This work sheet is designed to estiamte the combined level of noise exposure at a single discrete receptor from multiple point sources.

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Receptor Name: **Residential receptors south of the Bay Drive Drainage Ditch**

STEP 1: Identify the noise sources and enter the reference noise levels (dBA and distance).
STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.
STEP 3: Select the distance to the receptor and the reduction provided by any intervening barrier.

Step 1. | Step 2. | Step 3.

Noise Source	Reference Noise Level			Attenuation Characteristics				Attenuated Noise Level at Receptor				
	Reference Noise Level (dBA)	@	Reference Distance (ft)	Ground Type (soft/hard)	Source Height (ft)	Receiver Height (ft)	Ground Factor	Noise Level (dBA)	@	Distance to Receptor (ft)	Reduction Provided by Barrier, if any (dBA)
Electrical transformer	74.0	@	20	hard	8	5	0.00	34.3	@	122	24
Backup generator	70.0	@	50	hard	8	5	0.00	38.3	@	122	24
							0.66				
							0.66				
							0.66				
							0.66				

Combined level of noise exposure at receptor from all noise sources (dBA): **39.7**

Notes:

1 - Computation of the attenuated noise level is based on the equation presented on pg. 176 and 177 of FTA 2018.

2 - Computation of the ground factor is based on the equation presentd in Table 4-26 on pg. 86 of FTA 2018, where the distance of the reference noise leve can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

3 - Summation of noise levels from different stationary noise sources at the same receptor is based on the equation presented on page 201 of FTA 2018.

Sources:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment. Washington, D.C. Available: <http://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>Accessed:

Addition of Noise Levels from Multiple Sources at a Discrete Receptor

OBJECTIVE: This work sheet is designed to estiamte the combined level of noise exposure at a single discrete receptor from multiple point sources.

KEY: Orange cells are for input.
Grey cells are intermediate calculations performed by the model.
Green cells are data to present in a written analysis (output).

Receptor Name: **Residential receptors south of the Bay Drive Drainage Ditch**

STEP 1: Identify the noise sources and enter the reference noise levels (dBA and distance).
STEP 2: Select the ground type (hard or soft), and enter the source and receiver heights.
STEP 3: Select the distance to the receptor and the reduction provided by any intervening barrier.

Step 1.				Step 2.				Step 3.				
Noise Source	**Reference Noise Level**			**Attenuation Characteristics**				**Attenuated Noise Level at Receptor**				
	Reference Noise Level (dBA)	@	Reference Distance (ft)	Ground Type (soft/hard)	Source Height (ft)	Receiver Height (ft)	Ground Factor	Noise Level (dBA)	@	Distance to Receptor (ft)	Reduction Provided by Barrier, if any (dBA)
Electrical transformer	74.0	@	20	hard	8	5	0.00	34.3	@	122	24
							0.66				
							0.66				
							0.66				
							0.66				

Combined level of noise exposure at receptor from all noise sources (dBA): **34.3**

Notes:

1 - Computation of the attenuated noise level is based on the equation presented on pg. 176 and 177 of FTA 2018.

2 - Computation of the ground factor is based on the equation presentd in Table 4-26 on pg. 86 of FTA 2018, where the distance of the reference noise leve can be adjusted and the usage factor is not applied (i.e., the usage factor is equal to 1).

3 - Summation of noise levels from different stationary noise sources at the same receptor is based on the equation presented on page 201 of FTA 2018.

Sources:

Federal Transit Association (FTA). 2018 (September). Transit Noise and Vibration Impact Assessment. Washington, D.C. Available: <http://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf>Accessed: