Attachment C

South Sacramento County Agriculture and Habitat Lands Recycled Water Program
Environmental Impact Report
Addendum

Harvest Water Program Groundwater Accounting Project

State Clearinghouse No. 2015022067

Prepared for:

REGIONALSAN

Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

March 1, 2021

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LIST OF ABBREVIATIONS

°C	degrees Celsius
AB	Assembly Bill
AF	acre feet
AFY	acre feet per year
ALUC	Airport Land Use Commission
AMM	avoidance and minimization measure
AQMP	Air Quality Management Plan
BAU	business-as-usual
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
California MUTCD	California Manual of Uniform Traffic Control Devices
CARB	California Air Resources Board
CBC	California Building Code
CEQA	California Environmental Quality Act
CLUP	Comprehensive Land Use Plan
CO	carbon monoxide
CO_2	carbon dioxide
CY	cubic yards
DLD	dedicated land disposal
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FHSZ	fire hazard severity zone
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
gpm	gallons per minute
GSA	Groundwater Sustainability Agency
GSP	groundwater sustainability plan
I-5	Interstate 5
LRA	Local Responsibility Area
mgd	million gallons per day
MLD	Most Likely Descendant
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
$MTCO_2e$	metric tons of carbon dioxide equivalent
MWh/yr	megawatts per year
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide

NOP	notice of preparation
NO_X	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NWR	National Wildlife Refuge
OEHHA	Office of Environmental Health Hazard Assessment
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
Program EIR	*South Sacramento County Agriculture and Habitat Lands Recycled Water Program Environmental Impact Report*
project	Groundwater Accounting Project
project modifications	Groundwater Accounting Project
RCEM	Roadway Construction Emissions Model
Regional San	Sacramento Regional County Sanitation District
ROG	reactive organic gases
ROW	right-of-way
SCGA	Sacramento Central Groundwater Authority
SGMA	Sustainable Groundwater Management Act
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
SRA	State Responsibility Area
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	Sacramento Habitat Conservation Plan
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Program
TAC	Toxic Air Contaminant
TCR	tribal cultural resource
TTC	Temporary Traffic Control
USACE	U.S. Army Corps of Engineers
VMT	vehicle miles traveled
WDR	waste discharge requirement
WUI	wildland urban interface
$\mu g/m^3$	micrograms per cubic meter

1 INTRODUCTION

1.1 BACKGROUND AND ACTION TRIGGERING THE ADDENDUM

This addendum to the Environmental Impact Report (EIR) for the South Sacramento County Agriculture and Habitat Lands Recycled Water Program (Program EIR) addresses a system to track groundwater inputs and withdrawals associated with the Program and ensure achievement of groundwater improvement obligations (groundwater accounting) and the development of groundwater wells and related infrastructure that were not known at the time the Program EIR was prepared. More specifically related to the wells, this addendum analyzes construction and operation of up to 10 groundwater wells, associated pipelines, electrical service lines, and other related improvements within the project area analyzed in the Program EIR. The groundwater accounting system and the 10 proposed wells are collectively referred to as the Groundwater Accounting Project. This addendum also evaluates two additional minor modifications to the project evaluated in the Program EIR as described further in Chapter 2, "Description of the Proposed Action."

As the lead agency under the California Environmental Quality Act (CEQA), the Sacramento Regional County Sanitation District (Regional San) has determined that, in accordance with Section 15164 of the State CEQA Guidelines, the proposed Groundwater Accounting Project differs sufficiently from the Program elements described in the Program EIR to warrant preparation of an addendum.

1.2 PREVIOUS ENVIRONMENTAL ANALYSIS

Regional San proposes to implement the Harvest Water Program (or simply "Harvest Water")(formerly, the South County Ag Program), which would provide a safe and reliable supply of tertiary-treated recycled water for agricultural uses, reduce groundwater pumping, support habitat enhancement efforts, and provide near-term benefits to the region. Regional San prepared an EIR (Program EIR) to analyze the environmental effects of Harvest Water and certified the EIR in March 2017 (State Clearinghouse No. 2015022067) (Regional San 2017). The Program EIR included both program- and project-level analyses depending on the level of detail available at the time for each program element.

Program EIRs provide a tiering mechanism to allow for the efficient processing of subsequent projects that are within the scope of the program EIR, with little-to-only minor additional CEQA analysis. CEQA and the State CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process (State CEQA Guidelines Section 15168). This is accomplished in tiered documents by eliminating repetitive analyses of issues that were already addressed in the program EIR and by incorporating those analyses by reference.

However, at the time the Program EIR was prepared, the Groundwater Accounting Project was not identified as an element of Harvest Water. The Program EIR identified that Harvest Water would deliver a base recycled water supply of up to 2/3 of the projected maximum month demand from the Sacramento Regional Wastewater Treatment Plant (SRWTP) and that the remaining peak demands (typically experienced in June, July, and August) would be met by existing groundwater supply used by growers (conjunctive use). This supply would be delivered to crops using grower-owned and operated groundwater wells. As noted in the Program EIR (page 2-20),

> Because recycled water would be used to meet most of the irrigation demand in place of groundwater, the action alternatives of the proposed Project is considered an in-lieu recharge Project. Although the action alternatives have a direct benefit for groundwater resources, Regional San is not proposing at this time to operate it within an administrative accounting framework such that the water savings over the life of the proposed Project would be accrued and reserved (groundwater banking) for other uses in the future. Regional San is considering participating in a groundwater banking framework in the future such that the stored groundwater would be available for beneficial use. If that occurs, Regional San would evaluate such a project in a separate environmental document.

While Harvest Water specifically includes the combined use (conjunctive) of groundwater and surface water (project-delivered recycled water) for agricultural irrigation and groundwater storage as an integral element of the program operations, the proposed groundwater accounting system, groundwater wells, and related infrastructure were only considered as a potential future project element and not specifically included in the Program EIR.

1.3 CEQA GUIDELINES REGARDING AN ADDENDUM TO AN EIR

Altered conditions, changes, or additions to the description of a project that occur after certification of an EIR may require additional analysis under CEQA. The legal principles that guide decisions regarding whether additional environmental documentation is required are provided in the State CEQA Guidelines, which establish three mechanisms to address these changes: a Subsequent EIR, a Supplement to an EIR, and an Addendum to an EIR.

Section 15162 of the State CEQA Guidelines describes the conditions under which a Subsequent EIR would be prepared. In summary, when an EIR has been certified or a negative declaration adopted for a project, no Subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
>
> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
>
> > (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
> >
> > (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
> >
> > (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or
> >
> > (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15163 of the State CEQA Guidelines states that a lead agency may choose to prepare a Supplement to an EIR rather than a Subsequent EIR if:

> (1) Any of the conditions described in Section 15162 would require the preparation of a Subsequent EIR; and
>
> (2) Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

An addendum is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in significant new or substantially more severe environmental impacts, consistent with CEQA Section 21166 and State CEQA Guidelines Sections 15162, 15163, 15164, and 15168.

This addendum is intended to evaluate and confirm CEQA compliance for the proposed Groundwater Accounting Project, which would be a change in the project relative to what is described and evaluated in the Program EIR. This addendum is organized as an environmental checklist, and is intended to evaluate all environmental topic areas for any changes in the project, changes in circumstances, or new information of substantial importance, as compared to the approved EIR, and determine whether such changes trigger any of the criteria included in Section 15162 of the CEQA Guidelines triggering the need for a Subsequent EIR. This checklist is not the traditional CEQA Environmental Checklist, per Appendix G of the CEQA Guidelines. As explained in Section 3.1, the purpose of this checklist is to evaluate the checklist categories in terms of any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the Program EIR. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, and 15168.

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2 DESCRIPTION OF THE PROPOSED ACTION

As described in Chapter 1, "Introduction," the Groundwater Accounting Project (project modifications) is an element of the Harvest Water Program (or simply Harvest Water) (formerly the South County Ag Program). This chapter provides a summary of Harvest Water and its relationship to the project modifications. Then a detailed description of the project modifications, including construction and operation details, is provided.

2.1 HARVEST WATER AND RELATIONSHIP TO THE PROJECT MODIFICATIONS

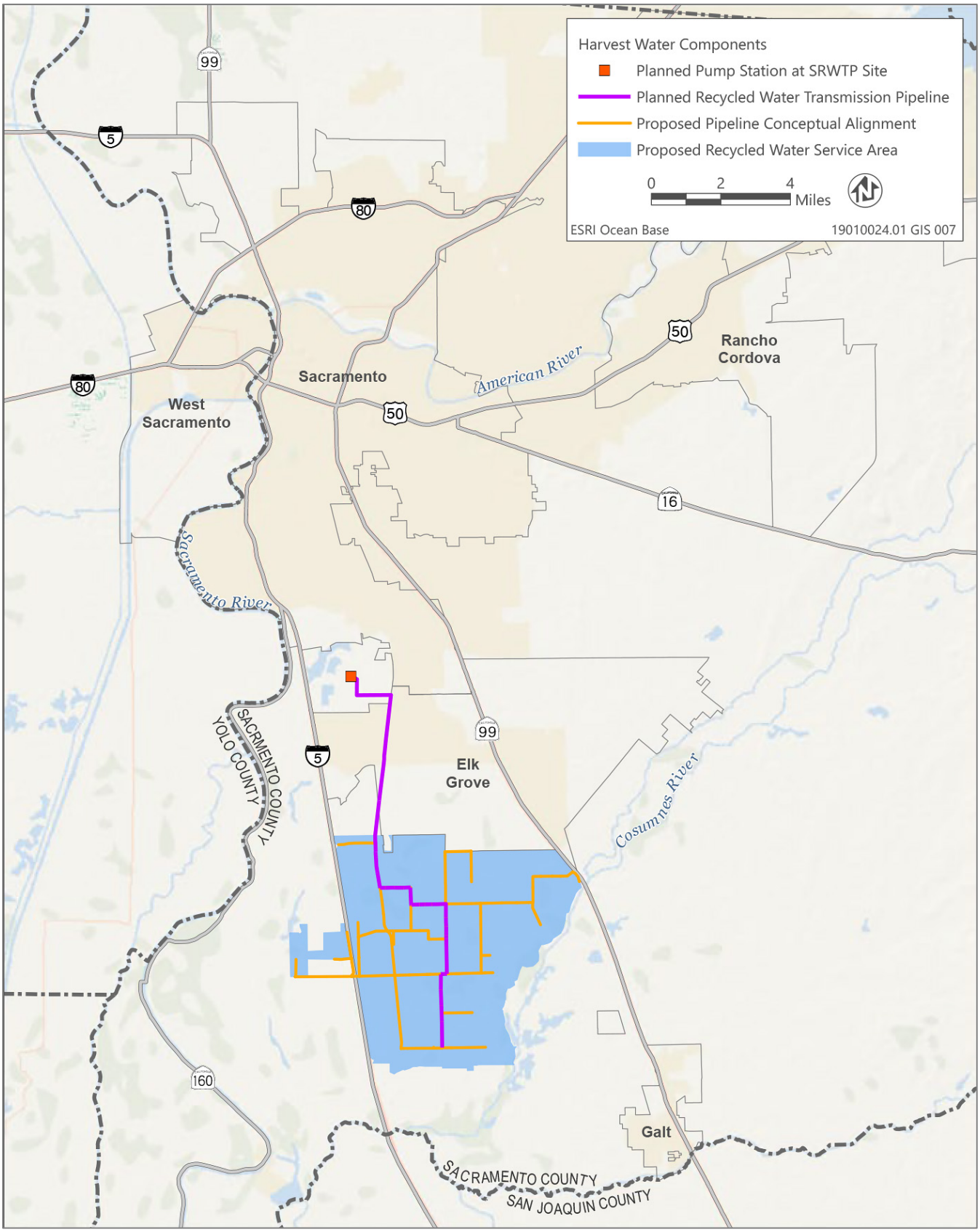
Harvest Water involves delivery of disinfected tertiary-treated water to potential agricultural customers in southern Sacramento County. Regional San plans to deliver up to 50,000 acre feet per year (AFY) of Title 22 tertiary recycled water (including wintertime habitat application) to approximately 16,000 acres of irrigated lands, 400 acres of managed wetlands within the Stone Lakes National Wildlife Refuge (NWR), and a potential recharge area, as shown in Figures 2-1 and 2-2 (note: the Recycled Water Delivery Area covers approximately 20,400 acres, but not all lands in the area will be irrigated by Harvest Water).

The initial phase of Harvest Water, already addressed at a project level in the *South Sacramento County Agriculture and Habitat Lands Recycled Water Program Environmental Impact Report* (Program EIR) (Regional San 2017), includes the installation of a pump station within the Sacramento Regional Wastewater Treatment Plant (SRWTP) site and up to 13.8 miles of off-site transmission pipeline. Figure 2-2 shows the locations of these future facilities. These facilities have been evaluated at a project level CEQA review and need no further CEQA analysis.

Another element of Harvest Water is the Lateral Pipelines and On-Farm Connections Project, which includes the installation of new distribution mains, service connection laterals, and appurtenant facilities that would connect the transmission pipeline to individual customers. Figure 2-2 shows the conceptual alignments for pipelines in public road rights-of-way as well as the proposed Recycled Water Delivery Area. The Lateral Pipelines and On-Farm Connections Project focusses on irrigation during the growing season, which would use an average of 32,500 AFY of recycled water and up to 37,000 AFY in higher demand (drier) years. These facilities have been evaluated in a project-level CEQA review tiering from the Program EIR.

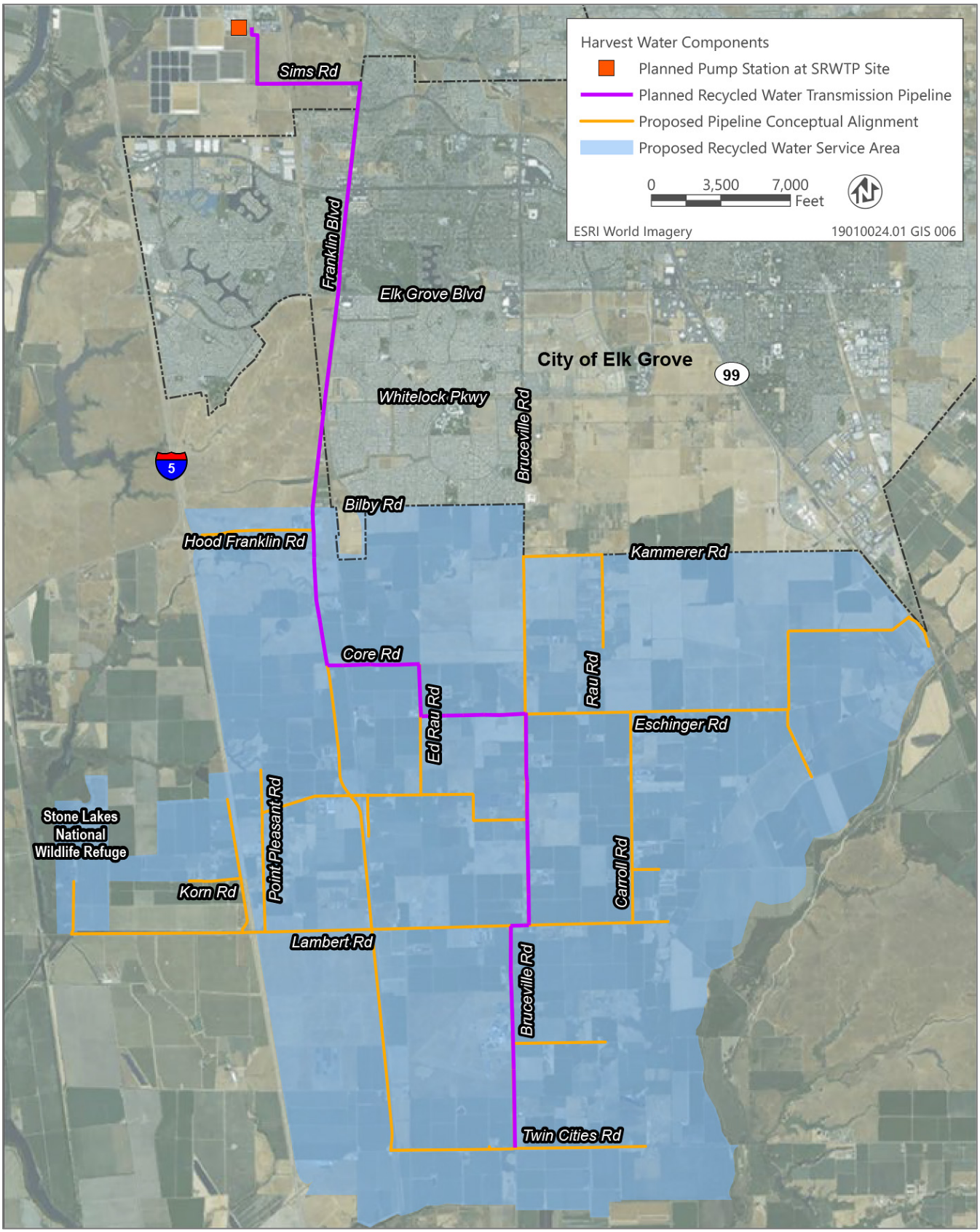
To maximize use of recycled water, the area proposed for summertime crop irrigation could also be used for wintertime habitat application for both ecosystem enhancement (primarily for Sand Hill Crane roosting and foraging) and wintertime cover crop irrigation (primarily orchards and vineyards) where agreements can be reached with willing landowners. This activity, as well as the potential addition of delivery of recycled water to the Cosumnes River Preserve, are being evaluated with a project level CEQA review in a separate EIR Addendum. Similarly, the potential delivery of recycled water to the Stone Lakes NWR and delivery to a potential recharge area, as individual parts of Harvest Water, will be evaluated with a project-level CEQA review in a separate CEQA document once planning and design for these activities have moved forward sufficiently to support adequate environmental impact analysis.

In addition, one of the recognized benefits of Harvest Water is providing a new source of water in the region that will advance the conjunctive (or combined) use of groundwater and surface water (recycled water) resources in southern Sacramento County for agricultural irrigation and habitat protection and enhancement. Accounting of groundwater recharge (including in-lieu and incidental passive recharge) and storage is the focus of this addendum and is discussed below.



Source: Data received from Woodard & Curran in 2020

Figure 2-1 Regional Location



Source: Data received from Woodard & Curran in 2019; adapted by Ascent Environmental in 2019

Figure 2-2 Project Modifications Area

2.2 PROJECT LOCATION

The Recycled Water Delivery Area is located within Sacramento County, within portions of the City of Elk Grove, unincorporated Sacramento County, and portions of the Stone Lakes NWR (Figure 2-1). The approximate boundaries of Harvest Water are Interstate 5 (I-5) to the west, Highway 99 and the Cosumnes River to the east, Bilby Road to the north, and the Cosumnes River Preserve to the south (Figure 2-2). A portion of the Recycled Water Delivery Area is located west of I-5 composed of portions of the Stone Lakes NWR and lands between the refuge and I-5.

The Groundwater Accounting Project would include the installation of wells, pipelines, and electrical facilities. The wells would be anticipated to be located within two primary locations: the SRWTP property and the surrounding Regional San Bufferlands, and on County-owned property adjacent to Franklin Field or other Regional San- or County-owned property within the Recycled Water Delivery Area (Figure 2-3). The SRWTP is located at 8521 Laguna Station Road in Elk Grove and is surrounded by the Bufferlands. The entire SRWTP site and the Bufferlands are located north of Laguna Boulevard in the unincorporated area of Sacramento County, between Franklin Boulevard and I-5. Franklin Field is located between Bruceville Road and Franklin Boulevard south of Lambert Road, also in the unincorporated area of Sacramento County. Proposed facilities would be located on County-owned property adjacent to Franklin Field, but would not be within the active airport area.

2.3 PROJECT CHARACTERISTICS AND CHANGES TO THE PREVIOUSLY APPROVED PROJECT

The project modifications analyzed in this addendum include a system to track groundwater inputs and withdrawals associated with the Program and ensure achievement of groundwater improvement obligations (groundwater accounting) and construction and operation of groundwater wells and related infrastructure. These items, comprising the proposed Groundwater Accounting Project, are described in this section. The elements of the Groundwater Accounting Project were not known at the time the Program EIR was prepared.

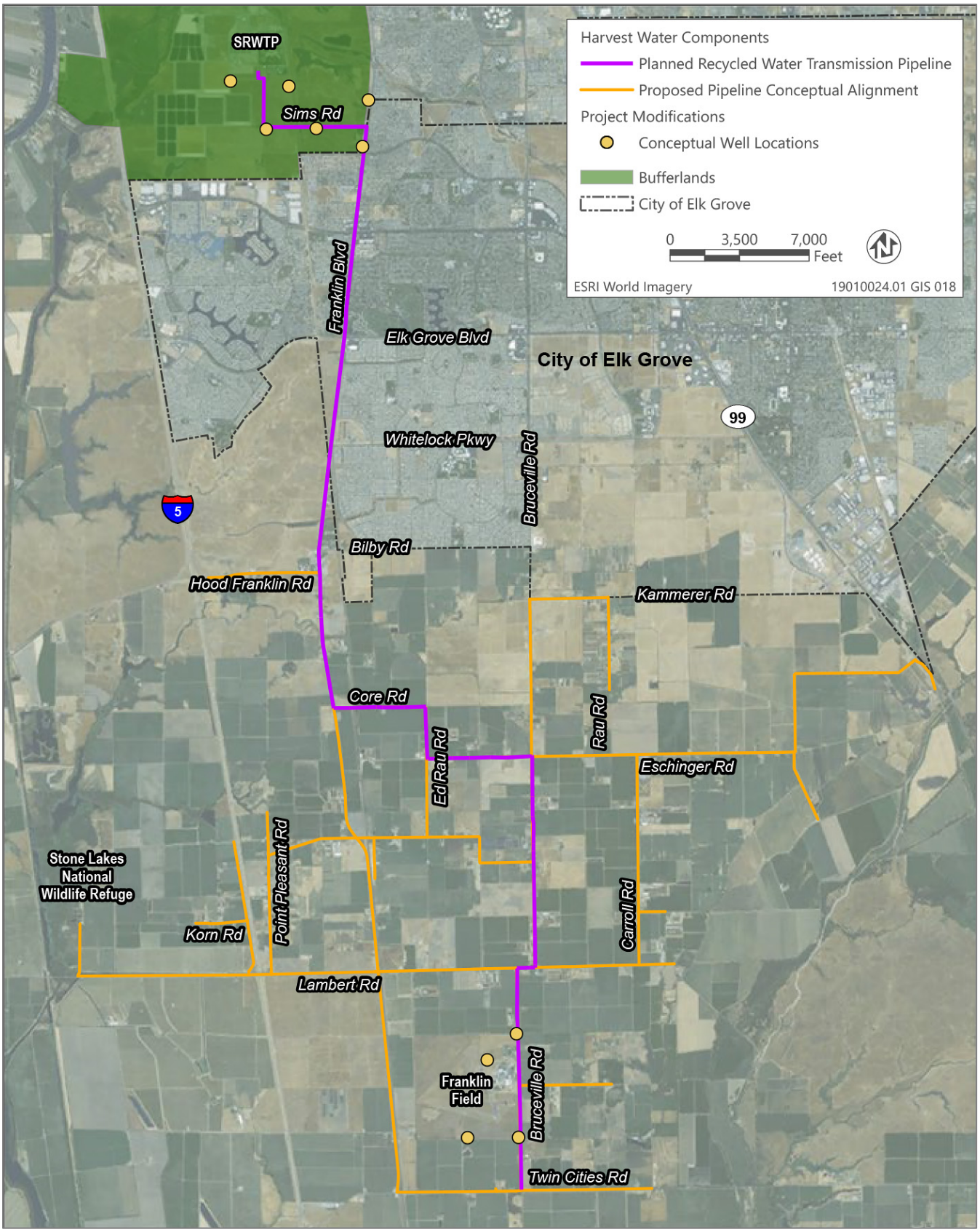
Additionally, this addendum analyzes two elements of Harvest Water that have changed since the Program EIR was prepared—the use of additional staging areas outside the construction corridor and increased pipeline size for a portion of the planned recycled water transmission pipeline (shown in Figures 2-1 and 2-2)—both of which are described later in this chapter.

2.3.1 Groundwater Accounting

GROUNDWATER WITHDRAWAL SCENARIOS AND GROUNDWATER USES

Implementation of Harvest Water includes groundwater recharge (including in-lieu and incidental passive recharge) and storage that would be accomplished in a manner that prioritizes meeting the groundwater basin elevation goals and related ecosystem benefits included in the Program. Water would be delivered to agricultural users in the South County for irrigation use in lieu of groundwater and would be applied to agricultural fields in the wintertime for ecosystem benefits, including Sandhill crane foraging and roosting habitat (which would passively recharge the groundwater basin) and for cover crop irrigation. Modeling indicates that the groundwater storage could increase by approximately 245,000 acre-feet (AF) within 10 years and 320,000 AF within 25 years (2030 hydrologic scenarios, modeled following California Water Commission technical guidance).

When the groundwater basin in the Recycled Water Delivery Area is in a sustainable balance and ecosystem benefits have been established and maintained (which is estimated to be approximately 20 years following initiation of Harvest Water), Harvest Water partners may collaborate to develop groundwater banking and withdrawal arrangements for use of the water locally during droughts. Regional San could make stored groundwater available to local agricultural users, local domestic users, and local municipal users during drought conditions (anticipated to occur approximately 3 years in 10 based upon historic hydrology). However, as described further below, there are also limited circumstances where groundwater may be used before ecosystem benefits being fully established and maintained (i.e., during the first 20 years after initiation of Harvest Water).



Source: Data received from Woodard & Curran in 2020; adapted by Ascent Environmental in 2020

Figure 2-3 Groundwater Accounting Project Features

Approximately 70 percent of recharged groundwater attributable to Harvest Water is assumed to be unavailable for extraction, as it is intended to benefit ecosystems through the elevation of groundwater levels, provide groundwater to enable surface water outflow from the basin, and contribute to overall basin sustainability. The remaining 30 percent of recharged water would be banked and available for future extraction after the first approximately 20 years of project operation. Extraction is projected to occur during the driest 30 percent of years and would recover an average amount of banked water equivalent to the annual average in-lieu recharged volume (approximately 32,500 AFY) in roughly 3 out of 10 years. Extracted water would replace water supplies that have been adversely affected by drought and would not constitute a new water supply available every year.

Future banked groundwater extraction scenarios may include:

- Banked groundwater is extracted locally by participating farmers or using new infrastructure owned by Regional San for agricultural irrigation to supplement the reduced recycled water supply and meet irrigation demands in dry years.
- Banked groundwater is extracted locally by participating farmers or using infrastructure owned by Regional San for agricultural irrigation. Farmers agree to receive reduced recycled water deliveries from planned recycled water distribution facilities. Regional San discharges additional treated water to the Sacramento River through the existing outfall. Recipients of the discharged treated water (either environmental user, agricultural user, or municipal water agency) diverts water downstream from the vicinity of the existing Regional San Sacramento River outfall using existing infrastructure.
- Banked groundwater is extracted locally using existing infrastructure owned by a third party (such as a municipal water agency) to supplement water supplies during drought.

Under Harvest Water, groundwater would be available to growers receiving recycled water in all years. The Program EIR (Regional San 2017) describes that growers would receive their full demand during non-peak demand months, and approximately 2/3 of the maximum (peak) month water demand from Regional San recycled water during peak demand months and any demand above that would be met by groundwater delivered to crops using grower-owned groundwater wells. This use of combined recycled water and groundwater may include meeting peak demands and blending of irrigation water sources to meet crop water quality objectives. The project modifications add a scenario where this "accounted for" groundwater that could be extracted by growers could also be extracted by Regional San wells included as part of the project modifications to provide the supplemental groundwater to growers through the recycled water distribution system. This use of Regional San operated wells to draw groundwater that would otherwise be extracted by grower's wells may occur during any year once the wells are in place (i.e. during the first 20-years of project operation and beyond).

Groundwater could also be used during very brief (anticipated to be hours or a day or two) periods when the recycled water treatment or distribution system is shut down for maintenance. The groundwater could be extracted by a combination of existing grower-owned wells and proposed Regional San wells. These short term and intermittent withdrawals could occur during any year.

During the first approximately 20 years, Regional San would cutback deliveries of recycled water during "Shasta critical and critically dry years" (as defined below). These delivery cutbacks would occur, as applicable, until Regional San's integrated surface water-groundwater modeling demonstrates that 50 percent or more of the in-lieu recharged groundwater (by volume) is returned to the downstream surface water environment, which is estimated to be during the first approximately 20 years of operation of Harvest Water. Functionally, to comply with this condition under Regional San's approved Water Rights Petition, Regional San would cut back recycled water deliveries in critically dry years during those first 20 years and growers would use higher volumes of groundwater to meet agricultural irrigation demands during those periods. Under the project modifications, the groundwater used during these conditions could also be provided by the wells included in the project modifications. Restrictions on recycled water deliveries during the irrigation season (April – October), and hence periods where groundwater could be used to supplement deliveries, would include:

- During Shasta Critical water years (as defined in the Sacramento River Settlement Contracts), irrigation season recycled water deliveries shall not exceed 16,250 AFY (50 percent cutbacks at full operation of Harvest Water).

- During dry or critically dry years (as defined in the Sacramento Valley 40-30-30 Index, but not Shasta Critical years), irrigation season recycled water deliveries under Harvest Water shall not exceed 24,375 AFY (25 percent cutbacks).

After the 50 percent return demonstration (after the approximately 20 years), groundwater would no longer be needed to meet summertime irrigation "cutbacks" described above because they would not be occurring. There would still be potential irrigation reductions in the spring to meet cold water pool requirements associated with extended droughts (and negotiated by Regional San with the U.S. Bureau of Reclamation), addressed in Program EIR Mitigation Measure HYD-4 (April and May months only). Groundwater could also be drawn from wells and delivered to growers under this scenario.

GROUNDWATER MONITORING AND ACCOUNTING METHODS

Groundwater storage would be tracked with the Sac IWRM model with and without the project modifications and verified and validated with groundwater elevation tracking at monitoring wells across the delivery area.

A Framework for Groundwater Accounting would be developed to establish rules for groundwater accounting, banking, and withdrawals. This effort would proceed concurrent with the groundwater sustainability plan (GSP), being conducted by the South American Subbasin Groundwater Sustainability Agencies (GSAs) (Sacramento Central Groundwater Authority [SCGA], Omochumne-Hartnell Water District [OHWD], Northern Delta GSA, Sloughhouse GSA and Sacramento County). It is anticipated that withdrawals from the groundwater basin by groundwater accounting partners would need to be measured to track the extraction volumes for accounting purposes. Monitoring may also be required under the Sustainable Groundwater Management Act (SGMA) and this would be regulated under the GSP, and the corresponding GSAs.

After approximately 20 years of groundwater storage, when the SAC IWRM model (or equivalent model succeeding SAC IRWM) identifies that the groundwater storage is sufficient that approximately half of the in-lieu recharged water is remaining in storage and the other half is returning to the receiving water environment (primarily the Cosumnes River), Regional San would take account of the ecosystem benefits achieved and monitored through its agreements with the California Department of Fish and Wildlife and the California Water Commission. Groundwater withdrawals subject to the Framework for Groundwater Accounting (Regional San and accounting partner agency wells) would be reported annually by Regional San.

2.3.2 Wells

As part of the project modifications, Regional San would install, own, and operate up to 10 groundwater wells that are capable of discharge to the Harvest Water recycled water distribution network, with a total capacity of 10,000 to 20,000 gallons per minute (gpm) (15 to 30 mgd). The wells would each be targeted for a flow rate of 1,000 gpm to 2,000 gpm, depending on a number of factors including pipeline network sizing and hydrogeology at well sites. The wells would be installed with appropriate backflow prevention equipment for connection to the recycled water system.

Each well would have a permanent footprint of approximately 55 feet by 65 feet, which would include two parking spaces (9 feet by 18 feet each), and a pump pad with a motor control center. The parking area would be paved. Siting of the wells would meet all requirements for setbacks from existing utilities and other features.

The conceptual well locations are shown in Figures 2-4 and 2-5. From a hydrogeological perspective, the wells have been sited to avoid impacts on one another, as well as avoiding overdraft of groundwater and creating mini cones of depression.

Additionally, wells within the Bufferlands have been sited to avoid sensitive biological resources (including existing conservation easements, special-status species habitat, vernal pools, and protected oak trees), other known infrastructure (including railroad property, existing SRWTP wells, and other infrastructure), and planned infrastructure (including future dedicated land disposal [DLD] areas).

Within the County-owned property adjacent to Franklin Field, the wells have been sited to avoid the active airport area and, thus, avoid conflicts with airport operations while still being within County-owned property (Figure 2-6).

2.3.3 Pipelines

New discharge pipelines would connect the 10 wells to the recycled water distribution system. The length of discharge pipeline from each well to each distribution alignment would vary. These pipelines would be approximately 16 inches in diameter (or less). Conceptual alignments for the connection pipelines are shown in Figures 2-4 and 2-5; their exact alignments have not yet been determined.

Pipelines connecting the wells to the recycled water distribution system associated with the Bufferlands would be constructed in public rights-of-way (ROW). The total pipeline distance within the Bufferlands would be 5,400 feet or an average of 900 feet of pipeline for each of the six wells.

Pipelines associated with the County-owned property adjacent to Franklin Field would be constructed in open fields and farmland. The total pipeline distance within County-owned property adjacent to Franklin Field would be 4,500 feet or an average of 1,125 feet of pipeline for each of the four wells.

2.3.4 Electrical Infrastructure

Electrical infrastructure would be installed to provide power for operation of the well pumps. Electrical infrastructure would include an electrical panel (2 feet by 3 feet) at each well and electrical service lines connecting each well to existing SMUD infrastructure.

Conceptual alignments for the electrical service lines are shown in Figures 2-4 and 2-5; their exact alignments have not yet been determined. Approximately 26,300 feet of electrical service lines would be installed in public ROW, including 15,800 feet of electrical lines within the Bufferlands and 10,500 feet within County-owned property adjacent to Franklin Field. The length of these electrical lines from each well to existing SMUD infrastructure would vary, with a maximum distance within the Bufferlands of 7,000 feet and a maximum distance within County-owned property adjacent to Franklin Field of 7,000 feet. The electrical service lines would be installed aboveground within the Bufferlands, where feasible, and below ground where needed to protect existing resources. If aboveground, the poles would be constructed of wood and would be approximately 20 feet tall. Within the County-owned property adjacent to Franklin Field electrical lines would be installed underground to meet all requirements of the Federal Aviation Administration (FAA) and the airport. Underground lines would be encased in a 4-inch diameter conduit.

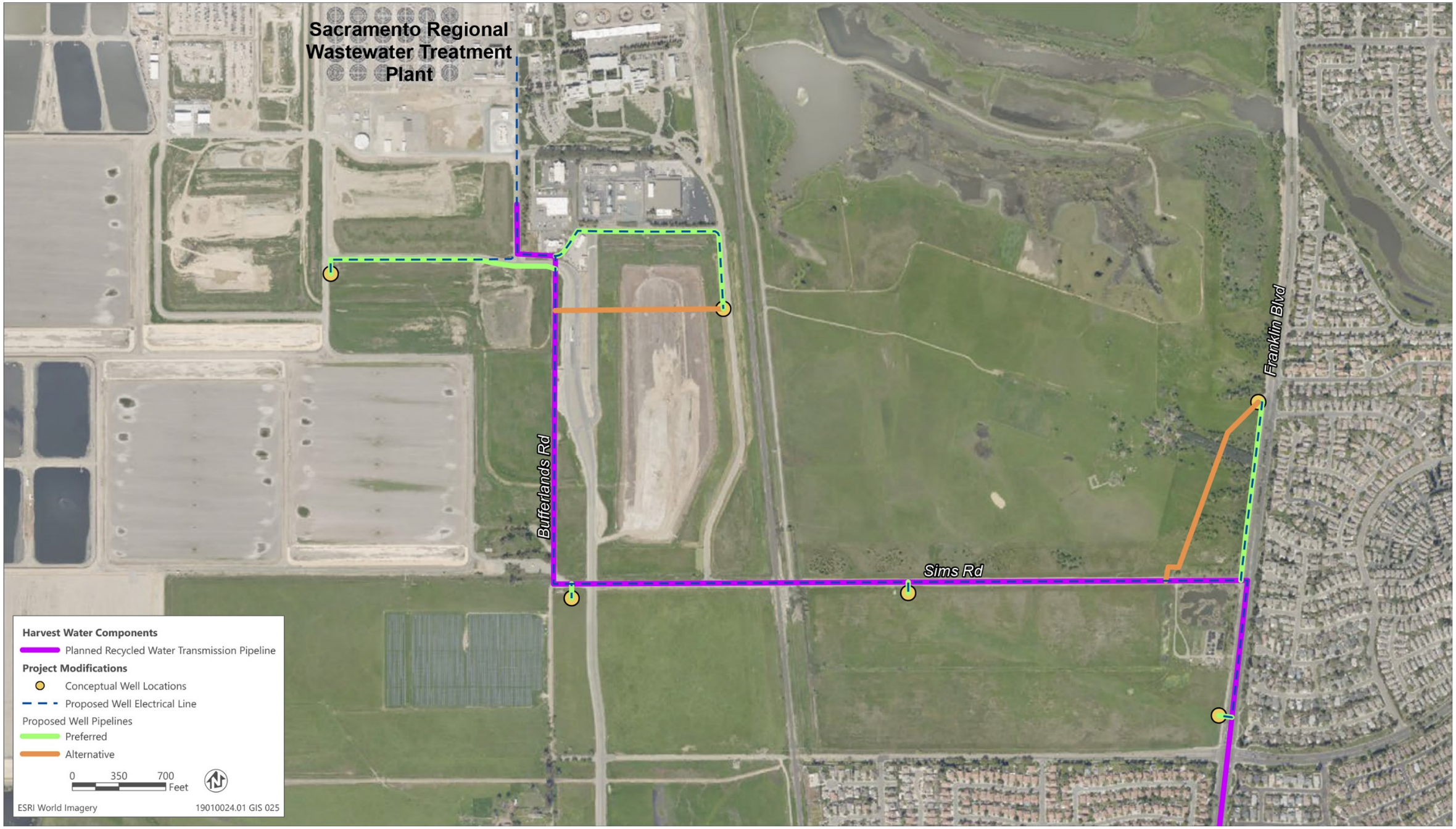
It is expected that operation of 10 well pumps would use 5,400,000 kilowatt hours per year assuming they would be operated up to 24 hours per day and up to 7 days per week for up to 6 months in a year.

2.4 PROJECT CONSTRUCTION

2.4.1 Construction Timing

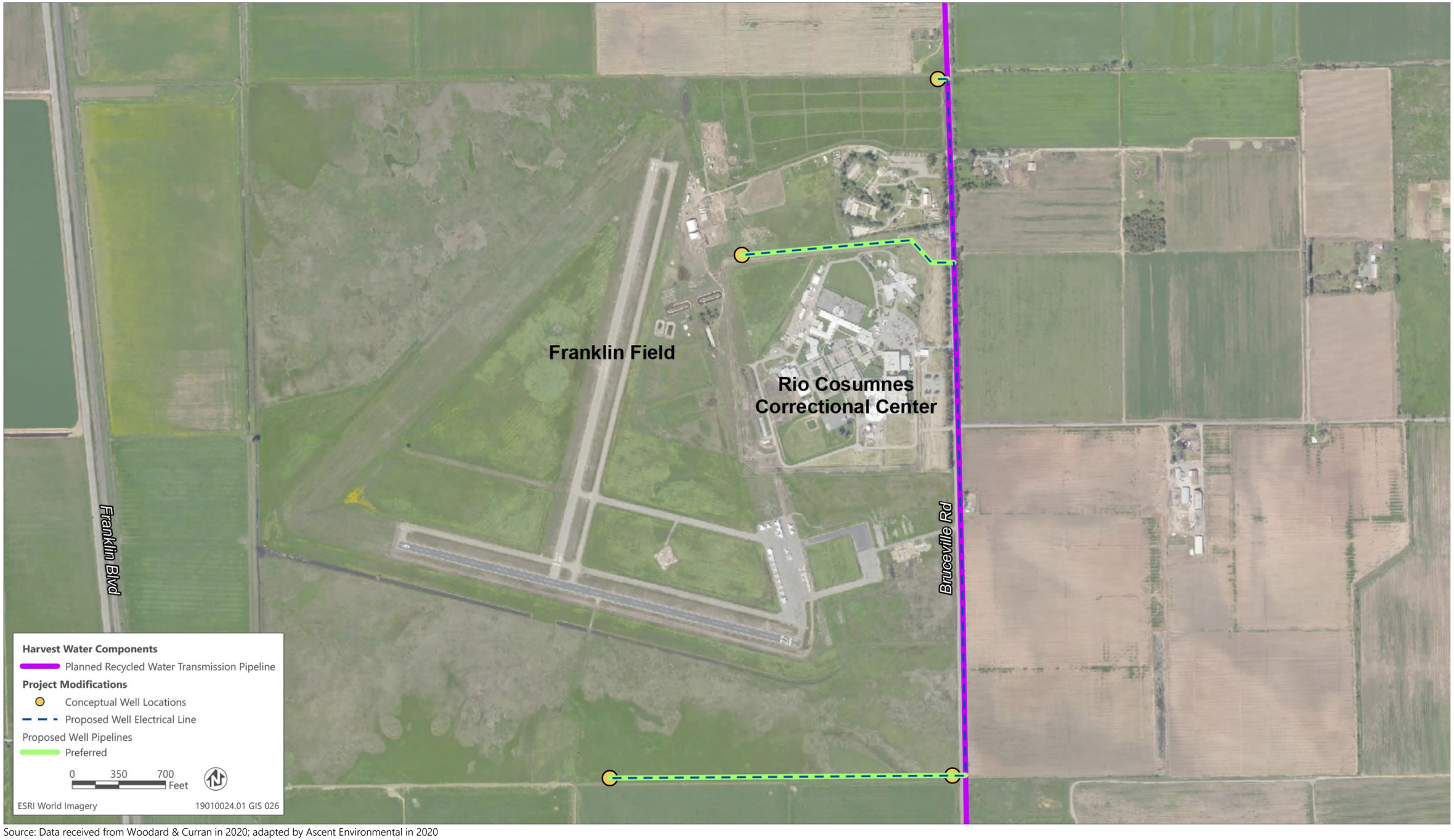
At the soonest, five wells are expected to be constructed in 2025 (April through November) and five additional wells would be constructed in 2026 (April through November). The pipelines connecting the wells to the recycled water delivery system, and electrical service lines serving each well, would be constructed at approximately the same time as each well.

Construction would typically be limited to those hours consistent with the noise ordinance of Sacramento County. Typical work hours would be Monday through Friday from 7:00 a.m. to 7:00 p.m. (construction noise is exempt from the noise ordinance between 6 a.m. and 8 p.m. on weekdays within Sacramento County), with construction occurring on weekends and nighttime only if necessary and approved by the affected jurisdictions. Exceptions may be needed for well drilling specifically; well drilling often requires 24-hour construction because continuous drilling may be needed to prevent borehole collapse. This can require on the order of one week of continuous drilling depending on well depth. Other construction for interconnecting pipelines, power supply, and well head improvements would fall within the typical work hours listed above.



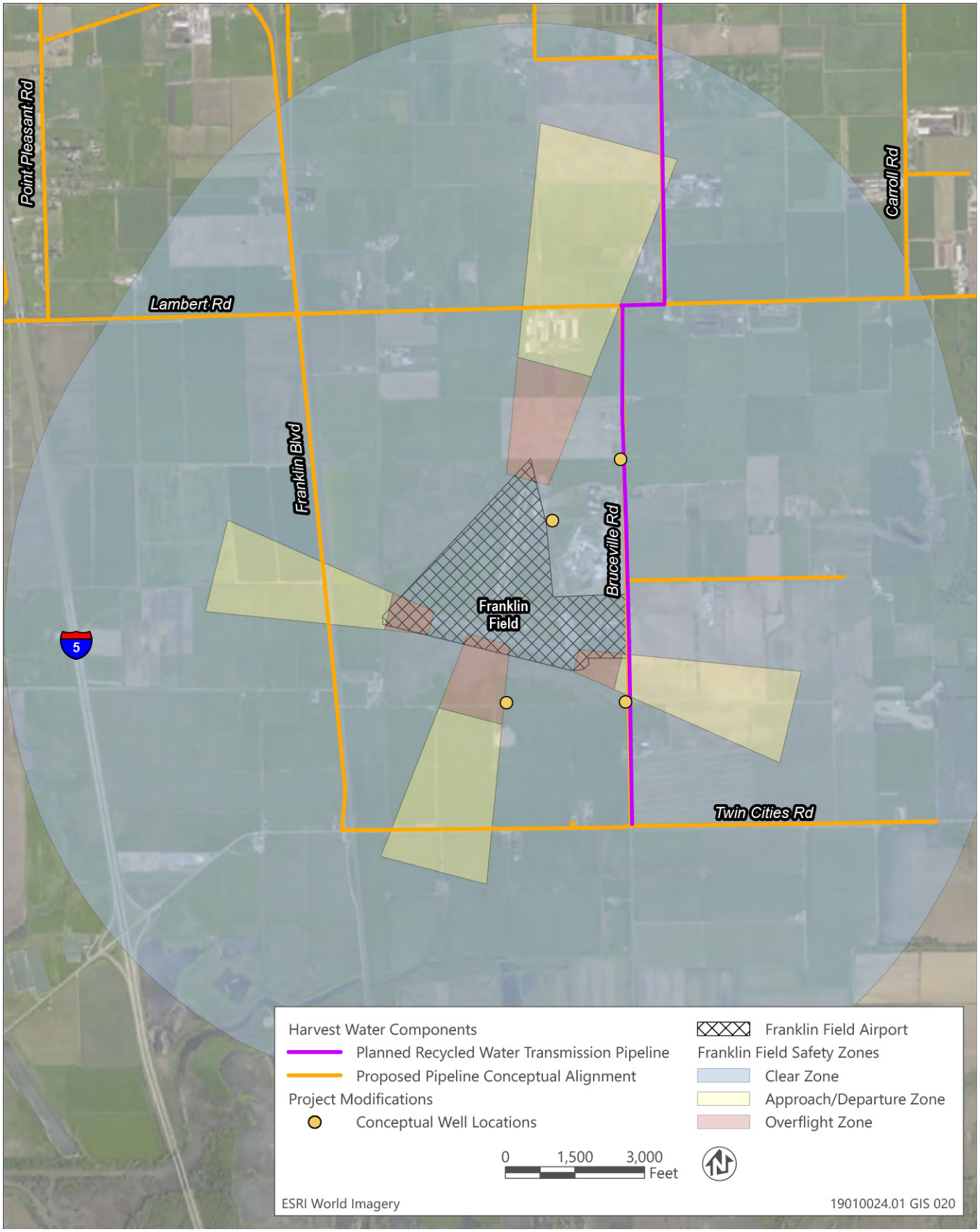
Source: Data received from Woodard & Curran in 2020; adapted by Ascent Environmental in 2020

Figure 2-4 Proposed Facilities in the Bufferlands



Source: Data received from Woodard & Curran in 2020; adapted by Ascent Environmental in 2020

Figure 2-5 Proposed Facilities Adjacent to Franklin Field



Source: Data received in 2020; adapted by Ascent Environmental in 2020

Figure 2-6 Franklin Field Area

2.4.2 Staging Areas and Construction Access

Equipment, material, and vehicle staging would be accommodated at each well site and along the proposed pipeline and electrical infrastructure alignments.

Construction access to each well site would be the shortest route from an existing paved or dirt road to the well site that does not adversely affect sensitive resources. As shown in Figures 2-5 and 2-6, all proposed well sites are in close proximity to an existing road. After construction is complete, the construction access path would be graded and graveled to provide access for well operations and maintenance. Access to pipeline and electrical line routes would begin at existing roadways and well locations and would follow pipeline/electrical line alignment. No permanent access routes would be retained along the pipeline/electrical line alignments.

2.4.3 Well Installation

Well installation would involve the following activities: clear and grub the site and mobilize, grade well pad, drill test well, drill permanent well, install pump pedestal (concrete), erect fencing bollards, and pave parking stalls. The construction footprint for each well would be approximately 100 feet by 120 feet. The total construction footprint for construction of 10 wells would be approximately 0.28 acre.

Well depths would be 400 to 1,250 feet within the Bufferlands and 250 to 1,250 feet within County-owned property adjacent to Franklin Field. Well construction is anticipated to extend for 25-43 days for each well within the Bufferlands and 23-43 days for each well within County-owned property adjacent to Franklin Field.

2.4.4 Pipeline Installation

Open-cut construction (also referred to as open trench with shoring or cut-and-cover) is the proposed option for installing the majority of the pipelines. Trenchless construction methods would be used in some locations to avoid sensitive resources. Generally, the open-cut trench would be approximately 2 feet wider than the diameter of the pipe being installed and 6 feet deeper than the pipe diameter. With an anticipated pipe diameter of up to 16 inches, the trench width would be approximately 3 feet, 4 inches and the depth would be approximately 7 feet, 4 inches. Trench widths and depths may vary in response to existing utility locations, pipe bedding requirements, and other factors. Shoring may be required to provide trench stability and to protect existing improvements.

Installation of dewatering wells may be required before the start of excavation depending on the soil type and groundwater level. Water pumped from the excavation area must be treated as necessary to meet water quality standards (e.g., run through settling tanks to remove sediment) and would then be directed to nearby irrigation ditches or impoundments. Dewatering pumps could run continuously (24 hours per day) in the open trench areas while excavation is taking place to maintain the groundwater level below the bottom of trench. After the pipeline is installed and backfilled, the dewatering pumps would be removed and relocated to the next segment of pipeline construction.

Heavy equipment for excavation typically involves continuous use of an excavator to fill dump trucks, which would make intermittent trips to an off-site disposal area. Typically, two or more dump trucks would be used to allow continuous offloading from the excavator. In addition, dump trucks hauling imported material from off-site sources for pipeline bedding and backfill would make semi-continuous trips to the site as pipe is being installed. A tracked excavator would be used to lift pipe segments and position the pipe in the trench. Temporary trench plates would be installed over the trench at the end of each workday.

To accommodate construction equipment and work area, the entire construction corridor (active work area including the trench) would be up to 30 feet wide for 16-inch pipelines.

It is expected that open trench construction would proceed at the rate of approximately 600 feet per day. Excavated trench materials would be sidecast (placed adjacent to the trench) within approved work areas and reused as appropriate for backfill. Excess material would be hauled off for disposal at an approved disposal site (e.g., landfill).

Pipeline alignments in existing paved areas within the Bufferlands would need to be repaved following pipeline installation (approximately 67,000 square feet or 1.5 acres).

Open-cut construction proposed for cultivated areas within County-owned property adjacent to Franklin Field may require removal of the crop, depending on the crop and time of year. Temporary and permanent easements would be obtained from individual property owners and growers as needed and coordinated to minimize removal of crops.

2.4.5 Electrical Infrastructure Installation

Buried electrical lines would be placed in 4-inch conduits, installed underground in public ROW. To accommodate a 4-inch line, a 2- to 3-foot top trench width would be needed. Daily installation of buried electrical infrastructure would involve grinding asphalt, excavation, laying pipeline, backfilling pipe zone, backfilling trench, temporary paving, and cleanup. It is expected that buried electrical line installation would proceed at the rate of approximately 750 feet per day. Aboveground electrical poles would be constructed of wood and would be 25 feet tall, with a buried depth of 5 feet and an aboveground height of 20 feet. Poles would be anchored via steel anchor guys.

2.4.6 Construction Equipment and Trip Generation

It is anticipated that 4-7 workers would be needed for installation of the wells, 10 workers for installation of the pipelines, and 4 workers for installation of the electrical infrastructure, for a total of up to 21 construction workers.

Equipment used for well installation would include a backhoe/loader, excavator, compactor, drilling rig, crane, utility trucks, water truck, welder, compressor, pickup trucks, concrete pumper, cement mixer, asphalt truck and generator.

For pipeline installation in the Bufferlands (public ROW), construction equipment would include a sawcutting machine, loader, skidsteer, backhoe/loader, excavator, truck tandem, roller compactor (walk behind), vibration plate/jumping jack compactor, water truck, asphalt paver, roller compactor (riding), and vibration plate compactor.

For pipeline installation in County-owned property adjacent to Franklin Field (open field/farmland), construction equipment would include a dozer, loader, chipper, chainsaw, truck tandem, backhoe/loader, vibration plate/jumping jack compactor, and a water truck.

Equipment needed for installation of the electrical infrastructure (regardless of whether it is buried or aboveground) would include a backhoe/loader, compactor, dump truck, paving equipment, auger (to drill holes for electrical poles), boom truck (for lifting electrical equipment), utility truck for stringing cable, and concrete pumper and cement mixer for well head improvements and electrical equipment pads.

The amount of spoil generated would depend on the construction methods selected. Table 2-1 shows estimated cubic yards (CY) of spoil from construction of the project modifications.

The spoil would consist of material excavated from the well locations, pipeline trenches (and not re-used to cover the pipelines), and material taken out of the electrical line trenches and electrical tower augering. Assuming a hauling truck capacity of 16 CY per truckload, up to 976 truck trips (round trips) total would be generated by spoil removal.

In addition to equipment and material delivery, a total of 32 worker trips (round trips) would be generated per day assuming each individual drives separately and half of the workers travel for lunch.

Table 2-1 Spoil Generated by Construction of the Project Modifications

Project Modifications	Spoil Quantity (CY)	Number of Truck Trips[1]
Groundwater wells (up to ten wells)	12	1
Pipelines (up to 9,900 feet)	6,500	406
Electrical lines (up to 26,300 feet)[2]	9,100	569
Total	**15,612**	**976**

Notes: CY = cubic yards

[1] It is assumed that each truck would have a hauling capacity of 16 cubic yards of spoil per truckload.

[2] For the purpose of this table, all electrical lines are assumed to be underground to provide a conservative (maximum) amount of spoil and truck trips.

Source: Data compiled by Ascent Environmental in 2020

2.4.7 Construction-Related Water Requirements

Water trucks would be used during construction for dust control. Water generated from trench dewatering may also be usable for dust control. Any excess water from dewatering not used for dust control is anticipated to be disposed of via land application, which would require property owner approval. If additional water is needed for well development, over and above that provided by water trucks, a (4-inch) well, adjacent to the production well could be drilled to provide hydrogeologic data to design the production well and as a water source for construction of the production well. The two would need to have adequate separation (approximately 50 feet) to provide valuable monitoring data going forward.

2.4.8 Surface Restoration

All areas disturbed for pipeline installation and areas temporarily disturbed for well and electrical infrastructure construction would be restored to pre-project conditions.

2.5 ADDITIONAL STAGING AREAS OUTSIDE THE CONSTRUCTION CORRIDOR

The Program EIR describes the staging areas that would be used during Harvest Water construction activities and evaluates the potential environmental impacts associated with using those staging areas. It was identified in the Program EIR that "[e]quipment, material, and vehicle staging would be accommodated at the SRWTP and along the proposed pipelines. Spoil would not be located within Caltrans ROW (along I-5)" (Regional San 2017:2-22). Since certification of the Program EIR and based on more detailed planning that has occurred to date, there is a possibility that additional staging areas could be located outside of the previously defined construction corridor.

As the planning and execution of project construction proceeds, there is the potential that new locations may be added to the construction disturbance area such as temporary staging areas, spoils storage areas, and temporary access roads. Regional San must provide authorization for the use of any lands outside the already authorized and permitted construction area. Any additions to the construction disturbance area must be in locations that would not result in significant adverse effects to biological, cultural, or other sensitive resources. Ideally, uses such as temporary staging areas, spoils storage areas, and temporary access roads will be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Lands supporting ruderal vegetation or agricultural lands may also be used if it is verified that sensitive resources such as wetlands would not be affected. Regional San will be given at least 10 business days notice to review any requested expansions of the construction area prior to use of the new area. Regional San will evaluate the requested area for compliance with the criteria above. The area cannot be used to support construction activities until Regional San has provided written authorization.

2.6 RECYCLED WATER TRANSMISSION PIPELINE SIZE

The Program EIR describes the planned recycled water transmission pipeline that would be needed to convey recycled water from the proposed pump station (at the SRWTP) to potential customers in the South County area and evaluates the potential environmental impacts associated with pipeline construction and operation. Figures 2-1 and 2-2 show the alignment of the planned transmission pipeline. It was identified in the Program EIR that "[t]he 18- to 60-inch diameter transmission pipeline would extend approximately 14 miles from the new pump station at the SRWTP to Twin Cities Road" (Regional San 2017:2-10). Since certification of the Program EIR and based on more detailed planning that has occurred to date, a portion of the transmission pipeline would need to be a larger diameter than what was identified in the Program EIR. Approximately 9 miles of the 14-mile pipeline would need to be 66 inches in diameter, rather than the maximum of 60 inches that was previously identified.

This increase in pipeline diameter would necessitate that the construction trench be wider and deeper (by about nine percent) than previously identified to accommodate the larger pipeline. In turn, the larger trench would generate additional spoil. The Program EIR stated that approximately 154,200 cubic yards (CY) of spoil would be generated from pipeline construction (Regional San 2017:2-28). Assuming a pipeline length of 9 miles, the increased pipeline size would generate approximately 7,600 to 15,700 CY of additional spoil, an increase of approximately 10 percent.

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3 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

3.1 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

This checklist and analysis are not a traditional CEQA "Initial Study" checklist and analysis. The purpose of this checklist is to evaluate the categories in terms of any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the certified *South Sacramento County Agriculture and Habitat Lands Recycled Water Program EIR* (Program EIR). The row titles of the checklist include the full range of environmental topics, as presented in Appendix G of the State CEQA Guidelines. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, and 15168. A "no" answer does not necessarily mean that here are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact since it was analyzed and addressed with mitigation in the Program EIR. The purpose of each column of the checklist is described below.

3.1.1 Where Impact Was Analyzed in the Program EIR

This column provides a cross-reference to the pages of the prior environmental documents (i.e., the Program EIR) where information and analysis may be found relative to the impact criteria listed under each topic.

3.1.2 Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?

Pursuant to Section 15162(a)(1) of the State CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered by the prior environmental review or a substantial increase in the severity of a previously identified impact.

3.1.3 Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?

Pursuant to Section 15162(a)(2) of the State CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) that have occurred subsequent to the prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

3.1.4 Any Substantially Important New Information Requiring New Analysis or Verification?

Pursuant to Section 15162(a)(3)(A-D) of the State CEQA Guidelines, this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified as complete, is available. This would require an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigations remain valid. If the new information shows that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; or (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental documents; or (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the

prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative, the question would be answered 'Yes' requiring the preparation of a Subsequent EIR or supplement to the EIR. However, if the additional analysis completed as part of this environmental checklist review finds that the conclusions of the prior environmental documents remain the same and no new significant impacts are identified, or identified environmental impacts are not found to be substantially more severe, the question would be answered 'Yes, but no significant impact would occur' and no additional EIR documentation (supplement to the EIR or Subsequent EIR) would be required.

3.1.5 Do Mitigation Measures in the Program EIR Address/Resolve Impacts?

Pursuant to Section 15162(a)(3) of the State CEQA Guidelines, this column indicates whether the prior environmental documents provide mitigation for Harvest Water that would also apply to impacts associated with the proposed modified components of the program. If "N/A" is indicated, there is no significant impact requiring mitigation with implementation of Harvest Water as analyzed in the Program EIR or with the proposed modifications evaluated in this addendum.

3.2 EXPLANATION OF ENVIRONMENTAL SETTING, DISCUSSION, MITIGATION MEASURES, AND CONCLUSION SECTIONS

3.2.1 Environmental Setting

The environmental setting includes the existing environmental conditions on the project site and in the surrounding area, as appropriate. Reference is made to the environmental setting provided in the Program EIR because it is relevant to understanding the potential impacts associated with the Groundwater Accounting Project. Where appropriate, additional information is provided to update the information from the Program EIR and reflect the current environmental setting.

3.2.2 Discussion

A discussion of the elements of the checklist is provided under each environmental category to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue, and the status of any mitigation that may be required or that has already been implemented.

3.2.3 Mitigation Measures

Applicable mitigation measures from the prior environmental review that apply to the project are summarized under each environmental category. New mitigation measures are included, if needed.

3.2.4 Conclusion

A discussion of the specific conclusion for each topical section relating to the need for additional environmental documentation is contained at the end of each separate section.

3.3 IMPACT EVALUATION CHECKLIST

A summary of findings and overall conclusions of the environmental checklist and requirements for further environmental documentation pursuant to the State CEQA Guidelines 15162, 15163, 15164, and 15168 are provided following the checklist items.

3.3.1 Aesthetics

Section 3.1, "Aesthetics," of the Program EIR evaluates the impacts of the program on visual resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
1. Aesthetics. Would the project modifications:					
a) Have a substantial adverse effect on a scenic vista?	Impact AES-1	No	No	No	N/A
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impact AES-1	No	No	No	N/A
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?	Impact AES-1	No	No	No	N/A
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impact AES-2	No	No	No	Yes

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.1-1 through 3.1-4 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to aesthetic resources.

DISCUSSION

The Program EIR determined that the program elements would not substantially alter existing viewsheds or degrade the existing visual character or quality of the program area; this impact was concluded to be less than significant (Program EIR Impact AES-1). Additionally, the Program EIR determined that the program elements would introduce new sources of light and glare associated with nighttime construction; this impact was concluded to be less than significant with mitigation (Program EIR Impact AES-2).

Increasing the size of the transmission pipeline from 60 to 66 inches would not result in any changes relative to aesthetics or visual resources compared to the impacts discussed for the transmission pipeline in the Program EIR. The transmission pipeline will result in similar construction-related effects and would be an underground facility that would not be visible following construction. Therefore, impacts to aesthetics related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence aesthetic impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project area and its surroundings (i.e., lands surrounding a wastewater treatment plant and lands in the vicinity of a municipal airport) do not offer expansive views or high value landscape, although the openness of the terrain and fields of row crops offer scenic value. The project area does not provide any aesthetic resources that would be considered a scenic vista. Thus, the project modifications would not have a substantial adverse effect on a scenic vista. In addition, a majority of project components would either be underground or would consist of relatively small pieces of infrastructure (well heads, gravel access driveways) consistent with the character of the surrounding area. The most visible project component would be overhead electrical lines which would be of a size and type consistent with existing overhead electrical infrastructure in the area. The electrical poles would be constructed of wood and would be approximately 20 feet tall.

   The use of additional staging areas outside the established construction corridor would not adversely affect a scenic vista because the project area does not provide any aesthetic resources that would be considered a scenic vista and staging areas would be returned to pre-project conditions once construction is complete.

b) Route 160 within Sacramento County is considered an officially designated state scenic highway and Highway 99 is designated as a protected scenic corridor by the Sacramento County General Plan; however, neither of these routes provide views of the project area. Interstate-5 (I-5) is also designated as a protected scenic corridor by the Sacramento County General Plan. Limited views of overhead electrical lines may be visible from I-5; however, views would be distant with intervening vegetation and development. In addition, the project modifications would be consistent with surrounding utility infrastructure and would not damage scenic resources within any scenic corridors.

   The use of additional staging areas outside the established construction corridor could potentially be visible from I-5, but would not be visible from Route 160 or Highway 99. Like the above ground groundwater accounting project elements evaluated above, additional staging areas would not damage scenic resources because such resources are not located in the project area. In addition, staging areas would be returned to pre-project conditions once construction is complete.

c) The project modifications would consist of up to 10 wells and associated pipelines and electrical service lines that would be located within public rights-of-way (ROW), agricultural lands, and public open space areas where sensitive biological resources are not present. Each well would be above-ground and have a permanent footprint of approximately 55 feet by 65 feet, which would include two parking spaces and pump pad with a motor control center. Siting of the wells would meet all requirements for setbacks from existing utilities and other features. Approximately 9,900 feet of underground pipelines would be installed within the Bufferlands and County-owned lands adjacent to Franklin Field. Electrical infrastructure would be installed to provide electricity for operation of the well pumps. Electrical infrastructure would include approximately 26,300 feet of electrical service lines. The maximum distance for electrical lines would be 7,000 feet. The electrical service lines would be installed aboveground within the Bufferlands, where appropriate (and below ground where needed for protection of resources), and below ground within County-owned property adjacent to Franklin Field to meet all requirements of the Federal Aviation Administration (FAA) and the airport.

Well and pipeline construction activities could potentially alter the visual character of the project area due to excavation activities, and the presence of construction equipment/materials and fencing around work areas. Existing residences located along the pipeline alignments, viewers at Franklin Field, and motorists using the affected or adjacent roadways would have views of construction activities, vehicles, equipment, and materials. Residences situated near construction activities would be the most sensitive viewer group. Viewers at Franklin Field would generally have a low sensitivity to changes in views, and motorists typically would have fleeting views of construction activities due to the speed of travel with slightly longer views when there is a momentary stoppage in traffic. However, views of construction activities would be temporary, and temporarily disturbed areas would be restored to pre-construction conditions following construction.

The proposed pipelines and electrical lines in the Franklin Field area would be installed underground and, therefore, would not be visible or degrade views once construction is complete. The proposed wells would be small, low profile structures that would not substantially alter or degrade views given the existing utility, institutional, and urban development in the project area. In addition, above ground electrical service lines in the Bufferlands area would be consistent with the existing utility infrastructure in the area. Therefore, the project modifications would not substantially degrade the existing visual quality of the project area or surroundings.

The use of additional staging areas outside the established construction corridor would not substantially degrade the existing visual character or quality of public views around each staging area and its surroundings because views of staging areas would be temporary and staging areas would be restored to pre-construction conditions once construction is complete. In addition, if additional staging areas outside the established construction corridors are used, they would ideally be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas to avoid impacts to sensitive resources. Use of these types of lands as staging areas would not alter the visual character of these sites. If staging areas are authorized on lands supporting ruderal vegetation or agricultural lands, as stated above, any change in visual character would be temporary and each site would be returned to pre-construction conditions. As noted in Chapter 2, "Description of the Proposed Action," Regional San would review any requested staging areas and only authorize those that meet the identified criteria for suitable land uses and environmental resource avoidance.

d) Consistent with what is described in the Program EIR, the project modifications would be located in the Bufferlands area, which is the area surrounding the SRWTP and is characterized by upland and wetland habitats, riparian forests, and native perennial grasses. The SRWTP site itself consists of above ground facilities including buildings, parking lots, ponds, equipment, and a grit and screening landfill. Additionally, the project modifications would be located in the Franklin Field area, which is a public use airport that includes two perpendicular runways and four hangars. Lands surrounding Franklin Field include public, open space, and agricultural uses, as well as the Rio Cosumnes Correction Center. Existing lighting consists of exterior security lighting at the SRWTP and at Franklin Field. If nighttime construction is required, temporary views of nighttime lighting associated with construction of the wells could be a nuisance to adjacent residences and a potential hazard to motorists traveling on the affected roadways. Once constructed, the pipelines and electrical service lines would not require lighting at night and, therefore, would not result in a new source of substantial light or glare. Well locations could require nighttime lighting for security purposes, but any new lighting would be shielded or directed downward, similar to existing security lighting at the SRWTP and at Franklin Field, and would, thus, not result in a new source of substantial light or glare. Therefore, operation of the wells would not result in substantial changes to light or glare conditions at the SRWTP and at Franklin Field.

The use of additional staging areas outside the established construction corridor would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area because any construction nighttime lighting (if needed) would be temporary and no permanent lighting would be installed at staging areas, which would be returned to pre-project conditions once construction is complete.

MITIGATION MEASURES

The following mitigation measure from the Program EIR would reduce the potential for light or glare and reduce the potential impact to a less-than-significant level.

Mitigation Measure AES-2: Nighttime Construction Lighting

If nighttime construction lighting is required, the construction contractor shall shield and orient lighting downward and directed away from any nearby receptors to minimize effects. Lighting shall be directed toward active construction areas only, and shall have the minimum brightness necessary to ensure worker safety.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to aesthetics. The combined analysis of aesthetics issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.2 Agriculture and Forest Resources

Section 3.2, "Land Use and Agriculture," of the Program EIR evaluates the impacts of the program on land use and agriculture. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to agriculture and forestry resources. Land use is addressed in Section 3.3.11, "Land Use and Planning," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
2. Agriculture and Forest Resources. Would the project modifications:					
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?	Impact LUA-2	No	No	No	Yes
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	Impact LUA-2	No	No	No	Yes
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))?	Not evaluated	No	No	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Not evaluated	No	No	No	N/A
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?	Impact LUA-2	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.2-1 through 3.2-9 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to agriculture and forest resources. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Farmlands are mapped by the State of California Department of Conservation under the Farmland Mapping and Monitoring Program (FMMP). The FMMP was created by the State of California to provide data on farmland quality for use by decision-makers in considering possible conversion of agricultural lands. 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. Mapping is conducted on a county-wide scale, with minimum mapping units of 10 acres unless otherwise specified.

Consistent with what is described in the Program EIR, the project would be located in the Bufferlands area, which is the area surrounding the SRWTP and is characterized by upland and wetland habitats, riparian forests, and native perennial grasses. The SRWTP site itself consists of above ground facilities including buildings, parking lots, ponds, equipment, and a grit and screening landfill. Franklin Field is a public use airport that includes two perpendicular runways and four hangars. The County-owned lands adjacent to Franklin Field consist of primarily public, open space, and agricultural uses, as well as the Rio Cosumnes Correction Center. The primary agricultural uses are corn, rice, and dairy farming (grazing land). This area is designated under the FMMP as Prime Farmland and Farmland of Statewide Importance. In addition, the proposed modifications would be located adjacent to and portions may be located on lands subject to Williamson Act contracts.

The project area is zoned Agricultural – 80 acres (AG-80), does not include forest or timberland uses, and is not zoned for these resource types.

DISCUSSION

The Program EIR determined that the program elements would result in construction-related effects to agricultural lands, including those designated as Important Farmland and lands under Williamson Act contracts; this impact was concluded to be less than significant with mitigation (Program EIR Impact LUA-2).

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence agricultural resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a,b) As described in Chapter 2, "Description of the Proposed Action," the majority of the proposed pipelines would be installed using open-cut construction methods, with trenchless pipeline construction for specific sensitive crossings (e.g., stream/river/sensitive biological resources, canal/ditch, areas with dense utilities), where trenchless construction techniques could be employed. Pipelines within the Bufferlands and electrical service lines would be constructed within public ROW. However, wells and pipelines associated with the County-owned property adjacent to Franklin Field would be constructed in open fields and farmland, which is designated as Important Farmland. The proposed modifications would be located adjacent to and portions may be located on lands subject to Williamson Act contracts.

Construction outside of paved areas would involve the removal of topsoil. Heavy equipment (e.g., excavator, dump truck, flat-bed truck, front-end loader) would be used to excavate, dig trenches, transport pipe, and off-load excavated materials. The removal of topsoil and use of heavy equipment would have the potential to adversely affect long-term soil characteristics and productivity of affected lands (i.e., through compaction/removal of topsoil), potentially causing a degradation of soil quality in such areas.

Construction in agricultural fields may require the temporary removal of crops, depending on the crop and time of year. Construction would also affect small areas of land adjacent to the road ROW during construction, which would then be converted to gravel access driveway for well maintenance and operations. The proposed pipelines and portions of the electrical lines would be buried underground, installed up to 7.5

feet deep, and soil would be backfilled over the trench per Mitigation Measure LUA-2 below, such that farming would be able to resume following construction. Wells and footings for electrical service lines would have permanent footprints that could result in a permanent loss of Important Farmland. While there could be small areas that are permanently removed from agricultural production, similar to impacts discussed in the Program EIR, the project modifications would have minimal effect on Important Farmland and land under Williamson Act contracts because they would require minimal land, which would not affect existing agricultural operations or be incompatible with existing agricultural operations. Further, agriculture would continue around the well heads. If a well head were in the middle of a field, this would not preclude the rest of the field from continuing to be cultivated or grazed.

The proposed facilities would need to be inspected and maintained periodically after construction (for which permanent easements would be acquired as necessary). Inspections for pipelines would be conducted through the utility access manholes installed during construction. Maintenance would consist of annual inspections of pipelines and inspections up to once per day for wells when in operation, and monthly when not in service. The inspections and maintenance activities would generally be isolated and confined to manholes, the immediate vicinity of pipeline alignments, and within the permanent well footprint. Therefore, maintenance would not be expected to disturb agricultural operations.

In addition, Harvest Water, supported by the project modifications, would provide a benefit to agricultural lands in the project area, including those designated as Important Farmland and Williamson Act lands by providing a sustainable water supply that may be available even during droughts, when groundwater supplies at on-farm wells in some parts of the Recycled Water Delivery Area may be limited.

The additional staging areas outside the established construction corridor could be located on or near land designated as Important Farmland and lands subject to Williamson Act contracts. If additional staging areas are needed, they would ideally be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Use of lands such as these would have no effect on Important Farmland or Williamson Act lands. However, lands supporting ruderal vegetation or agricultural lands may also be used if it is verified that sensitive resources such as wetlands would not be affected. Staging areas in these locations could temporarily alter conditions on lands supporting Important Farmland or land under Williamson Act contract. However, the change in land use would be temporary and the land would be returned to pre-project conditions once use of the staging area ends. Therefore, there would be no loss of Important Farmland or the need to cancel any Williamson Act contracts.

There are also areas where the proposed transmission pipeline traverses and/or is adjacent to Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland, as well as lands under Williamson Act contracts. Increasing the transmission pipeline size would result in a slightly larger footprint for the pipeline trench, which could result in a small increase in the amount of Important Farmland and Williamson Act contract lands excavated for pipeline installation compared to that described in the Program EIR. However, the width of the construction disturbance corridor would not change and the treatment of lands affected by trenching would not change. Therefore, post construction conditions relative to agricultural lands would not change compared to those identified in the Program EIR.

c,d) The project area is zoned Agricultural (AG-80). This zoning designation does not include provisions for forest land or timberland. Given that the project area is not zoned for these resource types, project implementation would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Further, there is no forest or timberland in the area of the project modifications; therefore, the project modifications would not result in the loss of forest land or conversion of forest land to non-forest use.

The use of additional staging areas outside the established construction corridor would not conflict with zoning related to forest land, timberland, or timberland zoned Timberland Production nor would it result in the loss or conversion of these lands because the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near these lands.

Increasing the size of the transmission pipeline would not conflict with zoning related to forest land, timberland, or timberland zoned Timberland Production nor would it result in the loss or conversion of these lands because the transmission pipeline footprint would be an underground facility and would not be located on or near these lands.

e) As described in item a) above, the proposed wells, pipelines, and electrical lines would traverse and/or be adjacent to Important Farmland as well as lands under Williamson Act contracts; however, these project modifications would not involve any other changes that could result in conversion of farmland to non-agricultural use. In addition, Harvest Water, supported by the project modifications, would provide long-term benefits to agricultural lands by providing a sustainable water supply that would be available even during droughts.

As described in item c) above, the project area does not include forest or timberland uses. Thus, the project modifications would not involve any changes that could result in conversion of forest land to non-forest use.

As described in items a) and c), above, the use of additional staging areas outside the established construction corridor would not involve any other changes that could result in conversion of farmland to non-agricultural use or forest land to non-forest use because the use of staging areas would be temporary and restored to pre-project conditions after use (and thus, would not convert farmland) and the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near forest lands.

As described in item a) above, increasing the size of the transmission pipeline could result in a small increase in the temporary impact of Important Farmland. Increasing the transmission pipeline size would not involve any other changes that could result in conversion of farmland to non-agricultural use or forest land to non-forest use because the impacts associated with the transmission pipeline would be temporary and treatment of lands disturbed by excavation would not change from what is described in the Program EIR (and thus, would not convert farmland) and it would not be located on or near forest lands.

MITIGATION MEASURES

The following mitigation measure from the Program EIR would address the potential for construction-related effects to agricultural lands, including those designated as Important Farmland and lands under Williamson Act contracts, and reduce the potential impact to a less-than-significant level.

Mitigation Measure LUA-2: Stockpile Topsoil

The following mitigation measure from the Program EIR would be implemented on agricultural lands and would address potential adverse effects related to the long-term soil characteristics and productivity of this land (i.e., through compaction/removal of topsoil).

Regional San and/or its contractors shall stockpile topsoil removed during construction for later reuse. The soil shall be stored in a clear area of the construction site where it would not have the potential to affect agricultural or biological resources. Stockpiled soil shall be covered with a tarp at all times to prevent generation of fugitive dust. Following pipeline construction, soil shall be backfilled into the trench and restored to an appropriate level of compaction.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to agriculture and forest resources. The combined analysis of agriculture and forest resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.3 Air Quality

Section 3.4, "Air Quality and Greenhouse Gas Emissions," of the Program EIR evaluates the impacts of the program on air quality and GHG emissions. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to air quality. GHG emissions are addressed in Section 3.3.8, "Greenhouse Gas Emissions," in this Initial Study Checklist.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
3. Air Quality. Would the project modifications:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	Impacts AQ-1, AQ-3, and AQ-5	No	No	No	N/A
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?	Impact AQ-6	No	No	No	N/A
c) Expose sensitive receptors to substantial pollutant concentrations?	Impact AQ-2	No	No	No	N/A
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Impact AQ-4	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.4-1 through 3.4-6 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to air quality. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Criteria Air Pollutants

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. Since the Program EIR, the National Ambient Air Quality Standards (NAAQS) for ozone have been updated and are included in Table 3.3-1 along with the California Ambient Air Quality Standards (CAAQS). Ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are the criteria air pollutants of primary concern in this analysis due to their nonattainment status with respect to the applicable NAAQS and CAAQS in the Sacramento Valley Air Basin (SVAB). Emission source types and health effects are summarized in Table 3.3-2. The attainment status of each criteria air pollutant with respect to the NAAQS and CAAQS in SVAB has not been changed since certification of the Program EIR and is provided in the Program EIR Table 3.4-1 (page 3.4-5). Monitoring data applicable to the project site has been updated since the Program EIR to provide the most current site-specific information and is included in Table 3.3-3.

Table 3.3-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS)[a,b]	National (NAAQS)[c]	
			Primary[b,d]	Secondary[b,e]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	–[e]	Same as primary standard
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Same as primary standard
	8-hour	9 ppm[f] (10 mg/m^3)	9 ppm (10 mg/m^3)	
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	—
Sulfur dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	—
Respirable particulate matter (PM_{10})	Annual arithmetic mean	20 µg/m^3	—	Same as primary standard
	24-hour	50 µg/m^3	150 µg/m^3	
Fine particulate matter ($PM_{2.5}$)	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
	24-hour	—	35 µg/m^3	Same as primary standard
Lead [f]	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-Day average	1.5 µg/m^3	—	—
	Rolling 3-Month Average	–	0.15 µg/m^3	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m^3)	No national standards	
Sulfates	24-hour	25 µg/m^3		
Vinyl chloride [f]	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m^3 = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

a California standards for ozone, carbon monoxide, SO_2 (1- and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards (CAAQS)are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

c National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.

d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants (TACs) with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2016

Table 3.3-2 Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	Secondary pollutant resulting from reaction of ROG and NO_X in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO_X results from the combustion of fuels	increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	Incomplete combustion of fuels; motor vehicle exhaust	headache, dizziness, fatigue, nausea, vomiting, death	permanent heart and brain damage
Nitrogen dioxide (NO_2)	combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines	coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	chronic bronchitis, decreased lung function
Sulfur dioxide (SO_2)	coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO_2 exposure to chronic health impacts
Respirable particulate matter (PM_{10}), Fine particulate matter ($PM_{2.5}$)	fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO_2 and ROG	breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	alterations to the immune system, carcinogenesis
Lead	metal processing	reproductive/ developmental effects (fetuses and children)	numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NO_X = oxides of nitrogen; ROG = reactive organic gases.

[1] "Acute" refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

[2] "Chronic" refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Source: EPA 2018

Monitoring Station Data and Attainment Designations

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The Sacramento County average air quality conditions are most representative of the project area with recent data for ozone, PM_{10}, and $PM_{2.5}$. Table 3.3-3 summarizes the air quality data from the most recent three years where data is available (2016-2018).

Both the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. Table 3.4-1 (page 3.4-5) of the Program EIR shows that the SVAB is in nonattainment for CAAQS and NAAQS for ozone, CAAQS for PM_{10}, and the NAAQS for $PM_{2.5}$.

Table 3.3-3 Summary of Annual Data on Ambient Air Quality (2016-2018)

	2016	2017	2018
Ozone			
Maximum concentration (1-hr/8-hr avg, ppm)	0.111/0.094	0.121/0.091	0.117/0.098
Number of days state standard exceeded (1-hr/8-hr)	10/33	6/18	8/19
Number of days national standard exceeded (8-hr)	15	9	10
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration (24-hour µg/m^3)	46.8	46.9	228.4
Number of days national standard exceeded (24-hour measured)	3	6.2	16
Respirable Particulate Matter (PM_{10})			
Maximum concentration (µg/m^3)	88.5	237.7	454.0

	2016	2017	2018
Number of days state standard exceeded	0	1	9
Number of days national standard exceeded	31	38	66

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; Ozone and fine particulate matter ($PM_{2.5}$) measurements from Sacramento County. Respirable particulate matter (PM_{10}) measurements from SVAB.

Source: CARB 2019

To supplement the analysis in the Program EIR, air quality modeling was performed to compare the construction emissions from the project modifications—development of 10 wells and associated pipelines and electrical lines—to the Sacramento Metropolitan Air Quality Management District (SMAQMD) mass emissions significance thresholds. The modeling data is included as Appendix A.

DISCUSSION

The Program EIR determined that the program elements would not exceed any applicable thresholds for criteria air pollutants and precursors or conflict with or obstruct implementation of the applicable air quality plan (Program EIR Impacts AQ-1, AQ-3, and AQ-5); would not expose sensitive receptors to substantial pollutant concentrations (Program EIR Impact AQ-2); would not create permanent or long-term objectionable odors (Program EIR Impact AQ-4); and would not result in a cumulatively considerable contribution to a significant air quality impact (Program EIR Impact AQ-6). These impacts were concluded to be less than significant.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence air quality impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) The project modifications would be located within the SVAB. Air quality planning for the Basin is under the jurisdiction of the SMAQMD. The SMAQMD has adopted Air Quality Management Plans (AQMPs) to reduce emissions of reactive organic gases (ROGs) and oxides of nitrogen (NO_X) (ozone precursors), PM_{10}, and $PM_{2.5}$ to lead the SVAB into compliance with the NAAQS and CAAQS. The AQMPs rely on emissions forecasts based on demographic and economic growth projections provided by the County and City general plans. Projects whose growth is included in the projections used in the formulation of the AQMPs are considered to be consistent with the plans and would not interfere with its attainment plans. Because the project would not modify land uses, the project would be consistent with SMAQMD's AQMPs. Furthermore, as discussed in the following impact discussions, the short-term construction and long-term operation of the project (jncluding installation of a pipeline with a 66-inch diameter) would not generate criteria air pollutants that would exceed the SMAQMD significance thresholds, which were developed to determine whether a project would cumulatively contribute to the SVAB nonattainment designations. The project would not conflict with applicable air quality plans and would not cause any additional or worse impacts as compared to those identified in the Program EIR.

   The use of staging areas outside the established construction corridor would not conflict with applicable air quality plans and would not cause any additional or worse impacts as compared to those identified in the Program EIR because use of staging areas would not permanently modify land uses or generate criteria air pollutants that would exceed the SMAQMD significance thresholds. For these same reasons, any additional construction activity associated with installation of a larger transmission pipeline would not conflict with applicable air quality plans and would not cause any additional or worse impacts as compared to those identified in the Program EIR.

b) Consistent with what is described in the Program EIR, construction of the project modifications would result in emissions of criteria air pollutants (e.g., PM_{10} and $PM_{2.5}$) and precursors (e.g., NO_X and ROGs) in the City of Elk Grove and Sacramento County, within the jurisdiction of the SMAQMD.

   The project modifications would consist of up to 10 wells and associated pipelines and electrical service lines that would be located within public ROW, agricultural lands, and public open space areas. Construction would be conducted in two phases. Phase 1 would involve construction of five wells and associated pipelines and

electrical lines from April to November in 2025 and Phase 2 would involve construction of five wells and associated pipelines and electrical lines from April to November in 2026. Construction-related activities would generate emissions of ROG, NO_X, CO, PM_{10}, and $PM_{2.5}$ associated with off-road equipment, material delivery, worker commute trips, and paving. Hauling of construction material would include the export of approximately 15,612 cubic yards of spoil material. Hauling of this material would generate a total of 406 trips during pipeline construction and 569 truck trips during electrical line construction (see Table 2-1 in Chapter 2, "Description of the Proposed Action"). Fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be associated primarily with excavation, trenching, grading, and clearing and vary as a function of soil silt content, soil moisture, wind speed, and acreage of disturbance. PM_{10} and $PM_{2.5}$ are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of ozone precursors, ROG and NO_X, would be associated primarily with construction equipment and on-road mobile exhaust. The construction equipment mix, hauling amounts, and the number of construction workers for Phases 1 and 2 were provided by Regional San and can be found in Appendix A.

Table 3.3-4 summarizes the modeled maximum daily emissions from construction activities for Phases 1 and 2. Daily maximum emissions reflect the maximum extent of construction activities that would occur from the wells constructed sequentially, a pipeline advancement averaging 600 feet per day, and electrical line advancement averaging 750 feet per day. It was assumed that all electrical lines would require underground installation for a conservative emissions analysis as trenching for underground installation would have greater emissions that installation of power poles and stringing of line. In addition, the emissions modelling was conducted for an early iteration of the project design with longer linear disturbance estimates for pipeline and electrical line installation. Since that time, further refinements to the project description have reduced the length of needed pipelines and electrical service lines. Therefore, the emissions estimates in Table 3.3-4 are likely greater than what would actually occur.

Table 3.3-4 Summary of Daily Maximum Emissions of Criteria Air Pollutants and Precursors Associated with Construction of the Project Modifications

Construction Phase	ROG lb/day	NO_X lb/day	PM_{10} lb/day	PM_{10} tons/year	$PM_{2.5}$ lb/day	$PM_{2.5}$ tons/year
Phase 1						
Wells	2	15	1	<1	1	<1
Pipelines	3	26	20	<1	5	<1
Electrical Lines	3	23	24	<1	6	<1
Total	**7**	**64**	**45**	**<1**	**12**	**<1**
Phase 2						
Wells	2	15	1	<1	1	<1
Pipelines	3	26	20	<1	5	<1
Electrical Lines	2	23	24	<1	6	<1
Total	**7**	**63**	**45**	**<1**	**12**	**<1**
Maximum Daily[a]	7	64	45	<1	12	<1
SMAQMD Threshold of Significance	None	85	80	14.6	82	15

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

Maximum emissions include compliance with SMAQMD's Basic Construction Emission Control Practices (Best Management Practices) under Rule 403.

Total values may not sum exactly due to rounding. See Appendix A for detailed input parameters and modeling results.

Criteria and precursor air pollutant emissions were estimated using construction equipment fleets included in the model for construction years 2023 and 2024. Because project construction is to occur in later years, 2025 and 2026, emissions are conservative due to the advancement of construction equipment efficiency over time. In addition, the modeling reflects an earlier iteration of the project that estimated a total pipeline length of 32,000 feet and a total spoil quantity of 21,000 cubic yards for pipeline excavation. Because the updated project proposes less construction activity with a total pipeline length of 9,900 feet and a total spoil quantity of 6,500 cubic yards for pipeline excavation, these emissions estimates are conservative.

Source: Modeling performed by Ascent Environmental in 2020

Daily emissions from the construction of the wells and the off-gas emissions from the laying of asphalt for both the pipelines and electrical lines were modeled using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. Emissions associated with the construction of the pipelines and electrical lines were modeled using SMAQMD's Roadway Construction Emissions Model (RCEM). As shown in Table 3.3-4, daily emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ and annual emissions of PM_{10} and $PM_{2.5}$ resulting from construction of the 10 wells and associated pipelines and electrical lines would not exceed the respective thresholds for Phases 1 and 2. Construction of the wells and related facilities would occur after installation of Harvest Water recycled water distribution pipelines is complete; therefore, construction emissions from wells, electrical lines, and pipelines would not overlap with construction emissions from other Harvest Water activities.

SMAQMD's project thresholds are intended to maintain or achieve attainment designations in the SVAB with respect to the CAAQS and NAAQS. The NAAQS and CAAQS in turn were developed based on health-based criteria to be protective of public health. As indicated in the Program EIR, SMAQMD requires all construction projects to implement the Basic Construction Emission Control Practices, under Rule 403, to reduce overall fugitive dust and exhaust emissions. If the project does not exceed the District's thresholds its individual emissions are not anticipated to cause or contribute towards nonattainment designations. Therefore, a project with estimated emissions below SMAQMD's thresholds of significance would not exacerbate or interfere with the region's ability to attain the health-based standards. Furthermore, because emissions of criteria air pollutants would not cause an exceedance of the NAAQS and CAAQS the project would not cause adverse health impacts as the standards are set to be protective of public health. Because the project's construction phase emissions would be below SMAQMD's thresholds, they would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. In addition, because maintenance vehicle trips would be conducted less than weekly, emissions associated with trips would be nominal and would not be anticipated to exceed SMAQMD thresholds of significance. As the project's operational emissions would be below SMAQMD's recommended thresholds, they would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Because the ambient air quality standards are established to be protective of public health, adverse health impacts to receptors are not anticipated as the project modification's emissions would be below SMAQMD's thresholds.

Therefore, the short-term construction and long-term operations contribution of criteria air pollutants and precursors, combined with other cumulative sources of criteria air pollutants and precursors in the region would not be cumulatively considerable and would not contribute to adverse health impacts.

The use of staging areas outside the established construction corridor would contribute to the generation of construction emissions of criteria air pollutants (e.g., PM_{10} and $PM_{2.5}$) and precursors (e.g., NO_X and ROGs) because these additional staging areas would be used during project construction. However, no new emissions would be generated, but rather, emissions already identified in the Program EIR would occur at the new staging areas. As described in the Program EIR, the project's construction phase emissions would be below SMAQMD's thresholds. Therefore, the project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Increasing the size of the transmission pipeline would result in additional construction emissions because of the greater equipment operation resulting from a larger trench and movement and disposal of more excavated spoils. In the *Air Quality and Greenhouse Gas Technical Report for the Lateral Pipelines and On-Farm Connections Project* (Regional San 2020a) construction emissions of criteria pollutants were provided for the concurrent construction of the transmission pipeline, the pump station, and the lateral pipelines and on farm connections. If all these project elements were under construction concurrently, maximum emissions would remain under all applicable thresholds (see Table 4 in the Air Quality Technical Report [Regional San 2020a]). To exceed any emissions thresholds, total emissions for construction of the transmission pipeline would need to increase by more than 25 percent for NOx and would need to more than double for all other criteria pollutants, As identified in Chapter 2, "Description of the Proposed Action," increasing the transmission pipeline from a 60-inch diameter to 66 inches would increase the trench size and spoils generation by approximately 10 percent. This would occur over approximately 9 miles of the 14-mile pipeline.

An increase in trench size and spoil handline of 10 percent over just a portion of the overall transmission pipeline route would not result in total construction emissions increasing by 25 percent or more. Therefore, construction emissions would continue to remain below applicable thresholds and would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

c) Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a Toxic Air Contaminant (TAC) by CARB in 1998. The potential cancer risk from the inhalation of diesel PM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003: K-1). With regard to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. 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 level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment (OEHHA), when a Health Risk Assessment is prepared to project the results of exposure of sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the duration of activities associated with the project modifications if emissions occur for shorter periods (OEHHA 2015:5-23, 5-24).

The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the project site would not include any industrial sources of other TACs. Construction-related activities that would result in temporary, intermittent emissions of diesel PM would be from the exhaust of off-road equipment.

Potential exposure levels of diesel PM, analyzed in the Program EIR, have not changed. The sensitive receptors closest to the site consist of residences located along Franklin Boulevard in the Bufferlands area. For the two wells and pipelines and electrical lines to be constructed along Franklin Boulevard, receptors are anticipated to be as close as 100 feet. Due to the temporary nature of construction activities for each well and the associated pipelines and electrical lines, exposure of any particular sensitive receptor would be brief (i.e., days) and would not be expected to cause an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0. Because construction would not occur near a particular receptor for an extended period of time, any TAC exposure would be short-term and temporary.

The use of staging areas outside the established construction corridor would not expose sensitive receptors to substantial pollutant concentrations because construction activities would be temporary, staging areas would be dispersed throughout the project area and locations would change as construction proceeds, and use of staging areas would not occur near a particular receptor for an extended period of time. For these same reasons, any additional construction activity associated with installation of a larger transmission pipeline would not expose sensitive receptors to substantial pollutant/TAC concentrations.

d) Consistent with what was described in the Program EIR, construction activities would not generate permanent or long-term objectionable odors. The project's minor odors from the use of heavy-duty diesel equipment, and the laying of asphalt during project-related construction activities would be intermittent and temporary. While one well is to be constructed at a time, and the pipelines and electrical lines are estimated to advance approximately 600 and 750 feet per day, respectively, construction activity would only occur in the vicinity of sensitive receptors temporarily. In addition, emissions from the source would dissipate rapidly with an increase in distance. Sensitive receptors in proximity to the project site are as close as 100 feet, but exposure would be brief and intermittent. As evaluated in the Program EIR, the operations and maintenance of the project modifications were determined not to be a substantial odor source.

The use of staging areas outside the established construction corridor would not generate permanent or long-term objectionable odors because of the temporary nature of staging areas and distance from sensitive receptors. The same is true for any increased construction effort associated with installation of a larger diameter transmission pipeline.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to air quality. The combined analysis of air quality issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.4 Biological Resources

Section 3.5, "Biological Resources," of the Program EIR evaluates the impacts of the program on biological resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
4. Biological Resources. Would the project modifications:					
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?	Impact BIO-1	No	No	No	Yes
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?	Impact BIO-2	No	No	No	Yes
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?	Impact BIO-3	No	No	No	Yes
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?	Impact BIO-4a, Impact BIO-4b	No	No	No	Yes
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impact BIO-5	No	No	No	Yes
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?	Impact BIO-6	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.5-1 through 3.5-28 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to biological resources. The following information provides an update of information from the Program EIR and reflects the current environmental setting. In addition, the *Biological Resources Technical Report for the Sacramento Regional County Sanitation District Harvest Water Program, Lateral Pipelines and On-Farm Connections Project* (Regional San 2020a) evaluated biological resources in the project area.

The Program EIR identified 32 special-status species in the program area. In addition to the species discussed in the Program EIR, seven others are known to occur or have the potential to occur within the project area including pappose tarplant (Centromadia parryi ssp. parryi), lesser sandhill crane (Grus canadensis) (wintering), greater sandhill crane (Grus canadensis tabida) (nesting an wintering), least bittern (Ixobrychus exilis) (nesting), California black rail (Laterallus jamaicensis coturniculus) (year round), yellow warbler (Setophaga petechia) (nesting), and mid-valley fairy shrimp (Branchinecta mesovallensis) (Regional San 2020a). The addition of these species is due primarily to occurrences of these species in the area being added to the California Natural Diversity Database (CNDDB) since publication of the Program EIR and more recent habitat mapping conducted in support of Harvest Water.

Sensitive biological resources within the Bufferlands in proximity to the potential well locations include raptor nests elderberry shrubs, giant garter snake habitat, seasonal wetlands, oak trees, and vernal pools. The County-owned lands adjacent to Franklin Field are primarily agricultural lands; however, there are also drainages and trees along Bruceville Road.

DISCUSSION

The project area now encompasses the area around Franklin Field, which includes sensitive habitats such as drainages and trees. In addition, several new special-status species have the potential to occur within the project area as described in the "Environmental Setting" section above. However, these changes would not appreciably alter the type or extent of impacts covered under the Program EIR; therefore, impacts on terrestrial biological resources resulting from construction and operation of the project modifications and the implementation and effectiveness of associated mitigation measures would not be different from that described in the Program EIR.

The Program EIR determined that the program elements could adversely affect sensitive species and their habitat (Program EIR Impact BIO-1), could adversely affect riparian habitat or other sensitive natural community (Program EIR Impact BIO-2), could adversely affect federally protected wetlands (Program EIR Impact BIO-3), could interfere with the movement or reproduction of sensitive or important fish species in the Sacramento River or Delta region (Program EIR Impact BIO-4b), and could conflict with local policies and ordinances protecting biological resources (Program EIR Impact BIO-5); these impacts were concluded to be less than significant with mitigation. Additionally, the program elements could interfere with the movement of native species; this impact was concluded to be less than significant (Program EIR Impact BIO-4a). Finally, the Program EIR determined that the program elements would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because there was no such adopted plan at the time the Program EIR was prepared; it was thus concluded that there would be no impact (Program EIR Impact BIO-6).

Other than the addition of species identified above, there are no new circumstances since certification of the Program EIR that would influence biological resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) Although additional special-status species have potential to occur in or near the project area, potential impacts to similar species were covered in the Program EIR. As with the impacts described in the Program EIR, construction of the project modifications could kill or injure individuals, particularly during ground-disturbing activities such as grubbing, grading, and excavating. Construction related equipment and storage/moving of construction materials could also impact sensitive species. Habitat for sensitive species could also be adversely affected by construction of the project modifications, and this could indirectly impact sensitive species. Substantial impacts to sensitive species, either directly, or indirectly through habitat impacts, may occur.

Therefore, the types and intensities of impacts to special-status species as a result of construction and operation of the project modifications would be similar to those described in the Program EIR.

The use of additional staging areas outside the established construction corridor would not have a substantial adverse effect on sensitive species or their habitat because the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near these lands. As described therein, if additional staging areas are needed, they would ideally be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Use of lands such as these would have no effect on sensitive species or their habitat. However, lands supporting ruderal vegetation or agricultural lands may also be used if it is verified that sensitive resources such as wetlands would not be affected. Staging areas in these locations could temporarily alter conditions on lands providing habitat for sensitive species. However, the change in land use would be temporary and the land would be returned to pre-project conditions once use of the staging area ends. Therefore, there would be no loss of habitat for sensitive species. Overall, potential impacts to sensitive species and their habitat would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in a slightly larger footprint for the pipeline trench, which could result in a small increase in adverse effects to special-status species or their habitat if they are in proximity to the pipeline alignment. However, the width of the construction disturbance corridor and the types of construction activities that would occur would not change compared to that described in the Program EIR. Special-status species and habitats that could be affected by the larger transmission pipeline would not change compared to the Program EIR. Therefore, potential impacts to special-status species would be similar to those identified in the Program EIR.

b) There are sensitive natural communities in the project area and construction of new facilities could adversely affect riparian habitat or other sensitive natural community, including use of equipment and excavation during construction, and construction of permanent facilities. The sensitive natural communities within the project area were covered by the Program EIR. In addition, the types of impacts and facilities constructed, intensity of construction, and amount of habitat affected by construction of the project modifications are similar to the impacts described in the Program EIR. Wells within the Bufferlands and access to these wells would be sited to avoid sensitive biological resources (including existing conservation easements, special-status species habitat, vernal pools, and protected oak trees). Similarly, wells adjacent to Franklin Field and access to these wells would be sited to avoid sensitive biological resources.

The use of additional staging areas outside the established construction corridor would not have a substantial adverse effect on riparian habitat or other sensitive natural community because the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near these lands. As described therein, if additional staging areas are needed, they would ideally be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Use of lands such as these would have no effect on riparian habitat or other sensitive natural community. However, lands supporting ruderal vegetation or agricultural lands may also be used if it is verified that sensitive resources such as riparian habitat would not be affected. Staging areas in these locations could temporarily alter conditions on lands adjacent to riparian habitat or other sensitive natural community. However, the change in land use would be temporary and the land would be returned to pre-project conditions once use of the staging area ends. Therefore, there would be no loss of riparian habitat or other sensitive natural community. Overall, potential impacts to riparian habitat or other sensitive natural community would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in a slightly larger footprint for the pipeline trench, which could result in a small increase in adverse effects to sensitive natural communities if they are in proximity to the pipeline alignment. However, the width of the construction disturbance corridor and the types of construction activities that would occur would not change. Sensitive natural communities that could

be affected by the larger transmission pipeline would not change compared to the Program EIR. Therefore, potential impacts to sensitive natural communities would be similar to those identified in the Program EIR.

c) Wetlands, drainages, and vernal pools are within the project area. Ground disturbance during construction could result in temporary fill of or indirect water quality effects to federally protected wetlands. As with impacts to wetlands described in the Program EIR, impacts to wetlands from the project modifications are thus expected to be confined to temporary construction impacts. In addition, wells and access to the wells would be sited to avoid sensitive resources including wetlands and vernal pools. Pipelines constructed along roadways have the potential to temporarily disturb agricultural or roadside ditches; however, these features are highly degraded and of low habitat quality. Therefore, impacts to wetlands would be similar to or less than those described in the Program EIR.

The use of additional staging areas outside the established construction corridor would not have a substantial adverse effect on wetlands because the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near these lands. As described therein, if additional staging areas are needed, they would ideally be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Use of lands such as these would have no effect on wetlands. However, lands supporting ruderal vegetation or agricultural lands may also be used if it is verified that sensitive resources such as wetlands would not be affected. Staging areas in these locations could temporarily alter conditions on lands adjacent to wetlands. However, the change in land use would be temporary and the land would be returned to pre-project conditions once use of the staging area ends. Therefore, there would be no loss of wetlands. Overall, potential impacts to wetlands would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size could result in a small increase in adverse effects to wetlands, drainages, and vernal pools if they are in proximity to the pipeline alignment. However, the width of the construction disturbance corridor and the types of construction activities that would occur would not change. Wetlands would still be avoided to the extent possible and trenchless construction methods would be used for creek/drainage crossings. Therefore, potential impacts to wetlands, drainages, and vernal pools would be similar to those identified in the Program EIR.

d) Similar to impacts to migratory corridors described in the Program EIR, direct impacts to drainage corridors from the project modifications would be limited to construction, as these features would be available for use as movement corridors following construction. Therefore, although construction activities could interfere with the movement of native resident or migratory fish or wildlife species, the drainage corridors within the project area are highly degraded and likely function poorly as migratory corridors. As with the Program EIR, these impacts would be temporary. Permanent facilities would be small and would not be within waterways.

In addition, the Program EIR evaluated the potential for the Harvest Water Project to reduce flows in the Sacramento River. However, the project modifications would not alter the operation of recycled water facilities or the transfer of recycled water to the South County rather than the Sacramento River. Furthermore, groundwater accounting would be conducted consistent with the ecosystem benefits of the Harvest Water Program. Therefore, the project modifications would not reduce flows in the Sacramento River or affect movement or reproduction of sensitive or important fish species in the Sacramento River. The project modifications would not substantially interfere with the movement of migratory species and would result in less of an impact on migratory corridors than described in the Program EIR.

The use of additional staging areas outside the established construction corridor could interfere with the movement of native resident or migratory fish or wildlife species during construction; however, as described in the Program EIR, the drainage corridors within the project area are highly degraded and likely function poorly as migratory corridors. Any impacts would be temporary and staging areas would be returned to pre-construction conditions once construction is complete. Overall, potential impacts to migratory corridors would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size could result in a small increase in adverse effects to migratory corridors, including drainages, if they are in proximity to the pipeline alignment. However, the width of the construction disturbance corridor and the types of construction activities that would occur would not change. In addition, the larger pipeline would not cross any additional drainages compared to those described in the Program EIR. Therefore, potential impacts to migratory corridors would be similar to those identified in the Program EIR.

e) The Sacramento County General Plan (Sacramento County 2011) and Bufferlands Master Plan (Regional San 2000) have policies regarding habitat and species preservation, and any tree removal would be subject to the Sacramento County Tree Preservation Ordinance. Drainages, wetlands, special-status species, and sensitive habitats are within the project area, and construction activities could result in adverse effects to these sensitive resources. The Program EIR evaluated the potential for tree trimming and removal to accommodate construction and installation of facilities under the program. No tree removal or trimming is anticipated with implementation of the project modifications. In addition, as described above and consistent with the conclusions in the Program EIR, sensitive resources would be avoided when possible and any impacts to sensitive resources would be mitigated. Therefore, conflicts with local policies and regulations would be similar to or less than those described in the Program EIR.

The use of additional staging areas outside the established construction corridor would not conflict with local policies and regulations because no tree removal or trimming is anticipated, sensitive resources would be avoided when possible and any impacts to sensitive resources would be mitigated, and staging areas would be returned to pre-construction conditions once construction is complete. Overall, potential impacts related to potential conflicts with local policies and regulations would be similar to or less than those identified in the Program EIR.

Increasing the transmission pipeline size could result in a small increase in adverse effects on sensitive biological resources protected by local policies if they are in proximity to the pipeline alignment. However, the width of the construction disturbance corridor and the types of construction activities that would occur would not change. In addition, no additional tree removal is expected as a result of increasing the size of the transmission pipeline. Therefore, conflicts with local policies and regulations protecting biological resources would be similar to those identified in the Program EIR.

f) Harvest Water is expressly identified as a covered activity in the SSHCP. The project modifications support the implementation of Harvest Water. However, on their own, the installation of wells and pipelines are also covered activities under the SSHCP. Therefore, the project modifications are a SSHCP-covered activity. Regional San is already coordinating with the South Sacramento Conservation Agency regarding the details of use of the SSHCP for Harvest Water and is applying to be identified as a Participating Special Entity consistent with SSHCP processes. Therefore, the project modifications would comply with terms and conditions of the SSHCP to gain regulatory permits and approvals and implementation of the project modifications would not conflict with the provisions of the SSHCP.

The use of additional staging areas outside the established construction corridor would not conflict with the provisions of the SSHCP because the use of these additional staging areas would be a covered activity under the SSHCP and Regional San would continue to comply with terms and conditions of the SSHCP to gain regulatory permits and approvals. Overall, this activity would not result in a new conflict with the SSHCP that was not identified in the Program EIR.

In addition, the transmission pipeline covered in the Program EIR is a SSHCP-covered activity. Increasing the size of the transmission pipeline would not change the coverage by the SSHCP. Therefore, increasing the size of the transmission pipeline would continue to comply with terms and conditions of the SSHCP and would not result in a new conflict with the SSHCP that was not identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for adverse effects to sensitive species and their habitat; riparian habitat, other sensitive natural communities, or federally protected wetlands; and the potential for conflicts with local policies and ordinances protecting biological resources. With implementation of these mitigation measures, potential impacts to biological resources would be reduced to a less-than-significant level.

No new biological resources impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measure from the Program EIR would apply to the project modifications evaluated in this addendum.

Mitigation Measure BIO-1a: Avoid Impacts (Both Permanent and Temporary) to the Extent Feasible to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species

Regional San and its contractors will avoid and minimize permanent and temporary impacts to habitats and land cover types used by sensitive species potentially occurring in the project Area (as listed in Table 3.5 1 of the EIR for the Program). Avoidance and minimization of habitat areas will be accomplished during project design work, and/or during construction by implementing best management practices, including establishment of buffer zones, installation of fencing around sensitive habitats, and implementation of a storm water pollution prevention plan (SWPPP) to reduce the potential for sediments or contaminants to enter sensitive habitats.

Mitigation Measure BIO-1b: Mitigate Impacts to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species

Mitigation Measure BIO-1b in the Program EIR provides mitigation measures for habitats covered in the South Sacramento Habitat Conservation Plan (SSHCP). At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species.

With the SSHCP now adopted and in effect, the habitat compensation measures provided in Mitigation Measure BIO-1b are now superseded by the habitat compensation protocols avoidance and minimization measures (AMMs) included in the SSHCP. The original text from Mitigation Measure BIO-1b in the Program EIR is not reproduced here as this measure is no longer in effect.

The SSHCP AMMs are provided in SSHCP Section 5.4.2, "Covered Species Take Avoidance and Minimization Measures," at https://www.southsachcp.com/. A file listing only the AMMs is available at https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/SSCHP/AMMs%20Table.pdf.

The Mitigation Monitoring and Reporting Program (MMRP) for the Program EIR is being updated to reflect the details of the approved SSHCP.

Mitigation Measure BIO-1c: Mitigate Impacts to HCP-Covered Species

Mitigation Measure BIO-1c in the Program EIR provides mitigation measures for plant and wildlife species covered in the SSHCP. At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species.

With the SSHCP now adopted and in effect, the species-specific measures provided in Mitigation Measure BIO-1c are now superseded by the habitat compensation protocols and AMMs included in the SSHCP. The original text from Mitigation Measure BIO-1c in the Program EIR is not reproduced here as this measure is no longer in effect.

The SSHCP AMMs are provided in SSHCP Section 5.4.2, "Covered Species Take Avoidance and Minimization Measures," at https://www.southsachcp.com/. A file listing only the AMMs is available at https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/SSCHP/AMMs%20Table.pdf.

The MMRP for the Program EIR is being updated to reflect the details of the approved SSHCP.

Mitigation Measure BIO-1d: Mitigate Impacts to Sensitive Non-HCP-Covered Species

Several sensitive species with a low to moderate potential to occur in or near the project area are not included as covered species in the SSHCP. For these species, Regional San shall implement the following mitigation measures:

- **Non-SSHCP-Covered Sensitive Plants.** Before construction-related disturbance of natural community types and land covers in the project area, a botanical survey(s) will be completed to determine if sensitive plant species occur in the project area. Surveys will be conducted during the appropriate time of the year to facilitate detections and identifications. Sensitive non-SSHCP-covered plant species detected in the project area will be avoided as feasible. If impacts to sensitive non-covered plant species cannot be feasible avoided, Regional San will coordinate with Sacramento County and the resource agencies (CDFW and/or USFWS) as appropriate to determine the course of action, which may include relocation of plants to the SSHCP Preserve System or another conserved location.
- **Non-SSHCP-Covered Birds:** Song sparrow (Modesto population) or other sensitive, non-SSHCP-covered bird species may occur in the project area. Before disturbance of natural community or land covers, Regional San or its contractors will conduct nesting bird surveys to determine if active nesting is occurring in the Project area. All active nests will be avoided to the extent feasible and a 25-foot buffer will be established and maintained around each active nest until such time that the nest is vacated.

Mitigation Measure BIO-2: Secure Regulatory Permits to Impact Riparian Habitat and other Sensitive Natural Communities

Regional San shall obtain all necessary permits and approvals required to impact riparian habitat and sensitive natural communities, to the extent that these impacts may occur with development of any of the action alternatives. Necessary permits and approvals will include Clean Water Act permits (Section 404 and 401), FESA and CESA permits, and CDFW Lake and Streambed Alteration Agreement, and would include measures to avoid, minimize and compensate for any impacts so as to avoid any net loss in habitat value. Mitigation would include restoration of any habitats that were affected temporarily during construction, and could include purchase of credits from a mitigation bank if there are any permanent impacts to sensitive natural communities. *With the SSHCP now adopted and in effect, the SSHCP provides a mechanism for FESA, CESA, and Clean Water Act authorization. Regional San may use the SSHCP to obtain these permit authorizations, but must seek separate approval outside the SSHCP for a CDFW Lake and Streambed Alteration Agreement.*

Mitigation Measure BIO-3: Secure Clean Water Act Permits/Approvals

Mitigation Measure BIO-3 in the Program EIR provides mitigation measures for federally protected wetlands. At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species and habitats, including wetlands.

With the SSHCP now adopted and in effect, the measures provided in Mitigation Measure BIO-3 are now superseded by the habitat compensation protocols, AMMs, and Clean Water Act compliance process included in the SSHCP. The original text from Mitigation Measure BIO-3 in the Program EIR is not reproduced here as this measure is no longer in effect.

The MMRP for the Program EIR is being updated to reflect the details of the approved SSHCP.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to biological resources. Although more recent information (e.g., CNDDB search results) identifies that additional special-status species are present and the geographic area is slightly different from that described in the Program EIR (specifically, with project components proposed in the Bufferlands and adjacent to Franklin Field rather than along existing road rights of way), the types of impacts, intensity and duration

of construction, and types of sensitive resources present in the project area would be similar to those described in the Program EIR. As described for the Program EIR, AMMs from the SSHCP will be implemented, any necessary permits will be obtained before construction, and fees will be paid. Implementation of the mitigation measures above would reduce impacts such that no new significant impacts or substantially more severe impacts to biological resources would occur, consistent with the conclusions described in the Program EIR. The combined analysis of biological resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.5 Cultural Resources

Section 3.6, "Cultural Resources," of the Program EIR evaluates the impacts of the program on cultural resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

To supplement the analysis in the Program EIR with site-specific information, the *Sacramento Regional County Sanitation District Recycled Water Distribution Mains, Lateral Pipelines, and On-Farm Connections Project, CEQA Cultural Resources Survey Report* (Regional San 2020b) was prepared to further clarify the potential for cultural resources along anticipated pipeline routes, evaluate previously identified resources to determine whether they are historical resources or unique archaeological resources, determine whether the project modifications would affect these resources, and recommend procedures for avoidance. The study area for this report encompasses the locations for wells, pipelines, and electrical lines evaluated in this addendum. Due to its confidential nature, this report is not appended to this document.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
5. Cultural Resources. Would the project modifications:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impact CR-1	No	No	No	Yes
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impact CR-1	No	No	No	Yes
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Impact CR-2	No	No	No	Yes

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.6-2 through 3.6-12 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to cultural resources. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

There are no historic-era resources in the project area, and most of the project area is in Pleistocene-age alluvium, which has a low potential for buried archaeological resources. Further, while there are some previously recorded archaeological resources in the project area and these locations are considered archaeologically sensitive (Regional San 2020b), the proposed well and pipeline locations are not located near these sites.

DISCUSSION

The Program EIR determined that the program elements would have the potential to result in the substantial adverse change in the significance of a buried archaeological resource (Program EIR Impact CR-1), and would have the potential to expose human remains during excavation (Program EIR Impact CR-2); these impacts were concluded to be less than significant with mitigation.

Other than the updated cultural resources report prepared for the lateral pipelines and on-farm connections (Regional San 2020b), there are no new circumstances since certification of the Program EIR that would influence cultural resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a,b) There are no known built historic-era resources in the project area. Therefore, the project modifications would not affect any built historic resources. In addition, most of the project area is considered to have a low sensitivity for archaeological resources and, thus, the Program EIR concluded that there were no previously recorded archaeological resources in the project area that would be affected by the Program elements. Similarly, the *CEQA Cultural Resources Survey Report* (Regional San 2020b), which was prepared to further clarify the potential for cultural resources in the project area, indicates that there are no previously recorded archaeological resources that are near the proposed well and pipeline locations.

Nonetheless, the project modifications have the potential to affect previously unrecorded archaeological resources or subsurface historical resources.

The use of additional staging areas outside the established construction corridor would not have a substantial adverse effect on previously recorded archaeological resources because the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near these lands. As described therein, if additional staging areas are needed, they would ideally be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Use of lands such as these would have no effect on previously recorded archaeological resources. Any additions to the construction disturbance area must be in locations that would not result in significant adverse effects to biological, cultural, or other sensitive resources. As described in the Program EIR, project construction nonetheless has the potential to affect previously unrecorded archaeological resources or subsurface historical resources, and mitigation would be implemented to reduce this impact. Overall, potential impacts to archaeological or historical resources would be similar to those identified in the Program EIR.

In addition, increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which would result in a slightly greater potential to encounter subsurface archaeological or historical resources. However, the location of the pipeline alignment, the width of the construction disturbance corridor, and the types of construction activities that would occur would not change. Therefore, potential impacts to previously unrecorded archaeological resources or subsurface historical resources would be similar to those identified in the Program EIR.

c) No evidence suggests that any prehistoric or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the project area. However, there is a possibility that unmarked, previously unknown Native American or other graves could be present and could be uncovered during construction activities. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and grave-associated items from vandalism and inadvertent destruction.

The use of additional staging areas outside the established construction corridor would not be likely to disturb human remains because subsurface excavation would not be conducted in these areas. As described in the Program EIR, project construction overall has the potential to affect human remains, and mitigation would be implemented to reduce this impact. Overall, potential impacts to human remains would be similar to those identified in the Program EIR.

In addition, increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which would result in a slightly greater potential to encounter unknown Native American or other graves. However, the location of the pipeline alignment, the width of the construction disturbance corridor, and the types of construction activities that would occur would not change. Therefore, potential impacts to unmarked, previously unknown Native American or other graves would be similar to those identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for substantial adverse changes in the significance of a buried archaeological resource and exposure of human remains during excavation. With implementation of these mitigation measures, potential impacts to cultural resources would be reduced to a less-than-significant level.

Mitigation Measure CR-1a: Discovery of Previously Unknown Historic or Archaeological Resources during Construction

If during excavation or earth moving activities, potential historic or archaeological resources are encountered, the County or local jurisdiction shall be notified and a professional archaeologist meeting the minimum qualifications in archaeology as set forth in the Secretary of the Interior's Standards and Guidelines shall be contracted by Regional San and dispatched to assess the nature and significance of the find in the following manner:

- All excavation and/or grading within 20 meters of the discovery area shall cease immediately. The responding archaeologist may, after analyzing the discovery, authorize an alternate (or reduced) buffer around the materials to ensure adequate evaluation and protection of potential historic and/or archaeological resource(s) during continued construction operations.
- Additional evaluation of the historic and/or archaeological resource(s) shall be conducted and significance of the materials determined. If the discovery is considered significant, the archaeologist shall develop and implement a late-discovery mitigation strategy in conjunction with Regional San, to minimize and/or avoid the impact through preparation and implementation of an avoidance, evaluation, or recovery plan that Regional San will implement. Such a plan may involve resource avoidance (preservation in place), or could include recovery and archival research (e.g., excavation, documentation, curation, data recovery, or other appropriate measures).

Mitigation Measure CR-1b: Note on Construction Plans

Regional San shall require the inclusion of a note on all construction plans specifying that construction, excavation, and earthwork shall cease immediately if historical, archaeological, or paleontological resources are discovered to enable a professional archaeologist to assess, evaluate, and mitigate or avoid the potential impacts to resources as appropriate.

Mitigation Measure CR-1c: Discovery of Paleontological Resources During Construction

If paleontological resources are discovered during earth moving activities, the construction crew shall immediately cease work near the find. A qualified paleontologist shall assess the nature and importance of the find and if the resource is determined to be significant, prepare an avoidance, evaluation, or recovery plan, which Regional San will implement. Such a plan may involve resource avoidance (preservation in place), or could include recovery and archival research, (e.g., excavation, documentation, curation, data recovery, or other appropriate measures) as well as additional monitoring.

Mitigation Measure CR-2: Discovery of Human Remains

If human remains are encountered during the construction in the project area, California Health and Safety Code Section 7050.5 requires that all disturbance at the site cease immediately within a 100 foot radius of the discovery, the County Coroner be notified, and a determination of origin and disposition provided by the Coroner pursuant to Public Resource Code Section 5097.98. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery.

The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to cultural resources. The combined analysis of cultural resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.6 Energy

Section 3.7, "Energy Resources," of the Program EIR evaluates the impacts of the program on energy resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
6. Energy. Would the project modifications:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Impact ENE-1	No	No	No	N/A
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Impact ENE-1	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.7-1 through 3.7-2 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to energy.

DISCUSSION

The Program EIR determined that the program elements would not result in the wasteful, inefficient, or unnecessary consumption of energy resources; this impact was concluded to be less than significant (Program EIR Impact ENE-1).

There are no new circumstances since certification of the Program EIR that would influence energy impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a,b) The project modifications would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Construction would require the use of fuels (primarily gas, diesel, and motor oil) for a variety of construction activities, including excavation, grading, and vehicle travel. Use of these fuels would not be wasteful or unnecessary because their use is necessary to contribute to the long-term distribution, use, and reliability of water resources within the project area. However, excessive idling and other inefficient site operations during construction could result in the inefficient use of fuels. Fuels would not be used wastefully during construction because doing so would not be economically sustainable for contractors. In addition, implementing SMAQMD's required emission control practices, as described in Section 3.3.3, "Air Quality," would reduce air pollutant emissions by a variety of methods including limiting idling, and would also reduce inefficient use of fuels. Implementation of this measure would reduce the inefficient use of construction-related fuels.

The South County Ag Program Feasibility Study determined that Harvest Water would decrease energy consumption in two areas: (1) avoided groundwater pumping energy and (2) avoided wastewater discharge energy. The avoided cost of groundwater pumping would translate to a reduction in energy consumption by approximately 5,000 megawatt-hours per year (MWh/yr). Because less water would be discharged into the

Sacramento River, Harvest Water would also reduce energy consumption from avoided wastewater discharge by 750 MWh/yr.

The project modifications would not conflict with the 2008 *Energy Action Plan*, which focuses on energy efficiency, demand response, renewable energy, and energy provisioning reliability and infrastructure (CEC 2020). Although the project modifications would use electricity for operation of the well pumps, as discussed above, Harvest Water would decrease energy consumption in two areas: (1) avoided groundwater pumping energy and (2) avoided wastewater discharge energy. Therefore, the project modifications would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The use of additional staging areas outside the established construction corridor would not result in the wasteful, inefficient, or unnecessary consumption of energy resources because the types of construction equipment and activities would not change and implementation of SMAQMD's required emission control practices would reduce the inefficient use of construction-related fuels. No long-term energy would be needed at staging areas, which would be returned to pre-project conditions once construction is complete. Therefore, overall energy usage would be similar to that identified in the Program EIR.

Increasing the transmission pipeline size would result in a slight increase in energy usage related to excavation of the pipeline trench compared to that described in the Program EIR. However, the types of equipment required and types of construction activities would not change. Increasing the transmission pipeline size would not increase the long-term energy consumption of the project. Therefore, overall energy usage for the project would be similar to that identified in the Program EIR.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to energy. The combined analysis of energy issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.7 Geology and Soils

Section 3.8, "Geology and Soils," of the Program EIR evaluates the impacts of the program on geology and soils. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Section 3.6, "Cultural Resources," of the Program EIR evaluates the impacts of the program on paleontological resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
7. Geology and Soils. Would the project modifications:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.) ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	Impact GEO-2	No	No	No	N/A
b) Result in substantial soil erosion or the loss of topsoil?	Impact GEO-1	No	No	No	N/A
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?	Impact GEO-2	No	No	No	N/A
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?	Impact GEO-2	No	No	No	N/A

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
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?	Issue dismissed on page 3.8-7	No	No	No	N/A
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impact CR-1	No	No	No	Yes

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.8-1 through 3.8-3 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to geology and soils. The environmental setting provided on page 3.6-2 of the Program EIR is relevant to understanding potential impacts to paleontological resources.

DISCUSSION

The Program EIR determined that the program elements would not result in substantial soil erosion, siltation, or loss of topsoil because compliance with the Construction General Permit would ensure that best management practices (BMPs) are implemented during construction (Program EIR Impact GEO-1); and would not exacerbate existing environmental hazards or conditions, resulting in a substantial risk of loss, injury, or death, because the geotechnical analysis required as part of the California Building Standards Code would incorporate appropriate standard engineering practices and specifications in facility design to minimize these risks (Program EIR Impact GEO-2); these impacts were concluded to be less than significant. Additionally, the Program EIR determined that the program elements would result in ground disturbance and, thus, the potential for discovery and disturbance of paleontological resources; this impact was concluded to be less than significant with mitigation (Program EIR Impact CR-1). Finally, the Program EIR determined that the program elements would have no impacts associated with soils supporting septic tanks or alternative wastewater disposal systems.

There are no new circumstances since certification of the Program EIR that would influence geology and soils impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) The project area is not within an Alquist-Priolo Zone earthquake fault zone. In addition, the project modifications would include wells, pipelines, and electrical service lines, and would not include structures for human occupancy.

Sacramento County is less affected by seismic activity and other related geologic hazards than other locations throughout California. The nearest fault is the Vaca fault, a potentially active fault, approximately 20 miles west of the project area. However, seismic events could still result in seismic ground shaking in the project area. The project modifications would be constructed consistent with the California Building Code (CBC). The CBC includes design standards that are intended to protect structures from the maximum credible earthquake that could occur on the site. The potential for seismic impacts would be minimized by applying all standard engineering and construction techniques in compliance with the requirements of the CBC.

While seismic activity in the surrounding area could result in secondary seismic impacts associated with unstable soils such as liquefaction, there are no areas susceptible to liquefaction within the project area. In addition, because the project modifications would be designed and constructed in a manner appropriate to the physical environment, and seismic-related ground failure would, because of the nature of the project modifications, be unlikely to pose a hazard to people or property.

Topography in the project area is generally flat, and the potential for landslides is low. In addition, the project modifications would not include any structures for human occupancy; therefore, the project modifications would not substantially increase the exposure of people or structures to landslides.

The use of additional staging areas outside the established construction corridor would not result in adverse effects related to seismic hazards nor increase the exposure of people or structures to landslides because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR and would not include permanent structures, including those for human occupancy. Staging areas would be returned to pre-project conditions once construction is complete. Therefore, potential impacts related to seismic hazards and landslides would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would not increase the risks related to seismic hazards compared to the Program EIR. The location of the pipeline alignment would not change and the pipeline would still be constructed in compliance with CBC design standards. Therefore, potential impacts related to seismic hazards would not change compared to those identified in the Program EIR.

b) Construction activities involving ground disturbance, such as excavation, stockpiling, and grading could result in increased erosion, sedimentation, and siltation to surface waters. A review of soil data shows that soils within the project area have a range of slow to high runoff potential. Ground disturbance in areas of high runoff potential could result in erosion.

The use of additional staging areas outside the established construction corridor could result in increased erosion, sedimentation, and siltation to surface waters; however, compliance with the Construction General Permit would ensure that BMPs are implemented during construction to reduce these effects.

In addition, increasing the transmission pipeline size would result in only minor additional excavation compared to that described in the Program EIR, which could result in a slight increase in erosion. However, the soil types within the pipeline corridor and the types of construction activities that would occur would not change. Therefore, potential impacts related to erosion and sedimentation would be similar to those identified in the Program EIR.

c) Lateral spreading is the lateral movement of saturated soils due to earthquake induced liquefaction. If not designed correctly, the project modifications could be subject to misalignment of pipelines, failure of joints, damage to wells, and recycled water leakage from pipelines after a seismic event. Leakage from pipelines or wells could saturate soils, contributing to conditions for liquefaction, lateral spreading, and subsidence. Structural failures could therefore result in increased risk to safety. However, the geotechnical analysis required as part of the CBC would incorporate appropriate standard engineering practices and specifications in facility design to minimize risk of structural failure in a seismic event, and would reduce secondary impacts that may occur as a result.

The use of additional staging areas outside the established construction corridor would not increase the risks of landslide, lateral spreading, subsidence, liquefaction, or collapse due to unstable geologic units or soil because staging areas would not include permanent structures and would be returned to pre-project conditions once construction is complete.

Increasing the transmission pipeline size would not increase the risks related to lateral spreading compared to the Program EIR. The location of the pipeline alignment would not change and the pipeline would still be constructed in compliance with CBC design standards. Therefore, potential impacts related to lateral spreading would not change compared to those identified in the Program EIR.

d) Soils in the project area are primarily clays, which have the potential to be expansive soils. Substantial risk to related to expansive soils would generally occur to habitable buildings, and no buildings that would be inhabited would be constructed as part of the project modifications. Structural failure of the proposed facilities could occur as a result of expansive soils; however, the geotechnical analysis required as part of the CBC would incorporate appropriate standard engineering practices and specifications in facility design to minimize risks related to expansive soils.

The use of additional staging areas outside the established construction corridor would not increase the risks related to expansive soils because staging areas would not include permanent structures and would be returned to pre-project conditions once construction is complete.

Increasing the transmission pipeline size would not increase the risks related to expansive soils compared to the Program EIR. The soil types within the pipeline alignment would not change and the pipeline would still be constructed in compliance with CBC design standards. Therefore, potential impacts related to expansive soils would not change compared to those identified in the Program EIR.

e) The project modifications would include construction of wells, pipelines, and electrical service lines, and would not involve or require construction of septic tanks or alternative wastewater disposal systems.

The use of additional staging areas outside the established construction corridor would not involve or require construction of septic tanks or alternative wastewater disposal systems.

Increasing the transmission pipeline size would not involve construction of septic tanks or alternative wastewater disposal systems. Therefore, potential impacts related to septic tanks and alternative wastewater disposal systems would not change compared to those identified in the Program EIR.

f) The project area is within the Pleistocene-age Riverbank Formation (California Geological Survey 1981), which has the potential to contain paleontological resources. Although no known paleontological resources have been identified within the project area, construction would result in ground disturbance and, thus, the potential for discovery and disturbance of unknown paleontological resources.

The use of additional staging areas outside the established construction corridor would not be likely to increase the potential for discovery and disturbance of unknown paleontological resources because subsurface excavation would not be conducted in these areas. As described in the Program EIR, project construction overall has the potential to affect unknown paleontological resources, and mitigation would be implemented to reduce this impact. Overall, potential impacts to unknown paleontological resources would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which would result in a slightly greater potential to encounter paleontological resources. However, the location of the pipeline alignment, the width of the construction disturbance corridor, and the types of construction activities that would occur would not change. Therefore, potential impacts to unknown paleontological resources would be similar to those identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measures from the Program EIR would reduce the potential for discovery and disturbance of paleontological resources, and reduce the potential impact to a less-than-significant level.

Mitigation Measure CR-1a: Discovery of Previously Unknown Historic or Archaeological Resources during Construction

Implement Mitigation Measure CR-1a above.

Mitigation Measure CR-1b: Note on Construction Plans

Implement Mitigation Measure CR-1b above.

Mitigation Measure CR-1c: Discovery of Paleontological Resources During Construction

Implement Mitigation Measure CR-1c above.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to geology and soils. The combined analysis of geology and soils issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.8 Greenhouse Gas Emissions

Section 3.4, "Air Quality and Greenhouse Gas Emissions," of the Program EIR evaluates the impacts of the program on air quality and GHG emissions. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to GHG emissions. Air quality is addressed in Section 3.3.3, "Air Quality," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
8. Greenhouse Gas Emissions. Would the project modifications:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impact GHG-1	No	No	No	N/A
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impact GHG-2	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.4-1 through 3.4-6 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to GHG emissions. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Greenhouse Gas Emission Sources

The total GHG inventory for California in 2016 was 429 million metric tons of CO_2 equivalents ($MMTCO_2e$) (CARB 2018a). This is less than the 2020 target (1990 levels by 2020) of 431 $MMTCO_2e$ (CARB 2018b). Table 3.8-1 summarizes the 2016 statewide GHG inventory for California.

Table 3.8-1 Statewide Greenhouse Gas Emissions by Economic Sector

Sector	Emissions ($MMTCO_2e$)	Percent
Transportation	174.01	41
Industrial	100.37	23
Electricity generation (in state)	42.67	10
Electricity generation (imports)	26.28	6
Agriculture	33.84	8
Residential	28.34	7
Commercial	23.04	5
Not specified	0.79	<1

Sources: CARB 2018a, 2018c

As shown in Table 3.8-1, transportation, industry, and electricity generation make up the largest GHG emission sectors for the state.

Emissions of carbon dioxide (CO_2) are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO_2 sinks, or reservoirs, include vegetation and the ocean, which absorb CO_2 through sequestration and dissolution (CO_2 dissolving into the water), respectively, two of the most common processes for removing CO_2 from the atmosphere.

In 2009, a GHG inventory for Sacramento County was conducted using 2005 as the emissions baseline year. An updated inventory was conducted in 2016 using a new emission baseline year of 2015. The County's updated baseline year and projected business-as-usual (BAU) inventory is summarized in Table 3.8-2. The BAU projection assumes that no additional efforts or legislative actions beyond what have already been adopted at the time the inventory was conducted will be made to reduce GHG emissions in the future.

Table 3.8-2 Sacramento County Greenhouse Gas Emissions Inventory for 2015 and Business-as-Usual Forecast Years ($MTCO_2e$)

Emissions Sector	2015	2020	2030	2050
Residential Energy	1,193,311	1,254,182	1,385,397	1,690,448
Commercial/Industrial Energy	890,603	978,487	1,181,128	1,720,999
On-Road Transportation	1,671,596	1,765,579	1,969,694	2,451,443
Off-Road Transportation	196,769	214,146	253,855	357,866
Solid Waste	352,909	372,751	415,844	517,551
Agriculture	254,899	253,627	251,102	246,128
High-GWP Gases	251,085	265,202	295,861	368,223
Wastewater	27,253	28,785	32,113	39,967
Water-Related	15,222	16,078	17,937	22,323
Total	**4,853,647**	**5,148,836**	**5,802,930**	**7,414948**

Notes: Totals may not add due to rounding.
$MTCO_2e$ = metric tons of carbon dioxide equivalent
Source: Sacramento County 2016

As shown in Table 3.8-2, on-road transportation and residential and non-residential energy use are the largest GHG emission sectors for the county.

In 2005, a GHG inventory for the City of Elk Grove was conducted using 2005 as the emissions baseline year. An updated inventory was conducted in 2019 with the City's General Plan Update using a new emission baseline year of 2013. The City's updated baseline year and projected business-as-usual inventory is summarized in Table 3.8-3.

Table 3.8-3 City of Elk Grove Greenhouse Gas Emissions Inventory for 2013 and Business-as-Usual Forecast Years ($MTCO_2e$)

Emissions Sector	2013	2020	2030	2050
Residential Energy	231,400	257,171	310,017	413,560
Commercial/Industrial Energy	129,860	147,685	196,037	293,532
On-Road Transportation	430,340	645,542	844,317	1,241,867
Off-Road Transportation	93,340	102,776	123,896	165,275
Solid Waste	26,260	36,181	39,817	47,781
Wastewater	3,854	4,283	5,163	6,888
Water-Related	2,708	3,010	3,628	4,840
Agriculture	1,030	2,585	1,061	299
Total	**918,790**	**1,199,232**	**1,523,936**	**2,174,042**

Notes: Totals may not add due to rounding.
$MTCO_2e$ = metric tons of carbon dioxide equivalent
Source: City of Elk Grove 2019

Like Sacramento County, Table 3.8-3 shows that on-road transportation and residential and non-residential energy use are the largest GHG emission sectors for the City of Elk Grove.

To supplement the analysis in the Program EIR, air quality modeling was performed to compare the project's construction emissions from the project modifications—development of 10 wells and associated pipelines and electrical lines—to the SMAQMD greenhouse gas (GHG) significance threshold. The modeling data is included as Appendix A.

DISCUSSION

The Program EIR determined that the program elements would generate GHG emissions during construction and operation, but would not exceed SMAQMD's significance thresholds; this impact was concluded to be less than significant (Program EIR Impact GHG-1). Additionally, the Program EIR determined that the program elements would be consistent with applicable GHG reduction plans; it was concluded that no impact would result (Program EIR Impact GHG-2).

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence GHG impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) Off-road construction equipment, materials transport, and worker commute during construction of the project modifications would result in exhaust emissions of GHGs. Based on modeling conducted for the project modifications (see Appendix A), construction of the wells and associated pipelines and electrical lines is estimated to generate a total of 44 metric tons of carbon dioxide equivalent ($MTCO_2e$) during Phase 1 (April to November in 2025) and 46 $MTCO_2e$ during Phase 2 (April to November in 2026). Thus, project emissions for Phases 1 and 2 would be below SMAQMD's 1,100 $MTCO_2e$ construction emission threshold. Table 3.8-4 summarizes the modeled GHG emissions associated with construction of the project modifications. Emissions from weekly on-road vehicles for routine maintenance on the pipelines would be nominal and, thus, are not quantified. As shown in Table 3.4-11 of the Program EIR (page 3.4-37 of Draft EIR), the majority of operational emissions from the overall Program would be from energy usage associated with the pump station (745 $MTCO_2e$ per year). As indicated in the Program EIR, operational emissions, for the entire program, including the pump station, would be about 1,200 $MTCO_2e$ per year, which is below SMAQMD's the total maximum GHG emissions threshold of 10,000 $MTCO_2e$ per year. Total operational emissions from the whole program would need to increase more than four-fold to exceed the maximum GHG emissions threshold. Operation of wells included in these project modifications would pump much smaller volumes of water than the Program pump station and for shorter durations, thereby using much less energy and generating lower GHG emissions. Additionally, wells would be pumping groundwater that has historically been pumped by individual farmers, so groundwater pumping with the project would actually be less than existing pumping. GHG emissions attributable to the project modifications would not be sufficient to alter the less-than-significant conclusion of the Program EIR.

   The use of staging areas outside the established construction corridor would contribute to the generation of exhaust emissions of GHGs because these additional staging areas would be used during project construction. No new GHG emissions would be generated, but rather, GHG emissions already identified in the Program EIR would occur at the new staging areas. As described in the Program EIR, the project's construction phase emissions would be below SMAQMD's 1,100 $MTCO_2e$ construction emission threshold. The use of additional staging areas outside the established construction corridor would not generate operational exhaust emissions of GHGs because the use of staging areas would be temporary, occurring only during construction. Therefore, potential impacts related to GHG emissions would be similar to those identified in the Program EIR.

   Increasing the size of the transmission pipeline would result in additional construction generated GHG emissions because of the greater equipment operation resulting from a larger trench and movement and disposal of more excavated spoils. In the *Air Quality and Greenhouse Gas Technical Report for the Lateral Pipelines and On-Farm Connections Project* (Regional San 2020a) construction GHG emissions were provided for the concurrent construction of the transmission pipeline, the pump station, and the lateral pipelines and

on farm connections. If all these project elements were under construction concurrently, maximum emissions would remain more than 10 times below the applicable thresholds (see Table 8 in the Air Quality Technical Report [Regional San 2020a]). Therefore, to exceed the applicable GHG emissions thresholds, total emissions for construction of the transmission pipeline would need to increase by well over 10 times, As identified in Chapter 2, "Description of the Proposed Action," increasing the transmission pipeline from a 60-inch diameter to 66 inches would increase the trench size and spoils generation by approximately 10 percent. This would occur over approximately 9 miles of the 14-mile pipeline. An increase in trench size and spoil handline of 10 percent over just a portion of the overall transmission pipeline route would not result in total construction emissions increasing by 10 times or more. Therefore, construction GHG emissions would continue to remain below applicable thresholds.

Table 3.8-4 Summary of Construction-Related Greenhouse Gas Emissions Associated with the Project Modifications

	GHG Emissions ($MTCO_2e$ year)
Phase 1 (April to November in 2025)	
Wells	19
Pipelines	19
Electrical Lines	6
Phase 1 Subtotal	**44**
Phase 2 (April to November in 2026)	
Wells	22
Pipelines	12
Electrical Lines	12
Phase 2 Subtotal	**46**
Total	**90**
SMAQMD Threshold of Significance	*1,100*

Notes: GHG = greenhouse gas; $MTCO_2e$ = metric tons of carbon dioxide equivalent; SMAQMD = Sacramento Metropolitan Air Quality Management District.

See Appendix A for detailed input parameters and modeling results.

GHG emissions were estimated using construction equipment fleets included in the model for construction years 2023 and 2024. Because project construction is to occur in later years, 2025 and 2026, emissions are conservative due to the advancement of construction equipment efficiency over time. In addition, the modeling reflects an earlier iteration of the project that estimated a total pipeline length of 32,000 feet and a total spoil quantity of 21,000 cubic yards for pipeline excavation. Because the updated project proposes less construction activities with a total pipeline length of 9,900 feet and a total spoil quantity of 6,500 cubic yards for pipeline excavation, these emissions estimates are conservative.

Source: Modeling performed by Ascent Environmental in 2020

b) The Groundwater Accounting Project is a component of the Harvest Water recycled water system to deliver 50,000 acre feet per year (AFY) to irrigated lands and managed wetlands. The project modifications would not conflict with CARB's 2017 Scoping Plan and would support California's efforts to reduce GHGs by reducing energy needs for water supply through recycled water infrastructure and programs. In addition, the 50,000 AFY of recycled water currently discharged into the Sacramento River would be used to replenish the groundwater basin and increase flow in the Cosumnes River. Thus, the project modifications would help replenish the area's groundwater systems and help maintain healthy wildlife lands that sequester carbon. The project modifications would also be consistent with the City of Elk Grove's General Plan in that the project modifications would protect and enhance the City's carbon sequestration resources. In addition, the project modifications would be consistent with the County of Sacramento's General Plan Policy CO-22 such that the project modifications would manage water sources in response to GHG emission reductions and climate change. Thus, the project modifications would be consistent with applicable GHG emission reduction plans.

The use of staging areas outside the established construction corridor would not conflict with applicable GHG emission reduction plans because they are temporary activities already anticipated in the Program EIR and only the location would change. Therefore, potential impacts related to applicable GHG emission reduction plans would be similar to those identified in the Program EIR. Any additional construction activity associated with installation of a larger transmission pipeline would not conflict with applicable GHG emission reduction plans because the project would continue to comply with applicable GHG emissions thresholds, plans, or policies.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to GHG emissions. The combined analysis of GHG emissions issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.9 Hazards and Hazardous Materials

Section 3.9, "Hazards and Hazardous Materials," of the Program EIR evaluates the impacts of the program on hazards and hazardous materials. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area		Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
9.	Hazards and Hazardous Materials. Would the project modifications:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Issue dismissed on page 3.9-11	No	No	No	N/A
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?	Impact HAZ-1	No	No	No	Yes
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Issue dismissed on page 3.9-11	No	No	No	N/A
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?	Issue dismissed on page 3.9-11	No	No	No	N/A
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?	Impact HAZ-2	No	No	No	N/A
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Impact HAZ-3	No	No	No	Yes
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Not evaluated	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.9-1 through 3.9-4 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts associated with hazards and hazardous materials. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

The Franklin Field Comprehensive Land Use Plan (CLUP) developed by the Airport Land Use Commission (ALUC), with regulations from the Federal Aviation Authority (FAA), outlines specific policies regarding land uses in Franklin Field's area of influence in relation to height restrictions, noise compatibility, and safety of persons on the ground. The Franklin Field CLUP is hereby incorporated for reference. Height restrictions are based on Federal Aviation Regulation Part 77, Objects Affecting Navigable Airspace. Objects that would be of greater height than the imaginary horizontal and sloping surfaces are deemed to be an obstruction to air navigation. Any proposed new construction or expansion of existing structures that would penetrate any of the imaginary surfaces for Franklin Field would be an incompatible land use (ALUC 1992:12-16).

Per the ALUC, three safety zones have been established for Franklin Field Airport: the clear zone, the approach/departure zone, and the overflight zone (see Figure 2-6 in Chapter 2, "Description of the Proposed Action"). Any land uses that would direct a steady or flashing light toward an approaching or departing aircraft, would cause sunlight to be reflected toward an aircraft during take-off, would generate smoke or large concentrations of birds, would generate electrical interference, or would include hazardous installations are incompatible in the Clear Zone and the Approach/Departure Zone (ALUC 1992:29-33).

DISCUSSION

The Program EIR determined that the program elements would not create any significant hazards to the public or the environment associated with the transport, use or disposal of hazardous materials; would not create a significant hazard to the public or the environment associated with the transport, use or disposal of hazardous materials within 0.25 mile of an existing or proposed school; and would not be located on a site included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 (Cortese List) and, therefore, would not create a significant hazard to the public or the environment. Thus, it was concluded that no impacts would occur.

The Program EIR determined that the program elements could expose the public or environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment; this impact was concluded to be less than significant with mitigation (Program EIR Impact HAZ-1). Additionally, program elements would not result in a significant safety hazard for people residing or working in the project area within 2 miles of a public use airport; this impact was concluded to be less than significant (Program EIR Impact HAZ-2). Finally, impacts related to implementation of an emergency response plan or emergency evacuation plan would be less than significant with mitigation (Program EIR Impact HAZ-3) because construction could interfere with the accessibility of roadways to emergency vehicles; however, implementation of Mitigation Measure TR-1, which would require the preparation and implementation of a traffic management plan, would reduce this impact.

The use of additional staging areas outside the established construction corridor would not result in any changes relative to hazards or hazardous materials compared to the impacts discussed in the Program EIR because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR. Potential impacts related to the use of additional staging areas outside the established construction corridor would not change relative to airports, schools, or hazardous waste sites, and construction-related hazards. Therefore, hazards and hazardous materials impacts related to this project change are not discussed further.

Increasing the size of the transmission pipeline from 60 to 66 inches would not result in any changes relative to hazards or hazardous materials compared to the impacts discussed for the transmission pipeline in the Program EIR. The location and potential impacts of the transmission pipeline alignment would not change relative to airports, schools, or hazardous waste sites, and construction-related hazards. Therefore, hazards and hazardous materials impacts related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence hazards and hazardous materials impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) Once construction is complete, no new hazardous substances would be used for operation of the wells, pipelines, or electrical lines. Thus, the project modifications would not create any significant hazards to the public or the environment associated with the transport, use or disposal of hazardous materials.

b) During construction, the contractor would use limited quantities of fuels, oils, lubricants, solvents, and other materials that are classified as hazardous. All materials would be stored, handled, and used in accordance with applicable laws. Some excavated materials would be hauled off site and disposed of as required by state and federal regulations, and waste would be classified and disposed of properly. Unidentified areas of contaminated soils may be present along the pipeline alignments or at the well sites and soil disturbance in these areas could expose construction workers to contaminated soils.

c) There are no schools within 0.25 mile of the project area. Therefore, the project modifications would not create a significant hazard to the public or the environment associated with the transport, use or disposal of hazardous materials within 0.25 mile of an existing or proposed school.

d) The project modifications would not be located on a site included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 (Cortese List) and, therefore, would not create a significant hazard to the public or the environment (DTSC 2020).

e) Franklin Field, which is a public use airport, is within the project area. The CLUP for Franklin Field identifies height restrictions, noise restrictions, and safety restrictions for areas surrounding the airport. During construction, workers would be working within two miles of the airport and would be exposed to airport noise. However, the exposure to noise would be temporary and Occupational Safety and Health Administration requirements for workers would be followed. In addition, the project modifications would not include any new residences or businesses that would expose people or workers to excessive noise in the long-term.

   Because the proposed pipelines would be below ground facilities, they would not be considered an obstruction to air navigation by the FAA or penetrate the height notification limits of FAA Part 77 (ALUC 1992). Additionally, proposed pipelines would not interfere with the operating compatibility of the airport, or endanger pilots or passengers of aircraft. However, wells would be above ground, and although heights of well facilities are relatively low (less than 15 feet), they would still be required to meet the height requirements within the CLUP.

   As discussed in the CLUP, the area surrounding the airport is exposed to the potential for aircraft accidents, which resulted in the establishment of safety areas to minimize the number of people exposed to aircraft crash hazards (see Figure 2-6 in Chapter 2, "Description of the Proposed Action"). Because the proposed facilities would either be underground or would be designed to meet the required height restrictions, the project modifications would not result in a safety hazard for people residing or working in the project area within two miles of Franklin Field.

f) Construction of wells would be within County-owned or Regional San-owned lands and would not interfere with any adopted emergency response plans. However, construction of pipelines and electrical lines within roadways or public ROW could temporarily interfere with the accessibility of roadways to emergency vehicles.

g) The project modifications would be located on County-owned or Regional San-owned land that are primarily used for agriculture. Existing wildfire risk in the project area is minimal as it is not near areas with high wildfire fuel loads; by their nature farmed lands have roads, canals, and other features that act as fire breaks; and farmed lands have irrigation systems that prevent the vegetation that is present from becoming overly dry. Given the topography of the project area and its proximity to water, it is unlikely that project

construction would exacerbate wildfire risk. The project modifications would provide recycled water to agricultural customers via proposed wells and pipelines. The project modifications would not include habitable structures. For these reasons, the project modifications would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for exposure of the public or environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment as well as conflicts with implementation of an emergency response plan or emergency evacuation plan. With implementation of these mitigation measures, potential impacts related to hazards and hazardous materials would be reduced to a less-than-significant level.

Mitigation Measure HAZ-1: Conduct Phase I Study

Note: The text of this mitigation measure has been changed slightly from what is shown in Program EIR to make sure that the mitigation measure can be clearly applied to the activities included in the project modifications (specifically, underground pipelines).

Before the start of construction, a Phase I hazardous waste/hazardous materials study for soil and groundwater contamination shall be completed for the project modifications. The recommendations set forth in the Phase I assessment shall be implemented to the satisfaction of applicable agencies before construction begins. If Phase I assessments indicate the potential for contamination within the construction zone, Phase II studies shall be completed before construction begins. Phase II studies will include soil and groundwater sampling and analysis for anticipated contaminants. The Phase II sampling is intended to identify how to dispose of any potentially harmful material from excavations, and to determine if construction workers need specialized personal protective equipment during construction. If soil or groundwater contaminated by potentially hazardous materials is exposed or encountered during construction that was not identified in the Phase I assessment, the appropriate hazardous materials agencies shall be notified. Any contaminated soil that is encountered during construction shall be disposed of in accordance with applicable regulations, at an approved landfill.

Mitigation Measure TR-1: Traffic Management Plan

Implementation of the project shall include a TMP that would minimize impacts on traffic as a result of construction activities. The TMP shall be prepared in accordance with the California Manual of Uniform Traffic Control Devices (California MUTCD) and all applicable requirements of Caltrans, the County of Sacramento Department of Public Works and the City of Elk Grove Department of Public Works. The TMP shall be approved by the affected jurisdictions before construction and complied with at all times during construction of the project. The TMP shall be prepared by a qualified transportation engineer and would include but not be limited to the following measures:

- Define location and timing of any temporary lane or roadway closures.
- Obtain permits and identify oversize and overweight load haul routes. Transport of oversized loads on state, county, and city roads will require oversize/overload permits from Caltrans, Sacramento County and the City of Elk Grove. Transporters will follow state and county regulations for transportation of oversized and overweight loads. Such regulations typically include provisions for time of day, pilot cars, law enforcement escorts, speed limits, flaggers, and warning lights, which will be detailed in the respective oversized-load permits.
- Prepare Temporary Traffic Control (TTC) Plans for each site location. The construction contractor will submit any applicable pedestrian or traffic detour plans, to the satisfaction of the City/County Engineer, for any lane or sidewalk closures. The detour plan shall comply with Part 6, Temporary Traffic Control, of the California MUTCD, and standard construction practices. The TTC Plans will identify the need for flaggers for directing traffic, temporary signage, lighting, and traffic control devices, if required.

- Identify and provide for circumstances requiring the use of temporary traffic control measures, such as flag persons, warning signs, lights, barricades, and cones to provide safe work areas in the vicinity of the project site or along the haul routes, including for narrow roadway segments, and to warn, control, protect, and expedite vehicular, bicycle, and pedestrian traffic and access by emergency responders.
- Schedule deliveries of heavy equipment and construction materials during periods of minimum traffic flow. The timing of deliveries shall be coordinated with Sacramento County and the City of Elk Grove.
- Determine the need to schedule construction workforce arrival and departure times outside peak traffic periods.
- Determine the need for construction scheduling outside of legal holidays and special events.
- Identify vehicle safety procedures for entering and exiting site access roads and staging areas.
- Notify and coordinate potential road closures with emergency responders before construction.
- Ensure access for emergency vehicles to and around the Project area.
- Identify procedures for construction area evacuation in the case of an emergency declared by county or other local authorities
- Maintain access to adjacent properties. The construction contractor will notify residential and commercial occupants of property adjacent to the construction site of the hours of construction activity which may impact the area. This notification will be provided one week in advance of the start of the extended construction activity.
- Notify and coordinate potential road closures with transit operators before construction.
- Maintain access to transit, bicycle, and pedestrian facilities along the project route(s).
- Notify and coordinate potential road closures with mail service and waste haulers before construction.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to hazards and hazardous materials. The combined analysis of hazards and hazardous materials issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.10 Hydrology and Water Quality

Section 3.10, "Hydrology and Water Quality," of the Program EIR evaluates the impacts of the program on hydrology and water quality. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
10. Hydrology and Water Quality. Would the project modifications:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Impact HYD-1	No	No	No	Yes
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Impact HYD-2	No	No	No	N/A
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in substantial on- or offsite erosion or siltation; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Impact HYD-3	No	No	No	N/A
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	Issue dismissed on page 3.10-27	No	No	No	N/A
iv) Impede or redirect flood flows?	Issue dismissed on page 3.10-27	No	No	No	N/A
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Issue dismissed on page 3.10-27	No	No	No	N/A
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Not evaluated	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.10-1 through 3.10-13 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to hydrology and water quality. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Hydrologic features within the project area include seasonal wetlands and vernal pools within the Bufferlands, and aquatic features and agricultural drainages within or adjacent to County-owned lands surrounding Franklin Field. The project area is within the DWR South American Groundwater Subbasin.

DISCUSSION

The Program EIR determined that construction of program elements could result in increased erosion and sedimentation to surface waters and contaminated stormwater runoff, which could degrade water quality. Compliance with the Construction General Permit, implementation of construction BMPs, and compliance with the General Order for Dewatering or other appropriate National Pollutant Discharge Elimination System (NPDES) permit would reduce potential water quality degradation. This impact was concluded to be less than significant with mitigation (Program EIR Impact HYD-1). Additionally, the Program EIR determined that construction and operation of the program elements would not deplete groundwater supplies because the program would not involve extraction of groundwater; instead, it would benefit the groundwater basin and would not result in adverse impacts related to groundwater supply depletion. This impact was concluded to be beneficial (Program EIR Impact HYD-2). The Program EIR determined that the program elements would not increase the amount of impervious surfaces or the amount or rate of surface runoff, thus resulting in a less-than-significant impact (Program EIR Impact HYD-3). Finally, the Program EIR found that discharge reductions associated with the program would have minor impacts on Delta outflows but could affect storage in Shasta, resulting in a less-than-significant impact with mitigation (Program EIR Impact HYD-4).

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence hydrology and water quality impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) The project modifications could result in increased erosion and sedimentation to surface waters and contaminated stormwater runoff, which could degrade water quality. Construction activities involving soil disturbance, excavation, cutting/filling, stockpiling, dewatering and grading activities could result in increased erosion and sedimentation to surface waters. If precautions are not taken to contain contaminants, construction could produce contaminated stormwater runoff (nonpoint source pollution), which is a contributor to the degradation of water quality. In addition, hazardous materials associated with construction equipment could adversely affect surface and groundwater quality if spilled or stored improperly. However, construction activities associated with the project modifications would be very similar to those addressed in the Program EIR; therefore, the types and intensities of impacts to water quality from construction activities would be similar to those described in the Program EIR.

   Once the pipelines are constructed, hydrostatic testing would need to be conducted, and water from the testing would also need to be discharged. Water from testing would be discharged in accordance with the General Order for Dewatering or other appropriate NPDES permit. This issue is also addressed in the Program EIR with the same regulatory restrictions identified.

   The use of additional staging areas outside the established construction corridor could result in increased erosion and sedimentation to surface waters and contaminated stormwater runoff, which could degrade water quality; however, compliance with the Construction General Permit would ensure that BMPs are implemented during construction to reduce these effects. As described in the Program EIR, mitigation would be implemented to reduce this impact. Overall, potential water quality impacts would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation, which could increase erosion, and may require a small increase in water needed to conduct hydrostatic testing compared to that described in the Program EIR. However, the soil types within the pipeline corridor and the types of construction activities that would occur would not change. Water from testing would still be discharged in accordance with the General Order for Dewatering or other appropriate NPDES permit. Therefore, potential impacts related to erosion and sedimentation to surface waters would be similar to those identified in the Program EIR.

b) The project modifications would not deplete groundwater supplies because the modifications would not conflict with the commitments to groundwater recharge (including in-lieu and incidental passive recharge) and storage included in Harvest Water that would benefit the groundwater basin. Although the project modifications include groundwater extraction, as described in Section 2.3.1, "Groundwater Accounting," the timing and volumes of groundwater withdrawals, the uses for the groundwater, and the groundwater monitoring and accounting methods, would result in the withdrawals not conflicting with benefits to the groundwater basin identified in the Program EIR. In the Program EIR, the discussion of Impact HYD-2, "Substantially Deplete Groundwater Supplies or Substantially Interfere with Groundwater Recharge" identifies that Harvest Water would have a beneficial effect on groundwater supplies. The project modifications would not alter the project elements or commitments that result in this beneficial effect.

The use of additional staging areas outside the established construction corridor would not involve the use of groundwater or deplete groundwater supplies. Therefore, potential impacts related to groundwater would not change compared to those identified in the Program EIR.

Increasing the transmission pipeline size would not involve the use of groundwater or deplete groundwater supplies. Therefore, potential impacts related to groundwater would not change compared to those identified in the Program EIR.

c.i-ii) The project modifications would result in an increase impervious surfaces in the project area. Aboveground facilities would include well pads, parking spaces at well sites, and tower footings for above ground electrical service lines. These aboveground facilities would be dispersed throughout the project area and would not substantially alter surface runoff or existing drainage patterns.

The project modifications could temporarily alter the existing drainage patterns of creeks or waterways during construction if pipeline crossings would be necessary. However, as described in Chapter 2, "Description of the Proposed Action," pipeline installation would be accomplished using trenchless construction techniques at all creek/drainage crossings. Therefore, the project modifications would not alter the existing drainage pattern of any creeks or drainages in the project area.

The use of additional staging areas outside the established construction corridor would not increase impervious surfaces or alter the existing drainage pattern of any creeks or drainages in the project area. Use of staging areas would be temporary and these areas would be returned to pre-project conditions once construction is complete. Therefore, potential impacts related to drainage would not change compared to those identified in the Program EIR.

Increasing the transmission pipeline size would result in a slightly larger footprint for the pipeline trench, which could temporarily alter the existing drainage patterns of creeks or waterways. However, the alignment of the transmission pipeline and the number of drainages that could be affected by the pipeline would not change. The pipeline installation would still be accomplished using trenchless construction techniques at all creek/drainage crossings. In addition, the pipeline would be an underground facility that would not increase impervious surfaces in the project area. Therefore, impacts related to drainage would be similar to those identified in the Program EIR.

c.iii) The project modifications would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems. The project modifications would be either buried underground within or along roadways or would have small footprints dispersed throughout the project area. Therefore, the facilities would not create a substantial increase in runoff. Thus, the project

modifications would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems.

The use of additional staging areas outside the established construction corridor would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Use of staging areas would be temporary, no permanent structures would be built, and these areas would be returned to pre-project conditions once construction is complete. Therefore, potential impacts related to runoff would not change compared to those identified in the Program EIR.

The transmission pipeline would continue to be an underground facility that would not increase runoff in the project area. Therefore, increasing the size of the transmission pipeline would not change impacts related to runoff compared to those identified in the Program EIR.

c.iv) The pipelines would be buried and creek/drainage crossings would be accomplished using trenchless construction techniques. Aboveground facilities would be limited to well pads, parking spaces at well sites, and tower footings for above ground electrical service lines, all of which would have small footprints. Therefore, construction and operation of these facilities would not impede or redirect flood flows.

The use of additional staging areas outside the established construction corridor would not impede or redirect flood flows. Use of staging areas would be temporary, no permanent structures would be built, and these areas would be returned to pre-project conditions once construction is complete. Therefore, potential impacts related to impeding or redirecting flood flows would not change compared to those identified in the Program EIR.

The transmission pipeline would continue to be an underground facility that would use trenchless construction techniques at creek/drainage crossing. In addition, the number of drainages that could be affected by the pipeline would not change. Therefore, increasing the size of the transmission pipeline would not change impacts related to impeding or redirecting flood flows compared to those identified in the Program EIR.

d) The project modifications would not expose people or structures to a risk of loss, injury or death involving flooding. As described in item civ), above, the project modifications would include limited aboveground structures and would not appreciably affect flood flows or runoff volumes. Further, the project modifications would have no impact on any levees or dams and would not increase the risk of failure of any levee or dam.

The use of additional staging areas outside the established construction corridor would not expose people or structures to a risk of loss, injury or death involving flooding. Use of staging areas would be temporary, no permanent structures would be built, and these areas would be returned to pre-project conditions once construction is complete. Therefore, potential impacts related to flooding would not change compared to those identified in the Program EIR.

The transmission pipeline would continue to be an underground facility that would not affect flood flows or any levees or dams. Therefore, increasing the size of the transmission pipeline would not change impacts related to flooding compared to those identified in the Program EIR.

e) The project modifications would comply with all federal, state, and local regulations and requirements for construction and implementation including the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan (Bay-Delta Plan) and the Groundwater Sustainability Plan for the DWR South American Subbasin. The Basin Plan establishes control measures to be implemented by the RWQCB as applicable to the project modifications. The Basin Plan also provides water quality objectives and waste discharge requirements (WDRs) to minimize impacts to water quality. NPDES permits are one method to regulate WDRs. The Program EIR found that discharge reductions associated with the program would have minor impacts on Delta outflows (Program EIR Impact HYD-4) but could affect storage in Lake Shasta. With implementation of Mitigation Measure HYD-4 this impact would be less than significant. The discharge reductions associated with Harvest Water were fully evaluated in the Program EIR and, thus, implementation of the project modifications would not change that conclusion. As discussed in item a), above, the project

modifications would be covered under the Construction General Permit, and the recycled wastewater has been addressed through WDRs and an NPDES permit specific to the Regional San wastewater treatment plant, and allows for this use. Thus, the project modifications would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

The use of additional staging areas outside the established construction corridor would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Use of staging areas would be covered under the Construction General Permit, which requires implementation of BMPs to reduce construction-related water quality impacts. Use of staging areas would be temporary, no permanent structures would be built, and these areas would be returned to pre-project conditions once construction is complete. Therefore, potential impacts related to water quality would not change compared to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation, which could increase erosion, and may require a small increase in water needed to conduct hydrostatic testing compared to that described in the Program EIR. However, construction of the transmission pipeline would continue to comply with WDRs and NPDES permit requirements. Therefore, potential impacts related to water quality would be similar to those identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for construction-related water quality degradation as well as potential impacts to operations of the Central Valley Project or State Water Project. With implementation of these mitigation measures, potential impacts related to hydrology and water quality would be reduced to a less-than-significant level.

Mitigation Measure HYD-1a: Comply with the Construction General Permit

To minimize the impacts to water quality from construction activities, the proposed project shall implement measures contained in the Construction General Permit including the development of a Stormwater Pollution Prevention Program (SWPPP).

Mitigation Measure HYD-1b: Implement BMPs to Control Erosion and Sediment During Construction

The SWPPP shall specify that all construction activities shall implement multiple BMPs to provide effective erosion and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following measures:

- Temporary erosion control measures, such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover, shall be employed for disturbed areas;
- Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events;
- Grass or other vegetative cover will be re-established on unpaved areas of the construction site as soon as possible after disturbance. In paved areas, any removed paving will be replaced as soon as possible; and
- Soil stockpiling sites will be located such that they do not drain directly into nearby surface water bodies.

Multiple BMPs used in combination, properly installed and maintained, can achieve significant sediment removal. BMPs proposed by the project contractor shall be subject to approval Regional San, who shall require that all parties performing construction under the proposed project incorporate into contract specifications the requirement that the contractor(s) comply with and implement these provisions. The contractor shall also include provisions for monitoring during and after construction activities to verify that these standards are met.

Mitigation Measure HYD-1c: Comply with the General Order for Dewatering or Other Appropriate NPDES Permit

To minimize the impacts to water quality from dewatering activities, the Regional San shall implement measures contained in the General Order for Dewatering or other appropriate NPDES permit or Waste Discharge Requirement.

Mitigation Measure HYD-4: Coordinate Operations with Relevant Resource Agencies

To minimize potential thermal impacts to the Sacramento River downstream of Lake Shasta during critically dry years due to losses of cold water storage from reduced treated wastewater discharges, Regional San shall work with the Bureau of Reclamation and other relevant resource agencies to make appropriate operational changes in recycled water use and timing of discharge reductions in the spring months when the cold water pool in Shasta is critical. In critically dry years when storage in Lake Shasta falls below 2,400,000 AF in April, Regional San will coordinate with Central Valley Operations staff to reduce deliveries of recycled water to farmers in April and May if needed to avoid thermal impacts to the Sacramento River below Lake Shasta, as determined by the Sacramento River Temperature Model being utilized by Reclamation in the given year.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to hydrology and water quality. The combined analysis of hydrology and water quality issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.11 Land Use and Planning

Section 3.2, "Land Use and Agriculture," of the Program EIR evaluates the impacts of the program on land use and agriculture. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to land use. Agricultural resources are addressed in Section 3.3.2, "Agriculture and Forestry Resources," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
11. Land Use and Planning. Would the project modifications:					
a) Physically divide an established community?	Issue dismissed on page 3.2-17	No	No	No	N/A
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?	Impact LUA-1	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.2-1 through 3.2-9 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to land use and planning. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

As discussed in Section 3.3.9, "Hazards and Hazardous Materials," above, the Franklin Field CLUP developed by ALUC, with regulations from FAA, outlines specific policies regarding land uses in Franklin Field's area of influence in relation to height restrictions, noise compatibility, and safety of persons on the ground.

DISCUSSION

The Program EIR determined that the program elements would not physically divide an established community; it was concluded that no impact would occur. Additionally, the program elements would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over Harvest Water; this impact was concluded to be less than significant/beneficial (Program EIR Impact LUA-1).

The use of additional staging areas outside the established construction corridor would not result in any changes relative to land use and planning compared to the impacts discussed in the Program EIR because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR, the use of staging areas would be temporary, and these areas would be returned to pre-construction conditions once construction is complete. Temporary use of these areas for construction staging would not divide an established community or conflict with land use policies. Therefore, land use and planning impacts related to this project change are not discussed further.

Increasing the size of the transmission pipeline from 60 to 66 inches would not result in any changes relative to land use and planning compared to the impacts discussed for the transmission pipeline in the Program EIR. The transmission pipeline would result in similar construction-related effects and would be an underground facility that

would not divide a community or conflict with land use policies. Therefore, land use and planning impacts related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence land use and planning impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) The project modifications would include wells, pipelines, and electrical service lines dispersed throughout the project area for the purpose of groundwater management and would not physically divide an established community. The project modifications would be consistent with the general plan designation and zoning of the project area. The proposed wells would have a permanent footprint of approximately 55 feet by 65 feet with underground pipelines and aboveground and underground electrical service lines connecting to the wells. Therefore, the project modifications would not divide an established community.

b) The project modifications would be located outside of the Franklin Field CLUP and would be constructed consistent with height, noise, and safety requirements in the plan. In addition, the project modifications would be sited to avoid sensitive biological resources and would not conflict with the Sacramento County General Plan (Sacramento County 2011) or Bufferlands Master Plan (Regional San 2000).

   Construction and operation of the project modifications would not result in any changes to land use. The proposed pipelines and appurtenances would be located underground and primarily within public ROWs. The wells would have permanent footprints; however, they would be small and would not cause a change in the surrounding land uses. The project modifications would not include residential, commercial, or agricultural development and would not alter land use designations of existing land uses. Providing recycled water to agricultural customers in the South County would contribute to Sacramento County's goals and objective of protecting farmland, enhancing the viability of the agricultural economy, and reducing or eliminating groundwater cones of depression in farming areas. In addition, the use of recycled water in an area currently relying primarily on groundwater would be consistent with groundwater management policies in the area. Therefore, the project modifications would be consistent with applicable land use plans in the project area.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to land use and planning. The combined analysis of land use and planning issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.12 Mineral Resources

Section 3.8, "Geology and Soils," of the Program EIR evaluates the impacts of the program on geology and soils, including mineral resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
12. Mineral Resources. Would the project modifications:					
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?	Issue dismissed on page 3.8-7	No	No	No	N/A
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?	Issue dismissed on page 3.8-7	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.8-1 through 3.8-3 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to mineral resources.

DISCUSSION

The Program EIR determined that the program elements would not be located within any areas of mineral resources or significant mineral deposits; it was concluded that no impact would occur.

The use of additional staging areas outside the established construction corridor would not result in any changes relative to mineral resources compared to the impacts discussed in the Program EIR because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR, the use of staging areas would be temporary, and these areas would be returned to pre-construction conditions once construction is complete. Temporary use of these areas for construction staging would have no effect on the availability of known mineral resources. Therefore, mineral resources impacts related to this project change are not discussed further.

Increasing the size of the transmission pipeline would not result in any changes relative to mineral resources compared to the impacts discussed for the transmission pipeline in the Program EIR. The transmission pipeline location and alignment would not change. Therefore, impacts to mineral resources related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence mineral resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a,b) The project area is not located within an area of known mineral resources, and the primary land uses include the Bufferlands, agriculture, and Franklin Field. The project modifications would include wells, pipelines, and electrical service lines dispersed throughout the project area and would not change the land uses within the project area. Therefore, construction of the project modifications would have no effect on the availability of known mineral resources that would be of value to the region and the residents of the state.

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. Therefore, the project modifications would have no effect on the availability of known mineral resources.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to mineral resources. The combined analysis of mineral resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.13 Noise

Section 3.12, "Noise," of the Program EIR evaluates the impacts of the program on noise. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
13. Noise. Would the project modifications 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?	Impact NOI-1, Impact NOI-2	No	No	No	Yes
b) Generation of excessive groundborne vibration or groundborne noise levels?	Impact NOI-3	No	No	No	N/A
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?	Issue dismissed on page 3.9-11	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.12-1 through 3.12-5 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to noise. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

As discussed above, the Franklin Field CLUP outlines specific policies regarding noise compatibility; however, these policies are related to construction of new land uses near the airport. Franklin Field is also one of the primary noise sources within the project area.

DISCUSSION

The Program EIR determined that implementation of Harvest Water would generate short-term and temporary noise during construction, which would not violate local noise standards, but that could cause annoyance to residences along the construction corridor; this impact was concluded to be less than significant with mitigation (Program EIR Impact NOI-1). Harvest Water elements would not expose people to or generate noise levels in excess of local noise standards (Program EIR Impact NOI-2), and would not expose people to or generate excessive groundborne vibration

or groundborne noise levels (Program EIR Impact NOI-3); these impacts were concluded to be less than significant. Finally, the Program EIR determined that the program elements would not expose people residing or working in the project area to excessive noise levels near a public use airport; it was concluded that no impact would occur.

There are no new circumstances since certification of the Program EIR that would influence noise impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) **Construction**: The project modifications would be constructed in a fairly developed area (i.e., lands surrounding a wastewater treatment plant and lands in the vicinity of a municipal airport). Construction activities would generate noise, which could affect sensitive receptors within the project area. However, the noise would be intermittent and short-term as construction is expected to occur in 2023 (April through November) and 2024 (April through November). Typical work hours would be Monday through Friday from 7:00 a.m. to 7:00 p.m. (construction noise is exempt from noise ordinances between 6:00 a.m. and 8:00 p.m. on weekdays within Sacramento County), and on weekends and nighttime only if necessary and approved by the affected jurisdictions.

The use of additional staging areas outside the established construction corridor would generate noise that could affect sensitive receptors within the project area. However, the types of construction equipment, construction activities, and duration of construction would not change. Therefore, construction-related noise impacts would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which could result in a small increase in construction-related noise. However, the types of construction equipment, construction activities that would occur, and duration of construction would not change. Therefore, construction-related noise impacts would be similar to those identified in the Program EIR.

Operation: Operation of the proposed pipelines and electrical service lines would not generate excessive noise in the long term. Operation of wells may generate limited noise related to operation of submersible pumps, but noise levels are low and the sound is only audible near the pump motor. The wells would be similar to other wells that are located throughout the project area and would either be located within the Bufferlands or County-owned lands adjacent to Franklin Field, which would be a substantial distance from sensitive receptors. Maintenance activities would involve staff travel in pickup trucks, small trucks, and similar vehicles These vehicle trips would not generate excessive noise relative to the existing roadway noise environment.

The use of additional staging areas outside the established construction corridor would not generate long-term, operational noise because use of staging areas would be temporary, occurring only during construction. Therefore, operational noise impacts would not change compared to those identified in the Program EIR.

Increasing the transmission pipeline size would not increase noise levels in the project area in the long term compared to that described in the Program EIR. The transmission pipeline would be an underground facility that would not generate operational noise. Therefore, the long-term noise impacts would not change compared to those identified in the Program EIR.

b) **Construction:** Vibrational impacts from construction would mainly be associated with the use of bulldozers, loaded trucks, and a jack compactor. These activities would be temporary and intermittent. Operation of heavy construction equipment would not generate vibration levels that could cause threshold (cosmetic) damage to fragile buildings.

The use of additional staging areas outside the established construction corridor would generate vibrational impacts that could affect sensitive receptors within the project area. However, the types of construction equipment, construction activities, and duration of construction would not change. Therefore, construction-related vibration impacts would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which could result in a small increase in construction-related vibration. However, the types of construction equipment, construction activities that would occur, and duration of construction would not change. Therefore, construction-related vibrational impacts would be similar to those identified in the Program EIR.

Operation: Once operational, the project modifications would not include facilities that generate vibration during operations. Therefore, there would be no operational vibration impacts.

The use of additional staging areas outside the established construction corridor would not generate long-term, operational vibration because use of staging areas would be temporary, occurring only during construction. Therefore, operational vibration impacts would not change compared to those identified in the Program EIR.

Increasing the transmission pipeline size would not result in increased vibration during operations compared to that described in the Program EIR. The transmission pipeline would be an underground facility that would not generate vibration during operations. Therefore, there would be no change to operational vibration impacts compared to those identified in the Program EIR.

c) The project modifications near Franklin Field would not be inhabited structures. Therefore, the project modifications would not expose residents to excessive noise near a public use airport. Construction workers would be working near the airport and would be exposed to airport noise. However, the exposure to noise would be temporary and Occupational Safety and Health Administration (OSHA) requirements for workers would be followed.

The use of additional staging areas outside the established construction corridor would not expose residents to excessive noise near Franklin Field because no permanent structures would be built within staging areas. If staging areas are located near Franklin Field, construction workers would be exposed to airport noise. However, the exposure to noise would be temporary and OSHA requirements for workers would be followed. Therefore, the potential for exposure to excessive noise would not change compared to those identified in the Program EIR.

Increasing the transmission pipeline size would not increase the exposure of residents or workers to excessive noise near a public use airport compared to that described in the Program EIR. The location of the pipeline alignment would not change and the larger pipeline would not require additional workers during construction. Therefore, the potential for exposure to excessive noise would not change compared to those identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measure from the Program EIR would address the potential for short-term and temporary noise during construction and generation of noise levels in excess of local noise standards. With implementation of this mitigation measure, potential impacts related to noise would be reduced to a less-than-significant level.

Mitigation Measure NOI-1: Noise Reduction Measures

To reduce the impact of noise from construction activities the following measures shall be implemented to the extent feasible:

- Heavy equipment and impact equipment use shall be restricted to daytime hours (7:00 a.m. to 7:00 p.m.).
- Construction staging areas shall be located as far as possible from existing residences.
- The project contractor shall be required to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically or electrically powered wherever possible, to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable,

an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA.

- Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment per the manufacturers' specifications and by shrouding or shielding impact tools. All equipment shall have sound-control devices no less effective than those provided by the manufacturer.
- All stationary noise generating construction equipment shall be placed as far away as possible from sensitive receptors in an orientation minimizing noise impacts (e.g. behind barriers or storage piles).

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to noise. The combined analysis of noise issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.14 Population and Housing

Section 3.17, "Population and Housing," of the Program EIR evaluates the impacts of the program on population and housing. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
14. Population and Housing. Would the project modifications:					
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)?	Section 4.2, "Growth Inducing Impacts"	No	No	No	N/A
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Issue dismissed on page 3.17-3	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.17-1 through 3.17-2 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to population and housing.

DISCUSSION

The Program EIR determined that the program elements would not directly induce population growth, nor would it remove an obstacle to growth; this impact was concluded to be less than significant (Program EIR Section 4.2, "Growth Inducing Impacts"). Additionally, the program elements would not displace any existing housing units and would not necessitate the construction of replacement housing; it was concluded that there would be no impact.

The use of additional staging areas outside the established construction corridor would not result in any changes relative to population and housing compared to the impacts discussed in the Program EIR because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR, and the use of staging areas would not induce unplanned population growth or displace people or housing. Therefore, population and housing impacts related to this project change are not discussed further.

Increasing the size of the transmission pipeline would not result in any changes relative to population and housing compared to the impacts discussed for the transmission pipeline in the Program EIR. The transmission pipeline location and the amount of water supplied by the project would not change. Therefore, population and housing impacts related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence population and housing impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) As described on page 4-3 of the Program EIR, Harvest Water would provide recycled water for non-potable uses (e.g., irrigation of agricultural lands), thus conserving existing water supplies for potable uses (e.g., to meet future, approved growth). The project modifications would deliver water to agricultural users in the South County for irrigation use in lieu of groundwater and to be applied to agricultural fields in the wintertime for ecosystem benefits, including sandhill crane foraging and roosting habitat.

   The project modifications would not directly induce population growth, as no new residential or commercial development projects would be served by the project modifications. In addition, the project modifications would not require new permanent employees who would generate a demand for new housing. Growers in this region rely on groundwater to meet their irrigation needs. The project modifications would offset a portion of existing groundwater use; during peak periods, farmers would rely on existing wells to pump groundwater to meet demand. Recycled water would be used beneficially for irrigation purposes for existing growers in lieu of being discharged into the Sacramento River and being exported out of the region. The Zone 41 Urban Water Management Plan discusses Harvest Water as part of the overall water supply for the region. Thus, Harvest Water would be expected to help the region meet existing demands and is not expected to remove an obstacle to growth.

b) The project modifications would not displace any existing housing units and would not necessitate the construction of replacement housing. The project modifications would include construction of buried pipelines and electrical service lines primarily within public ROW and wells within County-owned or Regional San-owned lands. There are currently no houses within the footprint of the project modifications. As such, the project modifications would not displace any existing housing units and would not necessitate the construction of replacement housing.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to population and housing. The combined analysis of population and housing issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.15 Public Services

Section 3.13, "Public Services and Utilities," of the Program EIR evaluates the impacts of the program on public services and utilities. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to public services. Utilities are addressed in Section 3.3.19, "Utilities and Service Systems," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
15. Public Services. Would the project: modifications					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?	Issue dismissed on page 3.13-7	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.13-1 through 3.13-3 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to public services.

DISCUSSION

The Program EIR determined that the program elements would not directly or indirectly induce population growth and, thus, would not require new or expanded public services; it was concluded that there would be no impact.

The use of additional staging areas outside the established construction corridor would not result in any changes relative to public services compared to the impacts discussed in the Program EIR because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR, and the use of staging areas would not induce unplanned population growth or require new or expanded public services. Therefore, public services impacts related to this project change are not discussed further.

Increasing the size of the transmission pipeline would not result in any changes relative to public services compared to the impacts discussed for the transmission pipeline in the Program EIR. The transmission pipeline would still be used to serve agricultural uses and would not directly or indirectly induce population growth. Therefore, impacts to public services related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence public services impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) The project modifications would involve groundwater management through construction of wells and associated pipelines and electrical service lines. The project modifications would not directly or indirectly induce population growth and, thus, would not require new or expanded public services. As discussed above in Section 3.3.14, "Population and Housing," the project modifications would not directly or indirectly induce growth. As such, it would not require new or expanded fire protection, police protection, schools, parks, or other public services and/or facilities. In addition, given the nature of the project modifications (groundwater wells, pipelines, and electrical service lines), operations would not affect the ability of local service providers to maintain acceptable service ratios, response times, or other performance objectives. The project modifications would not increase the need for new staff for public service providers.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to public services. The combined analysis of public services issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.16 Recreation

Section 3.3, "Recreation," of the Program EIR evaluates the impacts of the program on recreation. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
16. Recreation. Would the project: modifications					
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?	Impact REC-1	No	No	No	Yes
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	Issue dismissed on page 3.13-7	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.3-1 through 3.3-2 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to recreation.

DISCUSSION

The Program EIR determined that construction of the program elements would involve temporary road closures, which could adversely affect access to park facilities, and construction dust and noise could disrupt the enjoyment of recreational users; this impact was concluded to be less than significant with mitigation (Program EIR Impact REC-1). The program elements would not include the construction or expansion of recreational facilities that could result in direct adverse physical effect on the environment; therefore, it was concluded that there would be no impact.

Increasing the size of the transmission pipeline would not result in any changes relative to recreation compared to the impacts discussed for the transmission pipeline in the Program EIR. The transmission pipeline location and the proposed construction activities would not change. Therefore, recreation impacts related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence recreation impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) Construction of the proposed wells and associated pipelines and electrical service lines would occur primarily in roadway ROWs. Therefore, the project modifications would not directly alter existing recreational facilities. Construction activities could result in short-term impacts related to access to park facilities from temporary closures of roadway lanes to accommodate construction. Construction activities may also disrupt the

enjoyment of users due to construction dust and noise (see Sections 3.3.3, "Air Quality," Section 3.3.8, "Greenhouse Gas Emissions," Section 3.3.13, "Noise," and Section 3.3.17, "Transportation," for a discussion of these impacts). These temporary road closures could adversely affect access to park facilities and construction dust and noise could disrupt the enjoyment of recreational users. In compliance with Mitigation Measures TR-1 and NOI-1, Regional San and/or the construction contractor would be required to ensure that access is maintained to adjacent uses, including parks, and that construction noise is controlled and minimized, respectively.

The use of additional staging areas outside the established construction corridor would not directly alter existing recreational facilities, but would contribute to the generation of construction dust and noise that could disrupt the enjoyment of recreational users during construction. As described in the Program EIR, mitigation would be implemented to reduce this impact. Overall, potential impacts related to access and enjoyment of recreational resources would be similar to those identified in the Program EIR.

b) The project modifications would not include construction or expansion of recreational facilities that could result in direct adverse physical effect on the environment. The project modifications, as a component of Harvest Water, would provide recycled water to existing agricultural irrigation customers; however, the project modifications would not result in population growth or increase in demand for recreation facilities. The project modifications would not include the construction or expansion of recreational facilities that could result in direct adverse physical effect on the environment. In addition, the project modifications would not result in an increase in use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

The use of additional staging areas outside the established construction corridor would not result in any changes relative to recreation compared to the impacts discussed in the Program EIR because staging areas would be located in the same overall project area that was previously evaluated in the Program EIR, and the use of staging areas would not include construction or expansion of recreational facilities or increase the use of existing parks or other recreational facilities. Therefore, potential impacts related to recreational facilities would be similar to those identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measures from the Program EIR would reduce the potential for adverse effects related to access to park facilities and construction dust and noise to a less-than-significant level.

Mitigation Measure TR-1: Traffic Management Plan

Implement Mitigation Measure TR-1 above.

Mitigation Measure NOI-1: Noise Reduction Measures

Implement Mitigation Measure NOI-1 above.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to recreation. The combined analysis of recreation issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.17 Transportation

Section 3.14, "Traffic and Transportation," of the Program EIR evaluates the impacts of the program on traffic and transportation. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
17. Transportation. Would the project: modifications					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Impact TR-1	No	No	No	Yes
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Not evaluated	No	No	No	N/A
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Impact TR-3	No	No	No	Yes
d) Result in inadequate emergency access?	Impact TR-4	No	No	No	Yes

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.14-1 through 3.14-10 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to transportation. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Senate Bill 743, passed in 2013, required the Governor's Office of Planning and Research to develop new CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation (and Section 21099[b][2] of CEQA), upon adoption of the new CEQA guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the CEQA guidelines, if any."

The Office of Administrative Law approved the updated CEQA Guidelines on December 28, 2018, and the changes are reflected in new CEQA Guidelines (Section 15064.3). State CEQA Guidelines Section 15064.3 was added December 28, 2018, to address the determination of significance for transportation impacts. Pursuant to the new CEQA Guidelines, vehicle miles traveled (VMT) will replace congestion as the metric for determining transportation impacts. The CEQA Guidelines state that "lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide."

The Program EIR was certified in 2017 (Regional San 2017). As described above, the updated CEQA Guidelines were not adopted until December 28, 2018, subsequent to certification of the Program EIR in 2017. Section 15007 of the CEQA Guidelines addresses amendments to the CEQA Guidelines and states: "If a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to conform to any new content requirements in Guideline amendments taking effect before the document is finally approved." (CEQA

Guidelines Section 15007[c]) Stated another way, because the EIR was circulated for public review (and completed) before this change in the CEQA Guidelines, the new provisions regarding VMT do not apply to this project. Therefore, the shift from automobile delay to VMT as the primary metric used to analyze transportation impacts under CEQA, as dictated by CEQA Guidelines Section 15064.3, does not constitute "new information" as defined in CEQA Guidelines Section 15162 and, even if it was "new information," CEQA Guidelines Section 15007 directs that the document "shall not need to be revised" to reflect this information.

DISCUSSION

The Program EIR determined that Harvest Water would result in temporary impacts related to traffic operations during program construction, including temporary impacts to transit, bicycle, and pedestrian facilities due to the anticipated temporary intermittent road and lane closures (Program EIR Impact TR-1); could substantially increase transportation hazards (Program EIR Impact TR-3); and could result in inadequate emergency access (Program EIR Impact TR-4); these impacts were concluded to be less than significant with mitigation.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence transportation impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) The project modifications would result in a temporary increase in local traffic as a result of construction-related workforce traffic, equipment, and material deliveries. Construction would also occur within and/or across a number of roadways, which could temporarily disrupt existing transportation and circulation in the vicinity of the project modifications.

   Public transit operates in the vicinity of the project area, and thus, these transit routes and bus stops could also be affected by temporary and intermittent road and lane closures associated with construction activity within and along the public ROW. Additionally, as a result of construction within the public ROW, bicycle and pedestrian facilities (i.e., bike lanes and sidewalk/crosswalks) could be affected by construction of the pipelines and electrical lines.

   The use of additional staging areas outside the established construction corridor would contribute to construction-related traffic increases and disruptions to local transportation and circulation patterns, similar to those described in the Program EIR. Any impacts would be temporary and staging areas would be returned to pre-construction conditions once construction is complete. As described in the Program EIR, mitigation would be implemented to reduce this impact. Overall, construction-related traffic impacts would be similar to those identified in the Program EIR.

   Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which could result in a small increase in truck trips. However, the duration of construction, construction activities that would occur, and roadways affected would not change. Therefore, construction-related traffic impacts would be similar to those identified in the Program EIR.

b) See discussion of the updated CEQA Guidelines related to VMT, above.

c) The project modifications would not result in any permanent hazards related to a design feature or incompatible use. However, the project modifications would substantially increase transportation hazards due to the anticipated temporary and intermittent road and lane closures associated with construction activity within and along the public ROW.

   The use of additional staging areas outside the established construction corridor would contribute to construction-related transportation hazards due to construction vehicles traveling to and from staging areas, similar to those described in the Program EIR. Any impacts would be temporary and staging areas would be returned to pre-construction conditions once construction is complete. As described in the Program EIR, mitigation would be implemented to reduce this impact. Overall, construction-related transportation hazards impacts would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would not result in an increase in hazards related to design feature or incompatible use compared to that described in the Program EIR. The location of the pipeline and types of construction activities that would occur would not change. Therefore, hazards from a design feature or incompatible use related to this project change would be the same as those identified in the Program EIR.

d) Construction of wells would be within County-owned or Regional San-owned lands and would not interfere with any adopted emergency response plans. However, construction of pipelines and electrical lines within roadways or public ROW could temporarily interfere with the accessibility of roadways to emergency vehicles.

The use of additional staging areas outside the established construction corridor would contribute to the potential to interfere with an adopted emergency response plan, similar to those described in the Program EIR. Any impacts would be temporary and staging areas would be returned to pre-construction conditions once construction is complete. As described in the Program EIR, mitigation would be implemented to reduce this impact. Overall, potential impacts related to interference with an adopted emergency response plan would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would not increase the potential to interfere with an adopted emergency plan compared to that described in the Program EIR. The location of the pipeline, types of construction activities, and roadways that would be affected would not change. Therefore, the potential to interfere with an emergency plan related to this project change would be the same as those identified in the Program EIR.

MITIGATION MEASURES

The following mitigation measure from the Program EIR would address the potential for construction-related impacts related to traffic operations, including temporary impacts to transit, bicycle, and pedestrian facilities; potential transportation hazards; and emergency access. With implementation of this mitigation measure, potential impacts related to transportation would be reduced to a less-than-significant level.

Mitigation Measure TR-1: Traffic Management Plan

Implement Mitigation Measure TR-1 above.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to transportation. The combined analysis of transportation issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.18 Tribal Cultural Resources

Assembly Bill (AB) 52, signed by the California governor in September of 2014, establishes a new class of resources under CEQA: "tribal cultural resources." It requires that lead agencies undertaking CEQA review must, upon written request of a California Native American tribe, begin consultation after the lead agency determines that the application for the project is complete, before a notice of preparation (NOP) of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration is issued. AB 52 also requires revision to CEQA Appendix G, the environmental checklist. This revision has created a new category for tribal cultural resources (TCRs).

The Program EIR does not address TCRs because it was not required to do so. The NOP for the Program EIR was issued on February 19, 2015 (State Clearinghouse No. 2015022067), and AB 52 went into effect on July 1, 2015. Because the NOP was released before AB 52 went into effect, the Program EIR was not required to address TCRs. Further, because this addendum tiers from the Program EIR, it also is not required to address TCRs.

3.3.19 Utilities and Service Systems

Section 3.13, "Public Services and Utilities," of the Program EIR evaluates the impacts of the program on public services and utilities. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to utilities. Public services are addressed in Section 3.3.15, "Public Services," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
19. Utilities and Service Systems. Would the project modifications:					
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?	Impact PUB-1, Impact PUB-2	No	No	No	N/A
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Impact HYD-2	No	No	No	N/A
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?	Impact PUB-1	No	No	No	N/A
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?	Impact PUB-3	No	No	No	N/A
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impact PUB-3	No	No	No	N/A

ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.13-1 through 3.13-3 of the Program EIR is relevant to understanding the Groundwater Accounting Project's potential impacts to utilities and service systems.

DISCUSSION

The Program EIR determined that the program elements would result in impacts associated with the construction of new water or wastewater treatment and disposal facilities or expansion of existing facilities; this impact was concluded to be less than significant with mitigation (Program EIR Impact PUB-1). Additionally, the Program EIR determined that the program elements would not generate a need for new stormwater drainage facilities or the expansion of existing facilities (Program EIR Impact PUB-2), and would be served by a landfill with sufficient permitted capacity and would comply with all federal, state, and local statutes and regulations related to solid waste (Program EIR Impact PUB-3); these impacts were concluded to be less than significant.

The Program EIR determined that the program involves construction of new facilities to augment water supply with recycled water elements, the environmental effects of which were analyzed throughout the Program EIR, and that the program elements would not generate additional demand for wastewater treatment or disposal; thus, it was concluded that there would be no impacts.

The use of additional staging areas outside the established construction corridor would not result in any changes relative to utilities and service systems compared to the impacts discussed in the Program EIR because the use of staging areas would not involve the construction or expansion of utility infrastructure or result in induced population growth that would increase demands for utility service. Therefore, utilities and service systems impacts related to this project change are not discussed further.

There are no new circumstances since certification of the Program EIR that would influence utilities and service systems impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) Water and Wastewater: Consistent with the Program EIR, the project modifications involve construction of new facilities (wells and pipelines) to augment water supply with recycled water and electrical service lines to provide power for operation of the well pumps. The environmental effects of the proposed facilities are evaluated throughout this addendum. The existing source of water supply in the project area is primarily groundwater pumped from private wells. The project modifications would provide tertiary recycled water for agricultural irrigation in South County, which would offset groundwater pumping and reduce dependence on the Central Sacramento Groundwater Basin. By providing recycled water for agricultural irrigation, demands on groundwater supplies and groundwater pumping would be reduced.

   Increasing the transmission pipeline size would not result in any changes to water supply impacts compared to those described in the Program EIR. Although the maximum pipeline size would be increased in some areas from 60 inches to 66 inches, this would not result in an increase in anticipated annual recycled water delivery volumes. The larger pipeline is being considered, based on recent engineering analyses, to allow more efficient delivery of the water volumes already planned for. The proposed use of the pipeline to supply agricultural areas with recycled water would not change. Therefore, water supply impacts would be the same as those identified in the Program EIR.

   Stormwater: The project modifications would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems. The proposed facilities would either be buried underground within or along roadways or would have small footprints dispersed throughout the project area.

   The project modifications would not require expansion of wastewater, stormwater, natural gas, or telecommunication facilities and the effects of expanded water and electrical facilities are evaluated throughout this addendum.

The transmission pipeline would continue to be an underground facility, and increasing the size would not increase stormwater runoff in the project area. In addition, increasing the pipeline size would not require the expansion of wastewater, stormwater, natural gas, or telecommunication facilities. Therefore, increasing the size of the transmission pipeline would not change impacts related to these utilities compared to those identified in the Program EIR.

b) The project modifications would involve construction of new facilities to augment water supply with recycled water elements, the environmental effects of which were analyzed throughout this addendum. Wells and pipelines would be constructed as part of the project modifications for groundwater management. The project modifications would not increase demand for water supplies.

Increasing the transmission pipeline size would not result in any changes to water supply impacts compared to that described in the Program EIR. The source of water, amount of water used, and demand for water for the project would not change. Therefore, water supply impacts would be the same as those identified in the Program EIR.

c) The project modifications would not generate additional demand for wastewater treatment or disposal. The project modifications would provide recycled water as a source of non-potable water for beneficial use. As a water supply project that uses recycled water, the project modifications would not generate any additional demand for wastewater treatment or disposal.

The transmission pipeline would continue to be an underground facility, and increasing the size would not generate additional wastewater in the project area. Therefore, increasing the size of the transmission pipeline would not change impacts related to wastewater compared to those identified in the Program EIR.

d) During construction, there would be minimal solid waste generated that would require disposal at a landfill. Spoil (soil and rock) excavated during construction would either be reused on site for backfill or disposed of properly. Spoil not suitable for reuse would be temporarily stored at staging areas until characterized, and then hauled away to the proper disposal site (e.g., landfill). Additional solid waste would be generated by construction crews within the project area, which would need to be hauled off site 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.

Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which could result in a small increase in the amount of soil that would be disposed of at a landfill. However, the soil types within the pipeline corridor and the remaining capacity of Kiefer Landfill would not change as a result of this project change, and soil would still be reused on-site to the extent possible. Therefore, potential impacts related to generation of solid waste would be similar to those identified in the Program EIR.

e) During construction, there would be minimal solid waste generated that would require disposal at a landfill. No hazardous wastes would be generated by operation of the project modifications. The project modifications would comply with all federal, state, and local statutes and regulations related to solid waste.

Increasing the transmission pipeline size would not increase the amount of hazardous waste generated by the project compared to that described in the Program EIR. This project change would still comply with all federal, state, and local statutes and regulations related to solid waste similar to that described in the Program EIR.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to utilities and service systems. The combined analysis of utilities and service systems issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.20 Wildfire

Wildfire was not addressed in the Program EIR because a wildfire analysis was not required at that time. Changes to Appendix G of the State CEQA Guidelines were adopted in December 2018 and wildfire was added as a new resource to be evaluated in CEQA documents. The following analysis describes the potential impacts of the project modifications related to wildfire and wildfire-related risks.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
20. Wildfire. Would the project modifications:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Impact HAZ-3	No	No	No	Yes
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?	Not evaluated	No	No	No	N/A
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?	Not evaluated	No	No	No	N/A
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?	Not evaluated	No	No	No	N/A

ENVIRONMENTAL SETTING

The project modifications would be located in a fairly developed area (i.e., lands surrounding a wastewater treatment plant and lands in the vicinity of a municipal airport). Surrounding lands are primarily agricultural, characterized by orchards, fields of row crops, and scattered rural residences and farm structures (e.g., barns). The project area is relatively flat due to active farming and agricultural operations. The Cosumnes River borders the project area to the southeast.

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. Approximately 5 miles southwest of the project area is a federal responsibility area that is not designated as a "Very High" FHSZ. The western portion of Sacramento County, approximately 15 miles east of the project area, is within the SRA but is not located in an FHSZ. No portions of the project area are located in or near lands classified as high fire hazard severity zones (CAL FIRE 2008). Further, the project area is not located in or near a wildland urban interface (WUI) area (University of Wisconsin-Madison 2020).

DISCUSSION

The Program EIR determined that impacts related to implementation of an emergency response plan or emergency evacuation plan would be less than significant with mitigation (Program EIR Impact HAZ-3) because construction could interfere with the accessibility of roadways to emergency vehicles; however, implementation of Mitigation Measure TR-1, which would require the preparation and implementation of a traffic management plan, would reduce this impact.

The use of additional staging areas outside the established construction corridor would not exacerbate wildfire risk because the project area is not categorized as a Very High FHSZ and includes features that act as fire breaks as well as irrigation systems that prevent the vegetation that is present from becoming overly dry. Further, no permanent structures would be built within staging areas, which would be returned to pre-project conditions once construction is complete. Therefore, impacts to related to wildfire from this project change are not discussed further.

Increasing the size of the transmission pipeline would not result in increased wildfire risk. The transmission pipeline would be an underground facility that would not increase wildfire risk and construction activities would not change. Therefore, impacts to related to wildfire from this project change are not discussed further.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence wildfire impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a) As described in Section 3.3.9, "Hazards and Hazardous Materials," construction of wells would be within County-owned or Regional San-owned lands and would not interfere with any adopted emergency response plans. However, construction of pipelines and electrical lines within roadways or public ROW could temporarily interfere with the accessibility of roadways to emergency vehicles.

b) The project area is not categorized as a Very High FHSZ. By their nature farmed lands have roads, canals, and other features that act as fire breaks; and farmed lands have irrigation systems that prevent the vegetation that is present from becoming overly dry. The topography of the project area and its proximity to water is unlikely to exacerbate wildfire risk. Because the location and topography of the project area are unlikely to exacerbate wildfire risk, factors such as slope and prevailing wind would not further exacerbate the wildfire risk. Therefore, project area residents would not be exposed to pollutant concentrations or the uncontrolled spread of a wildfire.

c) The project modifications would include wells, pipelines, and electrical service lines dispersed throughout the project area for the purpose of groundwater management. Approximately 26,300 feet of electrical service lines would be installed in public ROW, including 15,800 feet of electrical lines within the Bufferlands and 10,500 feet within County-owned property adjacent to Franklin Field. The length of electrical conduit from each well to existing SMUD infrastructure would vary, with a maximum distance of 7,000 feet. The electrical service lines would be installed aboveground within the Bufferlands, and underground within County-owned property adjacent to Franklin Field to meet all requirements of the FAA and the airport. The electrical service lines throughout the project area would be designed and maintained to meet safety regulations and would not exacerbate fire risk. Therefore, the project modifications would not require the installation of infrastructure that could exacerbate fire risk, and the topography of the project area and its proximity to water is unlikely to exacerbate wildfire risk.

d) The project modifications would involve groundwater management through the construction of wells and associated pipelines and electrical service lines. The project is in an area of flat terrain and would not involve changing slopes and, thus, would not expose people or structures to risks of downslope or downstream flooding or landslides from runoff, post-fire instability, or drainage changes.

MITIGATION MEASURES

The following mitigation measure from the Program EIR would reduce potential adverse impacts related to implementation of an emergency response plan or emergency evacuation plan to a less-than-significant level.

Mitigation Measure TR-1: Traffic Management Plan

Implement Mitigation Measure TR-1 above.

CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to wildfire. The combined analysis of wildfire issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

3.3.21 Mandatory Findings of Significance

Environmental Issue Area		Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
21. 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?	Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures"	No	No	No	N/A
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.)	Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures"	No	No	No	N/A
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures"	No	No	No	N/A

DISCUSSION

a) All applicable mitigation measures identified in the Program EIR to avoid and reduce impacts are integrated into the Groundwater Accounting Project. Given the nature of the project modifications (i.e., installation of wells, pipelines, and electrical service lines in an agricultural area to provide groundwater management) and the integration of these measures, the project modifications would not substantially degrade the quality of the environment. As described in Section 3.3.4, "Biological Resources," of this addendum, the project modifications would not significantly affect fish or wildlife habitat or species. The project modifications would be constructed in a fairly developed area (i.e., lands surrounding a wastewater treatment plant and lands in the vicinity of a municipal airport) and impacts would be addressed by mitigation measures included in this addendum.

As described in Section 3.3.5, "Cultural Resources," portions of the project area are considered sensitive for cultural resources. Measures integrated into the project modifications would avoid disturbance, disruption, or destruction of inadvertent archaeological resource discoveries. Therefore, the project modifications would not eliminate any examples of the major periods of California history or prehistory.

The use of additional staging areas outside the established construction corridor would not have a substantial adverse effect on biological or cultural resources because the criteria for the location of staging areas provided in Chapter 2, "Description of the Proposed Action," would not authorize the placement of staging areas on or near lands supporting biological, cultural, or other sensitive resources. As described in the Program EIR, mitigation would be implemented to reduce impacts to biological and cultural resources. Further, any impacts would be temporary and staging areas would be returned to pre-construction conditions once construction is complete. Overall, potential impacts to biological or cultural resources would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR, which could result in slightly greater potential to adversely affect biological or cultural resources. However, the location of the pipeline alignment, the width of the construction disturbance corridor, and the types of construction activities that would occur would not change. In addition, there would be no change to the sensitive resources that have the potential to be affected. Therefore, potential impacts to biological and cultural resources would be similar to those identified in the Program EIR.

b) No significant and unavoidable impacts were identified in the Program EIR. Further, no cumulatively considerable impacts were identified in the Program EIR; therefore, the Groundwater Accounting Project would not incrementally contribute to any cumulatively considerable impacts. No conditions have substantially changed, and no new information has become available since certification of the Program EIR that would alter this previous analysis.

The use of additional staging areas outside the established construction corridor would not result in new significant and unavoidable impacts or contribute to any cumulatively considerable impacts. As described in the Program EIR, mitigation would be implemented to reduce all impacts to less-than-significant levels. Therefore, no new cumulatively considerable impacts would occur as a result of using additional staging areas and cumulative impacts would be similar to those identified in the Program EIR.

Increasing the transmission pipeline size would result in additional excavation compared to that described in the Program EIR. However, the location of the pipeline alignment, the width of the construction disturbance corridor, and the types of construction activities that would occur would not change. Therefore, no new cumulatively considerable impacts would occur as a result of increasing the pipeline size and cumulative impacts would be similar to those identified in the Program EIR.

c) Construction and operation emissions generated by Harvest Water were evaluated in the Program EIR. These impacts were also addressed in the Findings adopted by Regional San in connection with its certification of the Program EIR. Effects of the project modifications would not result in substantial adverse effects on human beings beyond those analyzed in the Program EIR. No conditions have substantially changed, and no new information has become available since certification of the Program EIR that would alter this analysis. No additional mitigation is available to reduce the project modification's contribution to these impacts. Other impacts with the potential to affect human beings were determined to be less than significant in the Program EIR.

The use of additional staging areas outside the established construction corridor would not result in greater construction emissions than those evaluated in the Program EIR because the construction equipment and activities would not change and staging areas would still be located in the same overall project area that was previously evaluated in the Program EIR. Therefore, this project change would not result in substantial adverse effects on human beings beyond those analyzed in the Program EIR.

Increasing the transmission pipeline size would result in a small increase in some construction-related impacts (e.g., traffic) compared to those described in the Program EIR. However, increasing the pipeline size would not result in substantial adverse effects on human beings beyond those analyzed in the Program EIR.

3.4 CONCLUSIONS REGARDING THE ENVIRONMENTAL ANALYSIS OF THE PROJECT MODIFICATIONS

Based on the analysis of the categories of environmental impacts evaluated above, implementing Harvest Water with the modifications described in this document would result in none of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a Subsequent EIR. In summary, no altered circumstances or new information of substantial importance has been identified since certification of the Program EIR, and the project modifications evaluated in this addendum would not: (1) result in any new environmental effects; (2) substantially increase the severity of any previously identified effects; (3) result in mitigation measures or alternatives previously found to be infeasible becoming feasible; and (4) result in availability/implementation of mitigation measures or alternatives that are considerable different from those analyzed in the previous document that would substantially reduce one or more significant effects on the environment. These conclusions confirm that this addendum to the Program EIR is the appropriate CEQA document to evaluate the minor project modifications described in this document.

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4 REFERENCES

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Alyssa Way ..... Air Quality and Greenhouse Gas Specialist
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Appendix A

Air Quality and Greenhouse Gas Modeling

Emissions Summary

Summary

Phase 1 - 2023

lbs/day

Installation Type	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Wells	1.8	16.3	15.4	0.9	0.7	0.2	0.7	0.6	0.1	0.0	3691.2	0.6	0.0	3706.1
Pipeline	3.0	33.9	26.2	19.9	1.3	18.6	5.0	1.2	3.9	0.1	5887.5	1.4	0.1	5949.0
Electrical	2.5	27.4	22.8	24.3	1.2	23.1	5.8	1.0	4.8	0.1	4887.3	1.1	0.1	4938.0
Total	**7.3**	**77.6**	**64.4**	**45.1**	**3.2**	**41.9**	**11.6**	**2.8**	**8.7**	**0.1**	**14,466.0**	**3.1**	**0.2**	**14,593.1**
Maximum (pounds/day)	7.3	77.6	64.4	45.1	3.2	41.9	11.6	2.8	8.7	0.1	-	-	-	-
SMAQMD Threshold	None	None	85.0	80.0	None	None	82.0	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Tons for all except CO2e. Metric Tonnes for CO2e.

Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Wells	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.9	0.0	0.0	19.0
Pipeline	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	21.0	0.0	0.0	19.3
Electrical	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	5.5
Total	**0.1**	**0.3**	**0.2**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**45.9**	**0.0**	**0.0**	**43.7**
Maximum (tons/phase)	0.1	0.3	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	-	-	-	-
SMAQMD Threshold	None	None	None	14.6	None	None	15.0	None	None	None	-	-	-	1100.0
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	FALSE

Phase 2 -2024

lbs/day

Installation Type	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Wells	1.7	16.2	14.5	0.8	0.6	0.2	0.6	0.6	0.1	0.0	3686.4	0.6	0.0	3701.1
Pipeline	2.9	33.9	26.1	19.9	1.3	18.6	5.0	1.2	3.9	0.1	5887.5	1.4	0.1	5949.0
Electrical	2.4	25.7	22.6	24.2	1.1	23.1	5.8	1.0	4.8	0.0	4375.8	1.1	0.1	4422.1
Total	**7.0**	**75.8**	**63.1**	**44.9**	**3.0**	**41.9**	**11.5**	**2.7**	**8.7**	**0.1**	**13,949.7**	**3.1**	**0.1**	**14,072.2**
Maximum (pounds/day)	7.0	75.8	63.1	44.9	3.0	41.9	11.5	2.7	8.7	0.1	-	-	-	-
SMAQMD Threshold	None	None	85.0	80.0	None	None	82.0	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Tons for all except CO2e. Metric Tonnes for CO2e.

Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Wells	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	21.5
Pipeline	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	13.4	0.0	0.0	12.3
Electrical	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	13.4	0.0	0.0	12.3
Total	**0.0**	**0.3**	**0.2**	**0.2**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**48.2**	**0.0**	**0.0**	**46.1**
Maximum (tons/phase)	0.0	0.3	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	-	-	-	-
SMAQMD Threshold	None	None	None	14.6	None	None	15.0	None	None	None	-	-	-	1100.0
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	FALSE

Well Installation

Phase 1

lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2023	1.8489	15.414	16.3164	0.0389	0.2068	0.6542	0.861	0.0559	0.636	0.6919	0	3,691.24	3,691.24	0.5949	0	3,706.11
Total	1.8489	15.414	16.3164	0.0389	0.2068	0.6542	0.861	0.0559	0.636	0.6919	0	3691.2397	3691.2397	0.5949	0	3706.111

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2023	0.01	0.0837	0.0901	2.20E-04	1.98E-03	3.46E-03	5.45E-03	5.40E-04	3.36E-03	3.90E-03	0	18.8945	18.8945	2.99E-03	0	18.9694
Total	0.01	0.0837	0.0901	0.00022	0.00198	0.00346	0.00545	0.00054	0.00336	0.0039	0	18.8945	18.8945	0.00299	0	18.9694

Phase 2

lbs/day	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2024	1.7442	14.4528	16.1902	0.0389	0.2068	0.5812	0.7881	0.0559	0.5645	0.6204	0	3,686.36	3,686.36	0.589	0	3,701.08
Total	1.7442	14.4528	16.1902	0.0389	0.2068	0.5812	0.7881	0.0559	0.5645	0.6204	0	3686.356	3686.356	0.589	0	3701.081

tons/year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2024	0.011	0.0948	0.108	2.50E-04	1.88E-03	3.86E-03	5.75E-03	5.10E-04	3.70E-03	4.21E-03	0	21.3907	21.3907	3.85E-03	0	21.4869
Total	0.011	0.0948	0.108	0.00025	0.00188	0.00386	0.00575	0.00051	0.0037	0.00421	0	21.3907	21.3907	0.00385	0	21.4869

Pipeline

Phase 1

lbs/day

Project Phases	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.2	9.7	11.3	6.8	0.6	6.2	1.8	0.5	1.3	0.0	1934.3	0.4	0.0	1950.4
Grading/Excavation	0.6	9.8	6.0	6.5	0.3	6.2	1.5	0.3	1.3	0.0	1581.1	0.4	0.0	1600.0
Drainage/Utilities/Sub-Grade	0.5	8.5	4.8	6.5	0.3	6.2	1.5	0.2	1.3	0.0	1380.6	0.4	0.0	1397.4
Paving	0.5	5.9	4.1	0.2	0.2	0.0	0.2	0.2	0.0	0.0	991.4	0.2	0.0	1001.2
Paving Off-Gas	0.1													
Total	**3.0**	**33.9**	**26.2**	**19.9**	**1.3**	**18.6**	**5.0**	**1.2**	**3.9**	**0.1**	**5,887.5**	**1.4**	**0.1**	**5,949.0**
Maximum (pounds/day)	3.0	33.9	26.2	19.9	1.3	18.6	5.0	1.2	3.9	0.1	-	-	-	-
SMAQMD Threshold	None	None	85.0	80.0	None	None	82.0	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Tons for all except CO2e. Metric Tonnes for CO2e.

Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	2.5
Grading/Excavation	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	0.0	9.3
Drainage/Utilities/Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.4
Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.9
Paving Off-Gas	0.0													
Total	**0.0**	**0.1**	**0.1**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**21.0**	**0.0**	**0.0**	**19.3**
Maximum (tons/phase)	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	-	-	-	-
SMAQMD Threshold	None	None	None	None	None	None	None	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Phase 2

lbs/day

Project Phases	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.2	9.7	11.3	6.8	0.6	6.2	1.8	0.5	1.3	0.0	1934.3	0.4	0.0	1950.4
Grading/Excavation	0.6	9.8	5.9	6.5	0.3	6.2	1.5	0.3	1.3	0.0	1581.1	0.4	0.0	1600.0
Drainage/Utilities/Sub-Grade	0.5	8.5	4.8	6.5	0.3	6.2	1.5	0.2	1.3	0.0	1380.6	0.4	0.0	1397.4
Paving	0.5	5.9	4.1	0.2	0.2	0.0	0.2	0.2	0.0	0.0	991.4	0.2	0.0	1001.2
Total	**2.9**	**33.9**	**26.1**	**19.9**	**1.3**	**18.6**	**5.0**	**1.2**	**3.9**	**0.1**	**5,887.5**	**1.4**	**0.1**	**5,949.0**
Maximum (pounds/day)	2.9	33.9	26.1	19.9	1.3	18.6	5.0	1.2	3.9	0.1	-	-	-	-
SMAQMD Threshold	None	None	85.0	80.0	None	None	82.0	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Tons for all except CO2e. Metric Tonnes for CO2e.

Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.6
Grading/Excavation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0	6.0
Drainage/Utilities/Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.5
Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.2
Total	**0.0**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**13.4**	**0.0**	**0.0**	**12.3**
Maximum (tons/phase)	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
SMAQMD Threshold	None	None	None	None	None	None	None	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Electrical Lines

Phase 1

lbs/day

Project Phases	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.2	9.7	11.3	8.3	0.6	7.7	2.1	0.5	1.6	0.0	1934.3	0.4	0.0	1950.4
Grading/Excavation	0.4	6.6	4.1	7.9	0.2	7.7	1.8	0.2	1.6	0.0	1081.0	0.3	0.0	1094.5
Drainage/Utilities/Sub-Grade	0.4	5.2	3.3	7.9	0.2	7.7	1.8	0.2	1.6	0.0	880.5	0.2	0.0	891.9
Paving	0.5	5.9	4.1	0.2	0.2	0.0	0.2	0.2	0.0	0.0	991.4	0.2	0.0	1001.2
Paving Off-Gas	0.0													
Total	**2.5**	**27.4**	**22.8**	**24.3**	**1.2**	**23.1**	**5.8**	**1.0**	**4.8**	**0.1**	**4,887.3**	**1.1**	**0.1**	**4,938.0**
Maximum (pounds/day)	2.5	27.4	22.8	24.3	1.2	23.1	5.8	1.0	4.8	0.1	-	-	-	-
SMAQMD Threshold	None	None	85.0	80.0	None	None	82.0	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Tons for all except CO2e. Metric Tonnes for CO2e.

Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.0
Grading/Excavation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	2.5
Drainage/Utilities/Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.3
Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.7
Paving Off-Gas	0.1													
Total	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**6.0**	**0.0**	**0.0**	**5.5**
Maximum (tons/phase)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
SMAQMD Threshold	None	None	None	None	None	None	None	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Phase 2

lbs/day

Project Phases	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.2	9.3	11.3	8.2	0.5	7.7	2.1	0.5	1.6	0.0	1806.5	0.4	0.0	1821.4
Grading/Excavation	0.4	6.2	4.1	7.9	0.2	7.7	1.8	0.2	1.6	0.0	953.2	0.3	0.0	965.6
Drainage/Utilities/Sub-Grade	0.3	4.8	3.2	7.9	0.2	7.7	1.7	0.1	1.6	0.0	752.7	0.2	0.0	762.9
Paving	0.4	5.4	4.0	0.2	0.2	0.0	0.2	0.2	0.0	0.0	863.5	0.2	0.0	872.3
Total	**2.4**	**25.7**	**22.6**	**24.2**	**1.1**	**23.1**	**5.8**	**1.0**	**4.8**	**0.0**	**4,375.8**	**1.1**	**0.1**	**4,422.1**
Maximum (pounds/day)	2.4	25.7	22.6	24.2	1.1	23.1	5.8	1.0	4.8	0.0	-	-	-	-
SMAQMD Threshold	None	None	85.0	80.0	None	None	82.0	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

Tons for all except CO2e. Metric Tonnes for CO2e.

Project Phases	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.3
Grading/Excavation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.5
Drainage/Utilities/Sub-Grade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	2.9
Paving	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.6
Total	**0.0**	**0.1**	**0.1**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**13.4**	**0.0**	**0.0**	**12.3**
Maximum (tons/phase)	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	-	-	-	-
SMAQMD Threshold	None	None	None	None	None	None	None	None	None	None	-	-	-	-
Threshold Exceeded	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	-	-	-	-

CalEEMod Outputs

Groundwater Accounting - Wells

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.27	12,000.00	0
Parking Lot	0.16	1000sqft	0.00	162.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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

Groundwater Accounting - Wells - Sacramento County, Annual

Project Characteristics -

Land Use - Total disturbed acreage for one well

Construction Phase - 19 total days of activities

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Trips and VMT - Workers and vendor trips provided; hauling in RCEM model

Grading -

Groundwater Accounting - Wells - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	1.00	2.00
tblLandUse	LandUseSquareFeet	0.00	12,000.00
tblLandUse	LandUseSquareFeet	160.00	162.00
tblLandUse	LotAcreage	0.00	0.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00

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					
2023	0.0100	0.0837	0.0901	2.2000e-004	1.9800e-003	3.4600e-003	5.4500e-003	5.4000e-004	3.3600e-003	3.9000e-003	0.0000	18.8946	18.8946	2.9900e-003	0.0000	18.9694
Maximum	**0.0100**	**0.0837**	**0.0901**	**2.2000e-004**	**1.9800e-003**	**3.4600e-003**	**5.4500e-003**	**5.4000e-004**	**3.3600e-003**	**3.9000e-003**	**0.0000**	**18.8946**	**18.8946**	**2.9900e-003**	**0.0000**	**18.9694**

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					
2023	0.0100	0.0837	0.0901	2.2000e-004	1.9800e-003	3.4600e-003	5.4500e-003	5.4000e-004	3.3600e-003	3.9000e-003	0.0000	18.8945	18.8945	2.9900e-003	0.0000	18.9694
Maximum	**0.0100**	**0.0837**	**0.0901**	**2.2000e-004**	**1.9800e-003**	**3.4600e-003**	**5.4500e-003**	**5.4000e-004**	**3.3600e-003**	**3.9000e-003**	**0.0000**	**18.8945**	**18.8945**	**2.9900e-003**	**0.0000**	**18.9694**

	ROG	NOx	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	**0.10**	**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	**4-1-2023**	**6-30-2023**	0.0938	0.0938
		Highest	0.0938	0.0938

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	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0153
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0000**	**0.0153**

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	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0153
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0000**	**0.0153**

	ROG	NOx	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

Groundwater Accounting - Wells - Sacramento County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clear and Grub Site	Site Preparation	4/1/2023	4/4/2023	5	2	
2	Grading	Grading	4/5/2023	4/6/2023	5	2	
3	Drill Test Well/Permanent Well	Building Construction	4/7/2023	4/20/2023	5	10	
4	Above Ground Faciliites	Building Construction	4/21/2023	4/28/2023	5	6	

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

Groundwater Accounting - Wells - Sacramento County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grub Site	Graders	0	8.00	187	0.41
Clear and Grub Site	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Drill Test Well/Permanent Well	Air Compressors	1	8.00	78	0.48
Drill Test Well/Permanent Well	Bore/Drill Rigs	1	8.00	221	0.50
Drill Test Well/Permanent Well	Cement and Mortar Mixers	1	8.00	9	0.56
Drill Test Well/Permanent Well	Cranes	1	8.00	231	0.29
Drill Test Well/Permanent Well	Forklifts	0	6.00	89	0.20
Drill Test Well/Permanent Well	Generator Sets	1	8.00	84	0.74
Drill Test Well/Permanent Well	Pumps	1	8.00	84	0.74
Drill Test Well/Permanent Well	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drill Test Well/Permanent Well	Welders	1	8.00	46	0.45
Above Ground Faciliites	Cranes	0	4.00	231	0.29
Above Ground Faciliites	Forklifts	0	6.00	89	0.20
Above Ground Faciliites	Plate Compactors	1	8.00	8	0.43
Above Ground Faciliites	Tractors/Loaders/Backhoes	0	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
Clear and Grub Site	1	14.00	4.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Drill Test Well/Permanent Well	7	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Facilities	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clear and Grub Site - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	1.5400e-003	2.2300e-003	0.0000		8.0000e-005	8.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2736	0.2736	9.0000e-005	0.0000	0.2758
Total	**1.5000e-004**	**1.5400e-003**	**2.2300e-003**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.2736**	**0.2736**	**9.0000e-005**	**0.0000**	**0.2758**

3.2 Clear and Grub Site - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.6000e-004	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1138	0.1138	1.0000e-005	0.0000	0.1139
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**7.0000e-005**	**4.0000e-004**	**5.2000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2350**	**0.2350**	**1.0000e-005**	**0.0000**	**0.2352**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	1.5400e-003	2.2300e-003	0.0000		8.0000e-005	8.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.2736	0.2736	9.0000e-005	0.0000	0.2758
Total	**1.5000e-004**	**1.5400e-003**	**2.2300e-003**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.2736**	**0.2736**	**9.0000e-005**	**0.0000**	**0.2758**

3.2 Clear and Grub Site - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.6000e-004	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1138	0.1138	1.0000e-005	0.0000	0.1139
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**7.0000e-005**	**4.0000e-004**	**5.2000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2350**	**0.2350**	**1.0000e-005**	**0.0000**	**0.2352**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9000e-004	1.5500e-003	3.2600e-003	1.0000e-005		8.0000e-005	8.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.4537	0.4537	1.5000e-004	0.0000	0.4574
Total	**1.9000e-004**	**1.5500e-003**	**3.2600e-003**	**1.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.4537**	**0.4537**	**1.5000e-004**	**0.0000**	**0.4574**

3.3 Grading - 2023

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	5.4000e-004	1.5000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1707	0.1707	1.0000e-005	0.0000	0.1709
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**8.0000e-005**	**5.8000e-004**	**5.7000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.1000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2919**	**0.2919**	**1.0000e-005**	**0.0000**	**0.2922**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9000e-004	1.5500e-003	3.2600e-003	1.0000e-005		8.0000e-005	8.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.4537	0.4537	1.5000e-004	0.0000	0.4574
Total	**1.9000e-004**	**1.5500e-003**	**3.2600e-003**	**1.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.4537**	**0.4537**	**1.5000e-004**	**0.0000**	**0.4574**

3.3 Grading - 2023

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	5.4000e-004	1.5000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1707	0.1707	1.0000e-005	0.0000	0.1709
Worker	6.0000e-005	4.0000e-005	4.2000e-004	0.0000	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1212	0.1212	0.0000	0.0000	0.1213
Total	**8.0000e-005**	**5.8000e-004**	**5.7000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.1000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2919**	**0.2919**	**1.0000e-005**	**0.0000**	**0.2922**

3.4 Drill Test Well/Permanent Well - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.8400e-003	0.0743	0.0783	1.8000e-004		3.2600e-003	3.2600e-003		3.1700e-003	3.1700e-003	0.0000	15.2115	15.2115	2.6400e-003	0.0000	15.2776
Total	**8.8400e-003**	**0.0743**	**0.0783**	**1.8000e-004**		**3.2600e-003**	**3.2600e-003**		**3.1700e-003**	**3.1700e-003**	**0.0000**	**15.2115**	**15.2115**	**2.6400e-003**	**0.0000**	**15.2776**

3.4 Drill Test Well/Permanent Well - 2023

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	8.0000e-005	2.7000e-003	7.6000e-004	1.0000e-005	2.3000e-004	0.0000	2.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.8535	0.8535	4.0000e-005	0.0000	0.8545
Worker	2.9000e-004	1.8000e-004	2.1000e-003	1.0000e-005	7.7000e-004	0.0000	7.8000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.6060	0.6060	1.0000e-005	0.0000	0.6063
Total	**3.7000e-004**	**2.8800e-003**	**2.8600e-003**	**2.0000e-005**	**1.0000e-003**	**0.0000**	**1.0100e-003**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**1.4595**	**1.4595**	**5.0000e-005**	**0.0000**	**1.4608**

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	8.8400e-003	0.0743	0.0783	1.8000e-004		3.2600e-003	3.2600e-003		3.1700e-003	3.1700e-003	0.0000	15.2114	15.2114	2.6400e-003	0.0000	15.2775
Total	**8.8400e-003**	**0.0743**	**0.0783**	**1.8000e-004**		**3.2600e-003**	**3.2600e-003**		**3.1700e-003**	**3.1700e-003**	**0.0000**	**15.2114**	**15.2114**	**2.6400e-003**	**0.0000**	**15.2775**

3.4 Drill Test Well/Permanent Well - 2023

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	8.0000e-005	2.7000e-003	7.6000e-004	1.0000e-005	2.3000e-004	0.0000	2.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.8535	0.8535	4.0000e-005	0.0000	0.8545
Worker	2.9000e-004	1.8000e-004	2.1000e-003	1.0000e-005	7.7000e-004	0.0000	7.8000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.6060	0.6060	1.0000e-005	0.0000	0.6063
Total	**3.7000e-004**	**2.8800e-003**	**2.8600e-003**	**2.0000e-005**	**1.0000e-003**	**0.0000**	**1.0100e-003**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**1.4595**	**1.4595**	**5.0000e-005**	**0.0000**	**1.4608**

3.5 Above Ground Faciliites - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2000e-004	7.5000e-004	6.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0938	0.0938	1.0000e-005	0.0000	0.0941
Total	**1.2000e-004**	**7.5000e-004**	**6.3000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0938**	**0.0938**	**1.0000e-005**	**0.0000**	**0.0941**

3.5 Above Ground Faciliites - 2023

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	5.0000e-005	1.6200e-003	4.6000e-004	1.0000e-005	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.5121	0.5121	2.0000e-005	0.0000	0.5127
Worker	1.7000e-004	1.1000e-004	1.2600e-003	0.0000	4.6000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3636	0.3636	1.0000e-005	0.0000	0.3638
Total	**2.2000e-004**	**1.7300e-003**	**1.7200e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.8757**	**0.8757**	**3.0000e-005**	**0.0000**	**0.8765**

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	1.2000e-004	7.5000e-004	6.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0938	0.0938	1.0000e-005	0.0000	0.0941
Total	**1.2000e-004**	**7.5000e-004**	**6.3000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0938**	**0.0938**	**1.0000e-005**	**0.0000**	**0.0941**

3.5 Above Ground Faciliites - 2023

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	5.0000e-005	1.6200e-003	4.6000e-004	1.0000e-005	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.5121	0.5121	2.0000e-005	0.0000	0.5127
Worker	1.7000e-004	1.1000e-004	1.2600e-003	0.0000	4.6000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3636	0.3636	1.0000e-005	0.0000	0.3638
Total	**2.2000e-004**	**1.7300e-003**	**1.7200e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.8757**	**0.8757**	**3.0000e-005**	**0.0000**	**0.8765**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0
User Defined Industrial	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776
User Defined Industrial	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0152	0.0152	0.0000	0.0000	0.0153
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0153
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	56.7	0.0152	0.0000	0.0000	0.0153
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0152**	**0.0000**	**0.0000**	**0.0153**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	56.7	0.0152	0.0000	0.0000	0.0153
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0152**	**0.0000**	**0.0000**	**0.0153**

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	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-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	5.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-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	5.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Groundwater Accounting - Wells

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.27	12,000.00	0
Parking Lot	0.16	1000sqft	0.00	162.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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

Groundwater Accounting - Wells - Sacramento County, Summer

Project Characteristics -

Land Use - Total disturbed acreage for one well

Construction Phase - 19 total days of activities

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Trips and VMT - Workers and vendor trips provided; hauling in RCEM model

Grading -

Groundwater Accounting - Wells - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	1.00	2.00
tblLandUse	LandUseSquareFeet	0.00	12,000.00
tblLandUse	LandUseSquareFeet	160.00	162.00
tblLandUse	LotAcreage	0.00	0.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00

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					
2023	1.8489	15.4140	16.3164	0.0389	0.2068	0.6542	0.8610	0.0559	0.6360	0.6919	0.0000	3,691.2397	3,691.2397	0.5949	0.0000	3,706.1109
Maximum	**1.8489**	**15.4140**	**16.3164**	**0.0389**	**0.2068**	**0.6542**	**0.8610**	**0.0559**	**0.6360**	**0.6919**	**0.0000**	**3,691.2397**	**3,691.2397**	**0.5949**	**0.0000**	**3,706.1109**

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					
2023	1.8489	15.4140	16.3164	0.0389	0.2068	0.6542	0.8610	0.0559	0.6360	0.6919	0.0000	3,691.2397	3,691.2397	0.5949	0.0000	3,706.1109
Maximum	**1.8489**	**15.4140**	**16.3164**	**0.0389**	**0.2068**	**0.6542**	**0.8610**	**0.0559**	**0.6360**	**0.6919**	**0.0000**	**3,691.2397**	**3,691.2397**	**0.5949**	**0.0000**	**3,706.1109**

Groundwater Accounting - Wells - Sacramento County, Summer

	ROG	NOx	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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

	ROG	NOx	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	Clear and Grub Site	Site Preparation	4/1/2023	4/4/2023	5	2	
2	Grading	Grading	4/5/2023	4/6/2023	5	2	
3	Drill Test Well/Permanent Well	Building Construction	4/7/2023	4/20/2023	5	10	
4	Above Ground Faciliites	Building Construction	4/21/2023	4/28/2023	5	6	

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

Groundwater Accounting - Wells - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grub Site	Graders	0	8.00	187	0.41
Clear and Grub Site	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Drill Test Well/Permanent Well	Air Compressors	1	8.00	78	0.48
Drill Test Well/Permanent Well	Bore/Drill Rigs	1	8.00	221	0.50
Drill Test Well/Permanent Well	Cement and Mortar Mixers	1	8.00	9	0.56
Drill Test Well/Permanent Well	Cranes	1	8.00	231	0.29
Drill Test Well/Permanent Well	Forklifts	0	6.00	89	0.20
Drill Test Well/Permanent Well	Generator Sets	1	8.00	84	0.74
Drill Test Well/Permanent Well	Pumps	1	8.00	84	0.74
Drill Test Well/Permanent Well	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drill Test Well/Permanent Well	Welders	1	8.00	46	0.45
Above Ground Faciliites	Cranes	0	4.00	231	0.29
Above Ground Faciliites	Forklifts	0	6.00	89	0.20
Above Ground Faciliites	Plate Compactors	1	8.00	8	0.43
Above Ground Faciliites	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Groundwater Accounting - Wells - Sacramento County, Summer

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
Clear and Grub Site	1	14.00	4.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Drill Test Well/Permanent Well	7	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Facilities	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clear and Grub Site - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1514	1.5357	2.2313	3.1200e-003		0.0758	0.0758		0.0698	0.0698		301.5765	301.5765	0.0975		304.0149
Total	**0.1514**	**1.5357**	**2.2313**	**3.1200e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0698**	**0.0698**		**301.5765**	**301.5765**	**0.0975**		**304.0149**

3.2 Clear and Grub Site - 2023

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	0.0105	0.3541	0.0961	1.1900e-003	0.0314	5.6000e-004	0.0320	9.0400e-003	5.4000e-004	9.5800e-003		126.5466	126.5466	5.6500e-003		126.6879
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0746**	**0.3873**	**0.6053**	**2.6700e-003**	**0.1911**	**1.5400e-003**	**0.1927**	**0.0514**	**1.4400e-003**	**0.0528**		**274.4166**	**274.4166**	**8.9900e-003**		**274.6414**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1514	1.5357	2.2313	3.1200e-003		0.0758	0.0758		0.0698	0.0698	0.0000	301.5765	301.5765	0.0975		304.0149
Total	**0.1514**	**1.5357**	**2.2313**	**3.1200e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0698**	**0.0698**	**0.0000**	**301.5765**	**301.5765**	**0.0975**		**304.0149**

3.2 Clear and Grub Site - 2023

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	0.0105	0.3541	0.0961	1.1900e-003	0.0314	5.6000e-004	0.0320	9.0400e-003	5.4000e-004	9.5800e-003		126.5466	126.5466	5.6500e-003		126.6879
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0746**	**0.3873**	**0.6053**	**2.6700e-003**	**0.1911**	**1.5400e-003**	**0.1927**	**0.0514**	**1.4400e-003**	**0.0528**		**274.4166**	**274.4166**	**8.9900e-003**		**274.6414**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1887	1.5486	3.2578	5.1700e-003		0.0758	0.0758		0.0697	0.0697		500.1056	500.1056	0.1617		504.1492
Total	**0.1887**	**1.5486**	**3.2578**	**5.1700e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0697**	**0.0697**		**500.1056**	**500.1056**	**0.1617**		**504.1492**

3.3 Grading - 2023

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	0.0158	0.5312	0.1441	1.7900e-003	0.0472	8.5000e-004	0.0480	0.0136	8.1000e-004	0.0144		189.8199	189.8199	8.4800e-003		190.0318
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0799**	**0.5644**	**0.6534**	**3.2700e-003**	**0.2068**	**1.8300e-003**	**0.2087**	**0.0559**	**1.7100e-003**	**0.0576**		**337.6899**	**337.6899**	**0.0118**		**337.9853**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1887	1.5486	3.2578	5.1700e-003		0.0758	0.0758		0.0697	0.0697	0.0000	500.1056	500.1056	0.1617		504.1492
Total	**0.1887**	**1.5486**	**3.2578**	**5.1700e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0697**	**0.0697**	**0.0000**	**500.1056**	**500.1056**	**0.1617**		**504.1492**

3.3 Grading - 2023

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	0.0158	0.5312	0.1441	1.7900e-003	0.0472	8.5000e-004	0.0480	0.0136	8.1000e-004	0.0144		189.8199	189.8199	8.4800e-003		190.0318
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0799**	**0.5644**	**0.6534**	**3.2700e-003**	**0.2068**	**1.8300e-003**	**0.2087**	**0.0559**	**1.7100e-003**	**0.0576**		**337.6899**	**337.6899**	**0.0118**		**337.9853**

3.4 Drill Test Well/Permanent Well - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7690	14.8496	15.6631	0.0356		0.6524	0.6524		0.6343	0.6343		3,353.5498	3,353.5498	0.5830		3,368.1257
Total	**1.7690**	**14.8496**	**15.6631**	**0.0356**		**0.6524**	**0.6524**		**0.6343**	**0.6343**		**3,353.5498**	**3,353.5498**	**0.5830**		**3,368.1257**

3.4 Drill Test Well/Permanent Well - 2023

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	0.0158	0.5312	0.1441	1.7900e-003	0.0472	8.5000e-004	0.0480	0.0136	8.1000e-004	0.0144		189.8199	189.8199	8.4800e-003		190.0318
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0799**	**0.5644**	**0.6534**	**3.2700e-003**	**0.2068**	**1.8300e-003**	**0.2087**	**0.0559**	**1.7100e-003**	**0.0576**		**337.6899**	**337.6899**	**0.0118**		**337.9853**

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	1.7690	14.8496	15.6631	0.0356		0.6524	0.6524		0.6343	0.6343	0.0000	3,353.5497	3,353.5497	0.5830		3,368.1257
Total	**1.7690**	**14.8496**	**15.6631**	**0.0356**		**0.6524**	**0.6524**		**0.6343**	**0.6343**	**0.0000**	**3,353.5497**	**3,353.5497**	**0.5830**		**3,368.1257**

3.4 Drill Test Well/Permanent Well - 2023

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	0.0158	0.5312	0.1441	1.7900e-003	0.0472	8.5000e-004	0.0480	0.0136	8.1000e-004	0.0144		189.8199	189.8199	8.4800e-003		190.0318
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0799**	**0.5644**	**0.6534**	**3.2700e-003**	**0.2068**	**1.8300e-003**	**0.2087**	**0.0559**	**1.7100e-003**	**0.0576**		**337.6899**	**337.6899**	**0.0118**		**337.9853**

3.5 Above Ground Faciliites - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0401	0.2513	0.2105	4.9000e-004		9.7700e-003	9.7700e-003		9.7700e-003	9.7700e-003		34.4794	34.4794	3.5800e-003		34.5689
Total	**0.0401**	**0.2513**	**0.2105**	**4.9000e-004**		**9.7700e-003**	**9.7700e-003**		**9.7700e-003**	**9.7700e-003**		**34.4794**	**34.4794**	**3.5800e-003**		**34.5689**

3.5 Above Ground Faciliites - 2023

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	0.0158	0.5312	0.1441	1.7900e-003	0.0472	8.5000e-004	0.0480	0.0136	8.1000e-004	0.0144		189.8199	189.8199	8.4800e-003		190.0318
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0799**	**0.5644**	**0.6534**	**3.2700e-003**	**0.2068**	**1.8300e-003**	**0.2087**	**0.0559**	**1.7100e-003**	**0.0576**		**337.6899**	**337.6899**	**0.0118**		**337.9853**

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	0.0401	0.2513	0.2105	4.9000e-004		9.7700e-003	9.7700e-003		9.7700e-003	9.7700e-003	0.0000	34.4794	34.4794	3.5800e-003		34.5689
Total	**0.0401**	**0.2513**	**0.2105**	**4.9000e-004**		**9.7700e-003**	**9.7700e-003**		**9.7700e-003**	**9.7700e-003**	**0.0000**	**34.4794**	**34.4794**	**3.5800e-003**		**34.5689**

3.5 Above Ground Faciliites - 2023

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	0.0158	0.5312	0.1441	1.7900e-003	0.0472	8.5000e-004	0.0480	0.0136	8.1000e-004	0.0144		189.8199	189.8199	8.4800e-003		190.0318
Worker	0.0641	0.0332	0.5093	1.4800e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		147.8701	147.8701	3.3400e-003		147.9535
Total	**0.0799**	**0.5644**	**0.6534**	**3.2700e-003**	**0.2068**	**1.8300e-003**	**0.2087**	**0.0559**	**1.7100e-003**	**0.0576**		**337.6899**	**337.6899**	**0.0118**		**337.9853**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0
User Defined Industrial	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776
User Defined Industrial	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Unmitigated	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-004**

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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-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

Groundwater Accounting - Wells

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.27	12,000.00	0
Parking Lot	0.16	1000sqft	0.00	162.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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

Groundwater Accounting - Wells - Sacramento County, Winter

Project Characteristics -

Land Use - Total disturbed acreage for one well

Construction Phase - 19 total days of activities

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Trips and VMT - Workers and vendor trips provided; hauling in RCEM model

Grading -

Groundwater Accounting - Wells - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	1.00	2.00
tblLandUse	LandUseSquareFeet	0.00	12,000.00
tblLandUse	LandUseSquareFeet	160.00	162.00
tblLandUse	LotAcreage	0.00	0.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00

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					
2023	1.8484	15.4308	16.2418	0.0387	0.2068	0.6542	0.8611	0.0559	0.6361	0.6920	0.0000	3,669.1920	3,669.1920	0.5950	0.0000	3,684.0662
Maximum	**1.8484**	**15.4308**	**16.2418**	**0.0387**	**0.2068**	**0.6542**	**0.8611**	**0.0559**	**0.6361**	**0.6920**	**0.0000**	**3,669.1920**	**3,669.1920**	**0.5950**	**0.0000**	**3,684.0662**

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					
2023	1.8484	15.4308	16.2418	0.0387	0.2068	0.6542	0.8611	0.0559	0.6361	0.6920	0.0000	3,669.1920	3,669.1920	0.5950	0.0000	3,684.0662
Maximum	**1.8484**	**15.4308**	**16.2418**	**0.0387**	**0.2068**	**0.6542**	**0.8611**	**0.0559**	**0.6361**	**0.6920**	**0.0000**	**3,669.1920**	**3,669.1920**	**0.5950**	**0.0000**	**3,684.0662**

Groundwater Accounting - Wells - Sacramento County, Winter

	ROG	NOx	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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

	ROG	NOx	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	Clear and Grub Site	Site Preparation	4/1/2023	4/4/2023	5	2	
2	Grading	Grading	4/5/2023	4/6/2023	5	2	
3	Drill Test Well/Permanent Well	Building Construction	4/7/2023	4/20/2023	5	10	
4	Above Ground Faciliites	Building Construction	4/21/2023	4/28/2023	5	6	

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

Groundwater Accounting - Wells - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grub Site	Graders	0	8.00	187	0.41
Clear and Grub Site	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Drill Test Well/Permanent Well	Air Compressors	1	8.00	78	0.48
Drill Test Well/Permanent Well	Bore/Drill Rigs	1	8.00	221	0.50
Drill Test Well/Permanent Well	Cement and Mortar Mixers	1	8.00	9	0.56
Drill Test Well/Permanent Well	Cranes	1	8.00	231	0.29
Drill Test Well/Permanent Well	Forklifts	0	6.00	89	0.20
Drill Test Well/Permanent Well	Generator Sets	1	8.00	84	0.74
Drill Test Well/Permanent Well	Pumps	1	8.00	84	0.74
Drill Test Well/Permanent Well	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drill Test Well/Permanent Well	Welders	1	8.00	46	0.45
Above Ground Faciliites	Cranes	0	4.00	231	0.29
Above Ground Faciliites	Forklifts	0	6.00	89	0.20
Above Ground Faciliites	Plate Compactors	1	8.00	8	0.43
Above Ground Faciliites	Tractors/Loaders/Backhoes	0	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
Clear and Grub Site	1	14.00	4.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Drill Test Well/Permanent Well	7	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Facilities	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clear and Grub Site - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1514	1.5357	2.2313	3.1200e-003		0.0758	0.0758		0.0698	0.0698		301.5765	301.5765	0.0975		304.0149
Total	**0.1514**	**1.5357**	**2.2313**	**3.1200e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0698**	**0.0698**		**301.5765**	**301.5765**	**0.0975**		**304.0149**

3.2 Clear and Grub Site - 2023

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	0.0111	0.3601	0.1086	1.1700e-003	0.0314	6.0000e-004	0.0320	9.0400e-003	5.8000e-004	9.6200e-003		123.9197	123.9197	6.0500e-003		124.0709
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0739**	**0.4011**	**0.5244**	**2.4700e-003**	**0.1911**	**1.5800e-003**	**0.1927**	**0.0514**	**1.4800e-003**	**0.0529**		**253.6824**	**253.6824**	**8.9100e-003**		**253.9051**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1514	1.5357	2.2313	3.1200e-003		0.0758	0.0758		0.0698	0.0698	0.0000	301.5765	301.5765	0.0975		304.0149
Total	**0.1514**	**1.5357**	**2.2313**	**3.1200e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0698**	**0.0698**	**0.0000**	**301.5765**	**301.5765**	**0.0975**		**304.0149**

3.2 Clear and Grub Site - 2023

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	0.0111	0.3601	0.1086	1.1700e-003	0.0314	6.0000e-004	0.0320	9.0400e-003	5.8000e-004	9.6200e-003		123.9197	123.9197	6.0500e-003		124.0709
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0739**	**0.4011**	**0.5244**	**2.4700e-003**	**0.1911**	**1.5800e-003**	**0.1927**	**0.0514**	**1.4800e-003**	**0.0529**		**253.6824**	**253.6824**	**8.9100e-003**		**253.9051**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1887	1.5486	3.2578	5.1700e-003		0.0758	0.0758		0.0697	0.0697		500.1056	500.1056	0.1617		504.1492
Total	**0.1887**	**1.5486**	**3.2578**	**5.1700e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0697**	**0.0697**		**500.1056**	**500.1056**	**0.1617**		**504.1492**

3.3 Grading - 2023

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	0.0167	0.5402	0.1629	1.7500e-003	0.0472	9.1000e-004	0.0481	0.0136	8.7000e-004	0.0144		185.8796	185.8796	9.0700e-003		186.1064
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0795**	**0.5812**	**0.5787**	**3.0500e-003**	**0.2068**	**1.8900e-003**	**0.2087**	**0.0559**	**1.7700e-003**	**0.0577**		**315.6423**	**315.6423**	**0.0119**		**315.9405**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1887	1.5486	3.2578	5.1700e-003		0.0758	0.0758		0.0697	0.0697	0.0000	500.1056	500.1056	0.1617		504.1492
Total	**0.1887**	**1.5486**	**3.2578**	**5.1700e-003**	**0.0000**	**0.0758**	**0.0758**	**0.0000**	**0.0697**	**0.0697**	**0.0000**	**500.1056**	**500.1056**	**0.1617**		**504.1492**

3.3 Grading - 2023

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	0.0167	0.5402	0.1629	1.7500e-003	0.0472	9.1000e-004	0.0481	0.0136	8.7000e-004	0.0144		185.8796	185.8796	9.0700e-003		186.1064
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0795**	**0.5812**	**0.5787**	**3.0500e-003**	**0.2068**	**1.8900e-003**	**0.2087**	**0.0559**	**1.7700e-003**	**0.0577**		**315.6423**	**315.6423**	**0.0119**		**315.9405**

3.4 Drill Test Well/Permanent Well - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7690	14.8496	15.6631	0.0356		0.6524	0.6524		0.6343	0.6343		3,353.5498	3,353.5498	0.5830		3,368.1257
Total	**1.7690**	**14.8496**	**15.6631**	**0.0356**		**0.6524**	**0.6524**		**0.6343**	**0.6343**		**3,353.5498**	**3,353.5498**	**0.5830**		**3,368.1257**

3.4 Drill Test Well/Permanent Well - 2023

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	0.0167	0.5402	0.1629	1.7500e-003	0.0472	9.1000e-004	0.0481	0.0136	8.7000e-004	0.0144		185.8796	185.8796	9.0700e-003		186.1064
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0795**	**0.5812**	**0.5787**	**3.0500e-003**	**0.2068**	**1.8900e-003**	**0.2087**	**0.0559**	**1.7700e-003**	**0.0577**		**315.6423**	**315.6423**	**0.0119**		**315.9405**

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	1.7690	14.8496	15.6631	0.0356		0.6524	0.6524		0.6343	0.6343	0.0000	3,353.5497	3,353.5497	0.5830		3,368.1257
Total	**1.7690**	**14.8496**	**15.6631**	**0.0356**		**0.6524**	**0.6524**		**0.6343**	**0.6343**	**0.0000**	**3,353.5497**	**3,353.5497**	**0.5830**		**3,368.1257**

3.4 Drill Test Well/Permanent Well - 2023

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	0.0167	0.5402	0.1629	1.7500e-003	0.0472	9.1000e-004	0.0481	0.0136	8.7000e-004	0.0144		185.8796	185.8796	9.0700e-003		186.1064
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0795**	**0.5812**	**0.5787**	**3.0500e-003**	**0.2068**	**1.8900e-003**	**0.2087**	**0.0559**	**1.7700e-003**	**0.0577**		**315.6423**	**315.6423**	**0.0119**		**315.9405**

3.5 Above Ground Faciliites - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0401	0.2513	0.2105	4.9000e-004		9.7700e-003	9.7700e-003		9.7700e-003	9.7700e-003		34.4794	34.4794	3.5800e-003		34.5689
Total	**0.0401**	**0.2513**	**0.2105**	**4.9000e-004**		**9.7700e-003**	**9.7700e-003**		**9.7700e-003**	**9.7700e-003**		**34.4794**	**34.4794**	**3.5800e-003**		**34.5689**

3.5 Above Ground Faciliites - 2023

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	0.0167	0.5402	0.1629	1.7500e-003	0.0472	9.1000e-004	0.0481	0.0136	8.7000e-004	0.0144		185.8796	185.8796	9.0700e-003		186.1064
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0795**	**0.5812**	**0.5787**	**3.0500e-003**	**0.2068**	**1.8900e-003**	**0.2087**	**0.0559**	**1.7700e-003**	**0.0577**		**315.6423**	**315.6423**	**0.0119**		**315.9405**

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	0.0401	0.2513	0.2105	4.9000e-004		9.7700e-003	9.7700e-003		9.7700e-003	9.7700e-003	0.0000	34.4794	34.4794	3.5800e-003		34.5689
Total	**0.0401**	**0.2513**	**0.2105**	**4.9000e-004**		**9.7700e-003**	**9.7700e-003**		**9.7700e-003**	**9.7700e-003**	**0.0000**	**34.4794**	**34.4794**	**3.5800e-003**		**34.5689**

3.5 Above Ground Faciliites - 2023

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	0.0167	0.5402	0.1629	1.7500e-003	0.0472	9.1000e-004	0.0481	0.0136	8.7000e-004	0.0144		185.8796	185.8796	9.0700e-003		186.1064
Worker	0.0628	0.0410	0.4159	1.3000e-003	0.1597	9.8000e-004	0.1607	0.0424	9.0000e-004	0.0433		129.7627	129.7627	2.8600e-003		129.8342
Total	**0.0795**	**0.5812**	**0.5787**	**3.0500e-003**	**0.2068**	**1.8900e-003**	**0.2087**	**0.0559**	**1.7700e-003**	**0.0577**		**315.6423**	**315.6423**	**0.0119**		**315.9405**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0
User Defined Industrial	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776
User Defined Industrial	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Unmitigated	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-004**

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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-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

Groundwater Accounting - Wells

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.27	12,000.00	0
Parking Lot	0.16	1000sqft	0.00	162.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2025
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 -

Land Use - Total disturbed acreage for one well

Construction Phase - 19 total days of activities

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Trips and VMT - 7 total workers
Trip vendors include pick-up trucks, utility trucks, water trucks, and asphalt trucks

Grading -

Groundwater Accounting - Wells - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	1.00	2.00
tblLandUse	LandUseSquareFeet	0.00	12,000.00
tblLandUse	LandUseSquareFeet	160.00	162.00
tblLandUse	LotAcreage	0.00	0.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00

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					
2024	0.0110	0.0948	0.1080	2.5000e-004	1.8800e-003	3.8600e-003	5.7500e-003	5.1000e-004	3.7000e-003	4.2100e-003	0.0000	21.3907	21.3907	3.8500e-003	0.0000	21.4869
Maximum	**0.0110**	**0.0948**	**0.1080**	**2.5000e-004**	**1.8800e-003**	**3.8600e-003**	**5.7500e-003**	**5.1000e-004**	**3.7000e-003**	**4.2100e-003**	**0.0000**	**21.3907**	**21.3907**	**3.8500e-003**	**0.0000**	**21.4869**

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					
2024	0.0110	0.0948	0.1080	2.5000e-004	1.8800e-003	3.8600e-003	5.7500e-003	5.1000e-004	3.7000e-003	4.2100e-003	0.0000	21.3907	21.3907	3.8500e-003	0.0000	21.4869
Maximum	**0.0110**	**0.0948**	**0.1080**	**2.5000e-004**	**1.8800e-003**	**3.8600e-003**	**5.7500e-003**	**5.1000e-004**	**3.7000e-003**	**4.2100e-003**	**0.0000**	**21.3907**	**21.3907**	**3.8500e-003**	**0.0000**	**21.4869**

	ROG	NOx	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	4-1-2024	6-30-2024	0.1038	0.1038
		Highest	0.1038	0.1038

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	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0153
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0000**	**0.0153**

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	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0153
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0152**	**0.0152**	**0.0000**	**0.0000**	**0.0153**

	ROG	NOx	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

Groundwater Accounting - Wells - Sacramento County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clear and Grub Site	Site Preparation	4/1/2024	4/2/2024	5	2	
2	Grading	Grading	4/3/2024	4/3/2024	5	1	
3	Drill Test Well/Permanent Well	Building Construction	4/4/2024	4/17/2024	5	10	
4	Above Ground Faciliites	Building Construction	4/18/2024	4/25/2024	5	6	

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

Groundwater Accounting - Wells - Sacramento County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grub Site	Graders	0	8.00	187	0.41
Clear and Grub Site	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Clear and Grub Site	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Drill Test Well/Permanent Well	Air Compressors	1	8.00	78	0.48
Drill Test Well/Permanent Well	Bore/Drill Rigs	1	8.00	221	0.50
Drill Test Well/Permanent Well	Cement and Mortar Mixers	1	8.00	9	0.56
Drill Test Well/Permanent Well	Cranes	1	8.00	231	0.29
Drill Test Well/Permanent Well	Forklifts	0	6.00	89	0.20
Drill Test Well/Permanent Well	Generator Sets	1	8.00	84	0.74
Drill Test Well/Permanent Well	Pumps	1	8.00	84	0.74
Drill Test Well/Permanent Well	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drill Test Well/Permanent Well	Welders	1	8.00	46	0.45
Above Ground Faciliites	Cranes	1	4.00	231	0.29
Above Ground Faciliites	Forklifts	2	6.00	89	0.20
Above Ground Faciliites	Tractors/Loaders/Backhoes	2	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
Clear and Grub Site	1	14.00	4.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Drill Test Well/Permanent Well	7	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Facilities	5	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clear and Grub Site - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4000e-004	1.4500e-003	2.2400e-003	0.0000		7.0000e-005	7.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2738	0.2738	9.0000e-005	0.0000	0.2760
Total	**1.4000e-004**	**1.4500e-003**	**2.2400e-003**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.2738**	**0.2738**	**9.0000e-005**	**0.0000**	**0.2760**

3.2 Clear and Grub Site - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.5000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133
Worker	5.0000e-005	3.0000e-005	3.9000e-004	0.0000	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1165	0.1165	0.0000	0.0000	0.1165
Total	**6.0000e-005**	**3.8000e-004**	**4.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2296**	**0.2296**	**1.0000e-005**	**0.0000**	**0.2298**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4000e-004	1.4500e-003	2.2400e-003	0.0000		7.0000e-005	7.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.2738	0.2738	9.0000e-005	0.0000	0.2760
Total	**1.4000e-004**	**1.4500e-003**	**2.2400e-003**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.2738**	**0.2738**	**9.0000e-005**	**0.0000**	**0.2760**

3.2 Clear and Grub Site - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	3.5000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1132	0.1132	1.0000e-005	0.0000	0.1133
Worker	5.0000e-005	3.0000e-005	3.9000e-004	0.0000	1.5000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1165	0.1165	0.0000	0.0000	0.1165
Total	**6.0000e-005**	**3.8000e-004**	**4.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.2296**	**0.2296**	**1.0000e-005**	**0.0000**	**0.2298**

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-005	7.0000e-004	1.6300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.2269	0.2269	7.0000e-005	0.0000	0.2288
Total	**9.0000e-005**	**7.0000e-004**	**1.6300e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.2269**	**0.2269**	**7.0000e-005**	**0.0000**	**0.2288**

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.6000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0849	0.0849	0.0000	0.0000	0.0850
Worker	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0582	0.0582	0.0000	0.0000	0.0583
Total	**4.0000e-005**	**2.8000e-004**	**2.7000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1431**	**0.1431**	**0.0000**	**0.0000**	**0.1432**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-005	7.0000e-004	1.6300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.2269	0.2269	7.0000e-005	0.0000	0.2288
Total	**9.0000e-005**	**7.0000e-004**	**1.6300e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.2269**	**0.2269**	**7.0000e-005**	**0.0000**	**0.2288**

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	2.6000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0849	0.0849	0.0000	0.0000	0.0850
Worker	3.0000e-005	2.0000e-005	2.0000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0582	0.0582	0.0000	0.0000	0.0583
Total	**4.0000e-005**	**2.8000e-004**	**2.7000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1431**	**0.1431**	**0.0000**	**0.0000**	**0.1432**

3.4 Drill Test Well/Permanent Well - 2024

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	8.3400e-003	0.0695	0.0779	1.8000e-004		2.9000e-003	2.9000e-003		2.8100e-003	2.8100e-003	0.0000	15.2203	15.2203	2.6200e-003	0.0000	15.2858
Total	**8.3400e-003**	**0.0695**	**0.0779**	**1.8000e-004**		**2.9000e-003**	**2.9000e-003**		**2.8100e-003**	**2.8100e-003**	**0.0000**	**15.2203**	**15.2203**	**2.6200e-003**	**0.0000**	**15.2858**

3.4 Drill Test Well/Permanent Well - 2024

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	8.0000e-005	2.6500e-003	7.1000e-004	1.0000e-005	2.3000e-004	0.0000	2.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.8487	0.8487	4.0000e-005	0.0000	0.8497
Worker	2.7000e-004	1.7000e-004	1.9500e-003	1.0000e-005	7.7000e-004	0.0000	7.8000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.5824	0.5824	1.0000e-005	0.0000	0.5827
Total	**3.5000e-004**	**2.8200e-003**	**2.6600e-003**	**2.0000e-005**	**1.0000e-003**	**0.0000**	**1.0100e-003**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**1.4311**	**1.4311**	**5.0000e-005**	**0.0000**	**1.4324**

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	8.3400e-003	0.0695	0.0779	1.8000e-004		2.9000e-003	2.9000e-003		2.8100e-003	2.8100e-003	0.0000	15.2203	15.2203	2.6200e-003	0.0000	15.2858
Total	**8.3400e-003**	**0.0695**	**0.0779**	**1.8000e-004**		**2.9000e-003**	**2.9000e-003**		**2.8100e-003**	**2.8100e-003**	**0.0000**	**15.2203**	**15.2203**	**2.6200e-003**	**0.0000**	**15.2858**

3.4 Drill Test Well/Permanent Well - 2024

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	8.0000e-005	2.6500e-003	7.1000e-004	1.0000e-005	2.3000e-004	0.0000	2.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.8487	0.8487	4.0000e-005	0.0000	0.8497
Worker	2.7000e-004	1.7000e-004	1.9500e-003	1.0000e-005	7.7000e-004	0.0000	7.8000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.5824	0.5824	1.0000e-005	0.0000	0.5827
Total	**3.5000e-004**	**2.8200e-003**	**2.6600e-003**	**2.0000e-005**	**1.0000e-003**	**0.0000**	**1.0100e-003**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**0.0000**	**1.4311**	**1.4311**	**5.0000e-005**	**0.0000**	**1.4324**

3.5 Above Ground Faciliites - 2024

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	1.7900e-003	0.0179	0.0212	3.0000e-005		8.5000e-004	8.5000e-004		7.8000e-004	7.8000e-004	0.0000	3.0073	3.0073	9.7000e-004	0.0000	3.0316
Total	**1.7900e-003**	**0.0179**	**0.0212**	**3.0000e-005**		**8.5000e-004**	**8.5000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**3.0073**	**3.0073**	**9.7000e-004**	**0.0000**	**3.0316**

3.5 Above Ground Faciliites - 2024

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	5.0000e-005	1.5900e-003	4.3000e-004	1.0000e-005	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.5092	0.5092	2.0000e-005	0.0000	0.5098
Worker	1.6000e-004	1.0000e-004	1.1700e-003	0.0000	4.6000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3494	0.3494	1.0000e-005	0.0000	0.3496
Total	**2.1000e-004**	**1.6900e-003**	**1.6000e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.8587**	**0.8587**	**3.0000e-005**	**0.0000**	**0.8594**

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	1.7900e-003	0.0179	0.0212	3.0000e-005		8.5000e-004	8.5000e-004		7.8000e-004	7.8000e-004	0.0000	3.0073	3.0073	9.7000e-004	0.0000	3.0316
Total	**1.7900e-003**	**0.0179**	**0.0212**	**3.0000e-005**		**8.5000e-004**	**8.5000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**3.0073**	**3.0073**	**9.7000e-004**	**0.0000**	**3.0316**

3.5 Above Ground Faciliites - 2024

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	5.0000e-005	1.5900e-003	4.3000e-004	1.0000e-005	1.4000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.5092	0.5092	2.0000e-005	0.0000	0.5098
Worker	1.6000e-004	1.0000e-004	1.1700e-003	0.0000	4.6000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3494	0.3494	1.0000e-005	0.0000	0.3496
Total	**2.1000e-004**	**1.6900e-003**	**1.6000e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**0.8587**	**0.8587**	**3.0000e-005**	**0.0000**	**0.8594**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0
User Defined Industrial	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.568817	0.036545	0.209097	0.111572	0.015710	0.004830	0.018344	0.024276	0.001951	0.001803	0.005698	0.000617	0.000741
User Defined Industrial	0.568817	0.036545	0.209097	0.111572	0.015710	0.004830	0.018344	0.024276	0.001951	0.001803	0.005698	0.000617	0.000741

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	0.0152	0.0152	0.0000	0.0000	0.0153
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0152	0.0152	0.0000	0.0000	0.0153
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	56.7	0.0152	0.0000	0.0000	0.0153
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0152**	**0.0000**	**0.0000**	**0.0153**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	56.7	0.0152	0.0000	0.0000	0.0153
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0152**	**0.0000**	**0.0000**	**0.0153**

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	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0524	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-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	5.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-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	5.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0469					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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0524**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Groundwater Accounting - Wells

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.27	12,000.00	0
Parking Lot	0.16	1000sqft	0.00	162.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2025
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

Groundwater Accounting - Wells - Sacramento County, Summer

Project Characteristics -

Land Use - Total disturbed acreage for one well

Construction Phase - 19 total days of activities

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Trips and VMT - 7 total workers
Trip vendors include pick-up trucks, utility trucks, water trucks, and asphalt trucks

Grading -

Groundwater Accounting - Wells - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	1.00	2.00
tblLandUse	LandUseSquareFeet	0.00	12,000.00
tblLandUse	LandUseSquareFeet	160.00	162.00
tblLandUse	LotAcreage	0.00	0.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00

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					
2024	1.7442	14.4528	16.1902	0.0389	0.2068	0.5812	0.7881	0.0559	0.5645	0.6204	0.0000	3,686.3560	3,686.3560	0.5890	0.0000	3,701.0806
Maximum	**1.7442**	**14.4528**	**16.1902**	**0.0389**	**0.2068**	**0.5812**	**0.7881**	**0.0559**	**0.5645**	**0.6204**	**0.0000**	**3,686.3560**	**3,686.3560**	**0.5890**	**0.0000**	**3,701.0806**

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					
2024	1.7442	14.4528	16.1902	0.0389	0.2068	0.5812	0.7881	0.0559	0.5645	0.6204	0.0000	3,686.3560	3,686.3560	0.5890	0.0000	3,701.0806
Maximum	**1.7442**	**14.4528**	**16.1902**	**0.0389**	**0.2068**	**0.5812**	**0.7881**	**0.0559**	**0.5645**	**0.6204**	**0.0000**	**3,686.3560**	**3,686.3560**	**0.5890**	**0.0000**	**3,701.0806**

	ROG	NOx	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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

	ROG	NOx	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	Clear and Grub Site	Site Preparation	4/1/2024	4/2/2024	5	2	
2	Grading	Grading	4/3/2024	4/3/2024	5	1	
3	Drill Test Well/Permanent Well	Building Construction	4/4/2024	4/17/2024	5	10	
4	Above Ground Faciliites	Building Construction	4/18/2024	4/25/2024	5	6	

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

Groundwater Accounting - Wells - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grub Site	Graders	0	8.00	187	0.41
Clear and Grub Site	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Clear and Grub Site	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Drill Test Well/Permanent Well	Air Compressors	1	8.00	78	0.48
Drill Test Well/Permanent Well	Bore/Drill Rigs	1	8.00	221	0.50
Drill Test Well/Permanent Well	Cement and Mortar Mixers	1	8.00	9	0.56
Drill Test Well/Permanent Well	Cranes	1	8.00	231	0.29
Drill Test Well/Permanent Well	Forklifts	0	6.00	89	0.20
Drill Test Well/Permanent Well	Generator Sets	1	8.00	84	0.74
Drill Test Well/Permanent Well	Pumps	1	8.00	84	0.74
Drill Test Well/Permanent Well	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drill Test Well/Permanent Well	Welders	1	8.00	46	0.45
Above Ground Faciliites	Cranes	1	4.00	231	0.29
Above Ground Faciliites	Forklifts	2	6.00	89	0.20
Above Ground Faciliites	Tractors/Loaders/Backhoes	2	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
Clear and Grub Site	1	14.00	4.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Drill Test Well/Permanent Well	7	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Facilities	5	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clear and Grub Site - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612		301.7667	301.7667	0.0976		304.2067
Total	**0.1439**	**1.4483**	**2.2356**	**3.1200e-003**	**0.0000**	**0.0665**	**0.0665**	**0.0000**	**0.0612**	**0.0612**		**301.7667**	**301.7667**	**0.0976**		**304.2067**

3.2 Clear and Grub Site - 2024

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	0.0101	0.3469	0.0901	1.1900e-003	0.0314	5.4000e-004	0.0320	9.0400e-003	5.2000e-004	9.5600e-003		125.8318	125.8318	5.5800e-003		125.9714
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0704**	**0.3770**	**0.5629**	**2.6200e-003**	**0.1911**	**1.5000e-003**	**0.1926**	**0.0514**	**1.4000e-003**	**0.0528**		**267.9422**	**267.9422**	**8.5900e-003**		**268.1570**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612	0.0000	301.7667	301.7667	0.0976		304.2067
Total	**0.1439**	**1.4483**	**2.2356**	**3.1200e-003**	**0.0000**	**0.0665**	**0.0665**	**0.0000**	**0.0612**	**0.0612**	**0.0000**	**301.7667**	**301.7667**	**0.0976**		**304.2067**

3.2 Clear and Grub Site - 2024

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	0.0101	0.3469	0.0901	1.1900e-003	0.0314	5.4000e-004	0.0320	9.0400e-003	5.2000e-004	9.5600e-003		125.8318	125.8318	5.5800e-003		125.9714
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0704**	**0.3770**	**0.5629**	**2.6200e-003**	**0.1911**	**1.5000e-003**	**0.1926**	**0.0514**	**1.4000e-003**	**0.0528**		**267.9422**	**267.9422**	**8.5900e-003**		**268.1570**

3.3 Grading - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1803	1.4029	3.2650	5.1700e-003		0.0691	0.0691		0.0636	0.0636		500.2654	500.2654	0.1618		504.3103
Total	**0.1803**	**1.4029**	**3.2650**	**5.1700e-003**	**0.0000**	**0.0691**	**0.0691**	**0.0000**	**0.0636**	**0.0636**		**500.2654**	**500.2654**	**0.1618**		**504.3103**

3.3 Grading - 2024

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	0.0151	0.5203	0.1351	1.7800e-003	0.0472	8.1000e-004	0.0480	0.0136	7.7000e-004	0.0143		188.7478	188.7478	8.3700e-003		188.9571
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0754**	**0.5504**	**0.6079**	**3.2100e-003**	**0.2068**	**1.7700e-003**	**0.2086**	**0.0559**	**1.6500e-003**	**0.0576**		**330.8581**	**330.8581**	**0.0114**		**331.1427**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1803	1.4029	3.2650	5.1700e-003		0.0691	0.0691		0.0636	0.0636	0.0000	500.2654	500.2654	0.1618		504.3103
Total	**0.1803**	**1.4029**	**3.2650**	**5.1700e-003**	**0.0000**	**0.0691**	**0.0691**	**0.0000**	**0.0636**	**0.0636**	**0.0000**	**500.2654**	**500.2654**	**0.1618**		**504.3103**

3.3 Grading - 2024

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	0.0151	0.5203	0.1351	1.7800e-003	0.0472	8.1000e-004	0.0480	0.0136	7.7000e-004	0.0143		188.7478	188.7478	8.3700e-003		188.9571
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0754**	**0.5504**	**0.6079**	**3.2100e-003**	**0.2068**	**1.7700e-003**	**0.2086**	**0.0559**	**1.6500e-003**	**0.0576**		**330.8581**	**330.8581**	**0.0114**		**331.1427**

3.4 Drill Test Well/Permanent Well - 2024

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	1.6688	13.9024	15.5823	0.0356		0.5795	0.5795		0.5628	0.5628		3,355.4979	3,355.4979	0.5776		3,369.9378
Total	**1.6688**	**13.9024**	**15.5823**	**0.0356**		**0.5795**	**0.5795**		**0.5628**	**0.5628**		**3,355.4979**	**3,355.4979**	**0.5776**		**3,369.9378**

3.4 Drill Test Well/Permanent Well - 2024

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	0.0151	0.5203	0.1351	1.7800e-003	0.0472	8.1000e-004	0.0480	0.0136	7.7000e-004	0.0143		188.7478	188.7478	8.3700e-003		188.9571
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0754**	**0.5504**	**0.6079**	**3.2100e-003**	**0.2068**	**1.7700e-003**	**0.2086**	**0.0559**	**1.6500e-003**	**0.0576**		**330.8581**	**330.8581**	**0.0114**		**331.1427**

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	1.6688	13.9024	15.5823	0.0356		0.5795	0.5795		0.5628	0.5628	0.0000	3,355.4979	3,355.4979	0.5776		3,369.9378
Total	**1.6688**	**13.9024**	**15.5823**	**0.0356**		**0.5795**	**0.5795**		**0.5628**	**0.5628**	**0.0000**	**3,355.4979**	**3,355.4979**	**0.5776**		**3,369.9378**

3.4 Drill Test Well/Permanent Well - 2024

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	0.0151	0.5203	0.1351	1.7800e-003	0.0472	8.1000e-004	0.0480	0.0136	7.7000e-004	0.0143		188.7478	188.7478	8.3700e-003		188.9571
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0754**	**0.5504**	**0.6079**	**3.2100e-003**	**0.2068**	**1.7700e-003**	**0.2086**	**0.0559**	**1.6500e-003**	**0.0576**		**330.8581**	**330.8581**	**0.0114**		**331.1427**

3.5 Above Ground Faciliites - 2024

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	0.5950	5.9739	7.0675	0.0114		0.2824	0.2824		0.2598	0.2598		1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.5950**	**5.9739**	**7.0675**	**0.0114**		**0.2824**	**0.2824**		**0.2598**	**0.2598**		**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

3.5 Above Ground Faciliites - 2024

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	0.0151	0.5203	0.1351	1.7800e-003	0.0472	8.1000e-004	0.0480	0.0136	7.7000e-004	0.0143		188.7478	188.7478	8.3700e-003		188.9571
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0754**	**0.5504**	**0.6079**	**3.2100e-003**	**0.2068**	**1.7700e-003**	**0.2086**	**0.0559**	**1.6500e-003**	**0.0576**		**330.8581**	**330.8581**	**0.0114**		**331.1427**

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	0.5950	5.9739	7.0675	0.0114		0.2824	0.2824		0.2598	0.2598	0.0000	1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.5950**	**5.9739**	**7.0675**	**0.0114**		**0.2824**	**0.2824**		**0.2598**	**0.2598**	**0.0000**	**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

3.5 Above Ground Faciliites - 2024

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	0.0151	0.5203	0.1351	1.7800e-003	0.0472	8.1000e-004	0.0480	0.0136	7.7000e-004	0.0143		188.7478	188.7478	8.3700e-003		188.9571
Worker	0.0603	0.0301	0.4728	1.4300e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		142.1103	142.1103	3.0100e-003		142.1856
Total	**0.0754**	**0.5504**	**0.6079**	**3.2100e-003**	**0.2068**	**1.7700e-003**	**0.2086**	**0.0559**	**1.6500e-003**	**0.0576**		**330.8581**	**330.8581**	**0.0114**		**331.1427**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0
User Defined Industrial	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.568817	0.036545	0.209097	0.111572	0.015710	0.004830	0.018344	0.024276	0.001951	0.001803	0.005698	0.000617	0.000741
User Defined Industrial	0.568817	0.036545	0.209097	0.111572	0.015710	0.004830	0.018344	0.024276	0.001951	0.001803	0.005698	0.000617	0.000741

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Unmitigated	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-004**

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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-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

Groundwater Accounting - Wells

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.27	12,000.00	0
Parking Lot	0.16	1000sqft	0.00	162.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2025
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

Groundwater Accounting - Wells - Sacramento County, Winter

Project Characteristics -

Land Use - Total disturbed acreage for one well

Construction Phase - 19 total days of activities

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Off-road Equipment - Applicant provided equipment

Trips and VMT - 7 total workers
Trip vendors include pick-up trucks, utility trucks, water trucks, and asphalt trucks

Grading -

Groundwater Accounting - Wells - Sacramento County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	100.00	6.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	1.00	2.00
tblLandUse	LandUseSquareFeet	0.00	12,000.00
tblLandUse	LandUseSquareFeet	160.00	162.00
tblLandUse	LotAcreage	0.00	0.27
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	VendorTripNumber	2.00	6.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	3.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00
tblTripsAndVMT	WorkerTripNumber	5.00	14.00

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					
2024	1.7440	14.4683	16.1199	0.0386	0.2068	0.5813	0.7881	0.0559	0.5645	0.6204	0.0000	3,665.0596	3,665.0596	0.5891	0.0000	3,679.7880
Maximum	**1.7440**	**14.4683**	**16.1199**	**0.0386**	**0.2068**	**0.5813**	**0.7881**	**0.0559**	**0.5645**	**0.6204**	**0.0000**	**3,665.0596**	**3,665.0596**	**0.5891**	**0.0000**	**3,679.7880**

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					
2024	1.7440	14.4683	16.1199	0.0386	0.2068	0.5813	0.7881	0.0559	0.5645	0.6204	0.0000	3,665.0596	3,665.0596	0.5891	0.0000	3,679.7880
Maximum	**1.7440**	**14.4683**	**16.1199**	**0.0386**	**0.2068**	**0.5813**	**0.7881**	**0.0559**	**0.5645**	**0.6204**	**0.0000**	**3,665.0596**	**3,665.0596**	**0.5891**	**0.0000**	**3,679.7880**

	ROG	NOx	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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

	ROG	NOx	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	Clear and Grub Site	Site Preparation	4/1/2024	4/2/2024	5	2	
2	Grading	Grading	4/3/2024	4/3/2024	5	1	
3	Drill Test Well/Permanent Well	Building Construction	4/4/2024	4/17/2024	5	10	
4	Above Ground Faciliites	Building Construction	4/18/2024	4/25/2024	5	6	

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

Groundwater Accounting - Wells - Sacramento County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grub Site	Graders	0	8.00	187	0.41
Clear and Grub Site	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Clear and Grub Site	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	0	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Drill Test Well/Permanent Well	Air Compressors	1	8.00	78	0.48
Drill Test Well/Permanent Well	Bore/Drill Rigs	1	8.00	221	0.50
Drill Test Well/Permanent Well	Cement and Mortar Mixers	1	8.00	9	0.56
Drill Test Well/Permanent Well	Cranes	1	8.00	231	0.29
Drill Test Well/Permanent Well	Forklifts	0	6.00	89	0.20
Drill Test Well/Permanent Well	Generator Sets	1	8.00	84	0.74
Drill Test Well/Permanent Well	Pumps	1	8.00	84	0.74
Drill Test Well/Permanent Well	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Drill Test Well/Permanent Well	Welders	1	8.00	46	0.45
Above Ground Faciliites	Cranes	1	4.00	231	0.29
Above Ground Faciliites	Forklifts	2	6.00	89	0.20
Above Ground Faciliites	Tractors/Loaders/Backhoes	2	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
Clear and Grub Site	1	14.00	4.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	1	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Drill Test Well/Permanent Well	7	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT
Above Ground Facilities	5	14.00	6.00	0.00	15.00	8.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clear and Grub Site - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612		301.7667	301.7667	0.0976		304.2067
Total	**0.1439**	**1.4483**	**2.2356**	**3.1200e-003**	**0.0000**	**0.0665**	**0.0665**	**0.0000**	**0.0612**	**0.0612**		**301.7667**	**301.7667**	**0.0976**		**304.2067**

3.2 Clear and Grub Site - 2024

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	0.0106	0.3526	0.1018	1.1600e-003	0.0314	5.7000e-004	0.0320	9.0400e-003	5.5000e-004	9.5900e-003		123.2302	123.2302	5.9700e-003		123.3795
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0699**	**0.3897**	**0.4868**	**2.4100e-003**	**0.1911**	**1.5300e-003**	**0.1927**	**0.0514**	**1.4300e-003**	**0.0528**		**247.9466**	**247.9466**	**8.5500e-003**		**248.1604**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612	0.0000	301.7667	301.7667	0.0976		304.2067
Total	**0.1439**	**1.4483**	**2.2356**	**3.1200e-003**	**0.0000**	**0.0665**	**0.0665**	**0.0000**	**0.0612**	**0.0612**	**0.0000**	**301.7667**	**301.7667**	**0.0976**		**304.2067**

3.2 Clear and Grub Site - 2024

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	0.0106	0.3526	0.1018	1.1600e-003	0.0314	5.7000e-004	0.0320	9.0400e-003	5.5000e-004	9.5900e-003		123.2302	123.2302	5.9700e-003		123.3795
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0699**	**0.3897**	**0.4868**	**2.4100e-003**	**0.1911**	**1.5300e-003**	**0.1927**	**0.0514**	**1.4300e-003**	**0.0528**		**247.9466**	**247.9466**	**8.5500e-003**		**248.1604**

3.3 Grading - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1803	1.4029	3.2650	5.1700e-003		0.0691	0.0691		0.0636	0.0636		500.2654	500.2654	0.1618		504.3103
Total	**0.1803**	**1.4029**	**3.2650**	**5.1700e-003**	**0.0000**	**0.0691**	**0.0691**	**0.0000**	**0.0636**	**0.0636**		**500.2654**	**500.2654**	**0.1618**		**504.3103**

3.3 Grading - 2024

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	0.0159	0.5289	0.1527	1.7400e-003	0.0472	8.6000e-004	0.0480	0.0136	8.2000e-004	0.0144		184.8452	184.8452	8.9600e-003		185.0693
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0752**	**0.5660**	**0.5376**	**2.9900e-003**	**0.2068**	**1.8200e-003**	**0.2087**	**0.0559**	**1.7000e-003**	**0.0576**		**309.5617**	**309.5617**	**0.0115**		**309.8502**

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1803	1.4029	3.2650	5.1700e-003		0.0691	0.0691		0.0636	0.0636	0.0000	500.2654	500.2654	0.1618		504.3103
Total	**0.1803**	**1.4029**	**3.2650**	**5.1700e-003**	**0.0000**	**0.0691**	**0.0691**	**0.0000**	**0.0636**	**0.0636**	**0.0000**	**500.2654**	**500.2654**	**0.1618**		**504.3103**

3.3 Grading - 2024

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	0.0159	0.5289	0.1527	1.7400e-003	0.0472	8.6000e-004	0.0480	0.0136	8.2000e-004	0.0144		184.8452	184.8452	8.9600e-003		185.0693
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0752**	**0.5660**	**0.5376**	**2.9900e-003**	**0.2068**	**1.8200e-003**	**0.2087**	**0.0559**	**1.7000e-003**	**0.0576**		**309.5617**	**309.5617**	**0.0115**		**309.8502**

3.4 Drill Test Well/Permanent Well - 2024

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	1.6688	13.9024	15.5823	0.0356		0.5795	0.5795		0.5628	0.5628		3,355.4979	3,355.4979	0.5776		3,369.9378
Total	**1.6688**	**13.9024**	**15.5823**	**0.0356**		**0.5795**	**0.5795**		**0.5628**	**0.5628**		**3,355.4979**	**3,355.4979**	**0.5776**		**3,369.9378**

3.4 Drill Test Well/Permanent Well - 2024

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	0.0159	0.5289	0.1527	1.7400e-003	0.0472	8.6000e-004	0.0480	0.0136	8.2000e-004	0.0144		184.8452	184.8452	8.9600e-003		185.0693
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0752**	**0.5660**	**0.5376**	**2.9900e-003**	**0.2068**	**1.8200e-003**	**0.2087**	**0.0559**	**1.7000e-003**	**0.0576**		**309.5617**	**309.5617**	**0.0115**		**309.8502**

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	1.6688	13.9024	15.5823	0.0356		0.5795	0.5795		0.5628	0.5628	0.0000	3,355.4979	3,355.4979	0.5776		3,369.9378
Total	**1.6688**	**13.9024**	**15.5823**	**0.0356**		**0.5795**	**0.5795**		**0.5628**	**0.5628**	**0.0000**	**3,355.4979**	**3,355.4979**	**0.5776**		**3,369.9378**

3.4 Drill Test Well/Permanent Well - 2024

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	0.0159	0.5289	0.1527	1.7400e-003	0.0472	8.6000e-004	0.0480	0.0136	8.2000e-004	0.0144		184.8452	184.8452	8.9600e-003		185.0693
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0752**	**0.5660**	**0.5376**	**2.9900e-003**	**0.2068**	**1.8200e-003**	**0.2087**	**0.0559**	**1.7000e-003**	**0.0576**		**309.5617**	**309.5617**	**0.0115**		**309.8502**

3.5 Above Ground Faciliites - 2024

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	0.5950	5.9739	7.0675	0.0114		0.2824	0.2824		0.2598	0.2598		1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.5950**	**5.9739**	**7.0675**	**0.0114**		**0.2824**	**0.2824**		**0.2598**	**0.2598**		**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

3.5 Above Ground Faciliites - 2024

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	0.0159	0.5289	0.1527	1.7400e-003	0.0472	8.6000e-004	0.0480	0.0136	8.2000e-004	0.0144		184.8452	184.8452	8.9600e-003		185.0693
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0752**	**0.5660**	**0.5376**	**2.9900e-003**	**0.2068**	**1.8200e-003**	**0.2087**	**0.0559**	**1.7000e-003**	**0.0576**		**309.5617**	**309.5617**	**0.0115**		**309.8502**

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	0.5950	5.9739	7.0675	0.0114		0.2824	0.2824		0.2598	0.2598	0.0000	1,104.9834	1,104.9834	0.3574		1,113.9177
Total	**0.5950**	**5.9739**	**7.0675**	**0.0114**		**0.2824**	**0.2824**		**0.2598**	**0.2598**	**0.0000**	**1,104.9834**	**1,104.9834**	**0.3574**		**1,113.9177**

3.5 Above Ground Faciliites - 2024

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	0.0159	0.5289	0.1527	1.7400e-003	0.0472	8.6000e-004	0.0480	0.0136	8.2000e-004	0.0144		184.8452	184.8452	8.9600e-003		185.0693
Worker	0.0593	0.0371	0.3850	1.2500e-003	0.1597	9.6000e-004	0.1606	0.0424	8.8000e-004	0.0432		124.7165	124.7165	2.5800e-003		124.7809
Total	**0.0752**	**0.5660**	**0.5376**	**2.9900e-003**	**0.2068**	**1.8200e-003**	**0.2087**	**0.0559**	**1.7000e-003**	**0.0576**		**309.5617**	**309.5617**	**0.0115**		**309.8502**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0
User Defined Industrial	15.00	7.50	8.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.568817	0.036545	0.209097	0.111572	0.015710	0.004830	0.018344	0.024276	0.001951	0.001803	0.005698	0.000617	0.000741
User Defined Industrial	0.568817	0.036545	0.209097	0.111572	0.015710	0.004830	0.018344	0.024276	0.001951	0.001803	0.005698	0.000617	0.000741

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Unmitigated	0.2874	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-004**

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	0.0305					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2569					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.5000e-004	2.5000e-004	0.0000		2.7000e-004
Total	**0.2874**	**0.0000**	**1.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.5000e-004**	**2.5000e-004**	**0.0000**		**2.7000e-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

Electrical Line Installation Pavement

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	27.60	1000sqft	0.63	27,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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 -

Land Use -

Construction Phase - 15 days of paving

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	9/13/2023	4/21/2023
tblConstructionPhase	PhaseStartDate	9/7/2023	4/1/2023

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					
2023	5.8200e-003	0.0415	0.0555	9.0000e-005	9.9000e-004	1.9900e-003	2.9800e-003	2.6000e-004	1.8600e-003	2.1200e-003	0.0000	7.8369	7.8369	2.0700e-003	0.0000	7.8887
Maximum	**5.8200e-003**	**0.0415**	**0.0555**	**9.0000e-005**	**9.9000e-004**	**1.9900e-003**	**2.9800e-003**	**2.6000e-004**	**1.8600e-003**	**2.1200e-003**	**0.0000**	**7.8369**	**7.8369**	**2.0700e-003**	**0.0000**	**7.8887**

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					
2023	5.8200e-003	0.0415	0.0555	9.0000e-005	9.9000e-004	1.9900e-003	2.9800e-003	2.6000e-004	1.8600e-003	2.1200e-003	0.0000	7.8369	7.8369	2.0700e-003	0.0000	7.8887
Maximum	**5.8200e-003**	**0.0415**	**0.0555**	**9.0000e-005**	**9.9000e-004**	**1.9900e-003**	**2.9800e-003**	**2.6000e-004**	**1.8600e-003**	**2.1200e-003**	**0.0000**	**7.8369**	**7.8369**	**2.0700e-003**	**0.0000**	**7.8887**

	ROG	NOx	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	4-1-2023	6-30-2023	0.0474	0.0474
		Highest	0.0474	0.0474

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	2.2000e-003	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2000e-003**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.8000e-004**	**6.8000e-004**	**0.0000**	**0.0000**	**7.3000e-004**

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	2.2000e-003	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.2000e-003**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**6.8000e-004**	**6.8000e-004**	**0.0000**	**0.0000**	**7.3000e-004**

	ROG	NOx	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	Paving	Paving	4/1/2023	4/21/2023	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.63

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
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	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
Paving	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5800e-003	0.0413	0.0527	8.0000e-005		1.9800e-003	1.9800e-003		1.8500e-003	1.8500e-003	0.0000	7.0494	7.0494	2.0500e-003	0.0000	7.1008
Paving	8.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4100e-003**	**0.0413**	**0.0527**	**8.0000e-005**		**1.9800e-003**	**1.9800e-003**		**1.8500e-003**	**1.8500e-003**	**0.0000**	**7.0494**	**7.0494**	**2.0500e-003**	**0.0000**	**7.1008**

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	4.1000e-004	2.5000e-004	2.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7875	0.7875	2.0000e-005	0.0000	0.7879
Total	**4.1000e-004**	**2.5000e-004**	**2.8800e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7875**	**0.7875**	**2.0000e-005**	**0.0000**	**0.7879**

3.2 Paving - 2023

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	4.5800e-003	0.0413	0.0527	8.0000e-005		1.9800e-003	1.9800e-003		1.8500e-003	1.8500e-003	0.0000	7.0494	7.0494	2.0500e-003	0.0000	7.1008
Paving	8.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.4100e-003**	**0.0413**	**0.0527**	**8.0000e-005**		**1.9800e-003**	**1.9800e-003**		**1.8500e-003**	**1.8500e-003**	**0.0000**	**7.0494**	**7.0494**	**2.0500e-003**	**0.0000**	**7.1008**

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	4.1000e-004	2.5000e-004	2.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7875	0.7875	2.0000e-005	0.0000	0.7879
Total	**4.1000e-004**	**2.5000e-004**	**2.8800e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7875**	**0.7875**	**2.0000e-005**	**0.0000**	**0.7879**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.2000e-003	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.3000e-004
Unmitigated	2.2000e-003	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.3000e-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	tons/yr										MT/yr					
Architectural Coating	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.3000e-004
Total	**2.1900e-003**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.8000e-004**	**6.8000e-004**	**0.0000**	**0.0000**	**7.3000e-004**

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	3.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.3000e-004
Total	**2.1900e-003**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.8000e-004**	**6.8000e-004**	**0.0000**	**0.0000**	**7.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Electrical Line Installation Pavement

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	27.60	1000sqft	0.63	27,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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 -

Land Use -

Construction Phase - 15 days of paving

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	9/13/2023	4/21/2023
tblConstructionPhase	PhaseStartDate	9/7/2023	4/1/2023

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					
2023	0.7841	5.5345	7.4774	0.0126	0.1369	0.2652	0.4021	0.0363	0.2474	0.2837	0.0000	1,164.1053	1,164.1053	0.3048	0.0000	1,171.7245
Maximum	**0.7841**	**5.5345**	**7.4774**	**0.0126**	**0.1369**	**0.2652**	**0.4021**	**0.0363**	**0.2474**	**0.2837**	**0.0000**	**1,164.1053**	**1,164.1053**	**0.3048**	**0.0000**	**1,171.7245**

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					
2023	0.7841	5.5345	7.4774	0.0126	0.1369	0.2652	0.4021	0.0363	0.2474	0.2837	0.0000	1,164.1053	1,164.1053	0.3048	0.0000	1,171.7245
Maximum	**0.7841**	**5.5345**	**7.4774**	**0.0126**	**0.1369**	**0.2652**	**0.4021**	**0.0363**	**0.2474**	**0.2837**	**0.0000**	**1,164.1053**	**1,164.1053**	**0.3048**	**0.0000**	**1,171.7245**

	ROG	NOx	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	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**	**0.0000**	**6.4300e-003**

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	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**	**0.0000**	**6.4300e-003**

	ROG	NOx	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	Paving	Paving	4/1/2023	4/21/2023	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.63

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
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	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
Paving	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7212**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.2 Paving - 2023

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	0.0629	0.0299	0.4565	1.2900e-003	0.1369	8.8000e-004	0.1378	0.0363	8.1000e-004	0.0371		128.0175	128.0175	2.9600e-003		128.0914
Total	**0.0629**	**0.0299**	**0.4565**	**1.2900e-003**	**0.1369**	**8.8000e-004**	**0.1378**	**0.0363**	**8.1000e-004**	**0.0371**		**128.0175**	**128.0175**	**2.9600e-003**		**128.0914**

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7212**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.2 Paving - 2023

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	0.0629	0.0299	0.4565	1.2900e-003	0.1369	8.8000e-004	0.1378	0.0363	8.1000e-004	0.0371		128.0175	128.0175	2.9600e-003		128.0914
Total	**0.0629**	**0.0299**	**0.4565**	**1.2900e-003**	**0.1369**	**8.8000e-004**	**0.1378**	**0.0363**	**8.1000e-004**	**0.0371**		**128.0175**	**128.0175**	**2.9600e-003**		**128.0914**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Unmitigated	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-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	lb/day										lb/day					
Architectural Coating	2.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**		**6.4300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**		**6.4300e-003**

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

Electrical Line Installation Pavement

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	27.60	1000sqft	0.63	27,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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 -

Land Use -

Construction Phase - 15 days of paving

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	PhaseEndDate	9/13/2023	4/21/2023
tblConstructionPhase	PhaseStartDate	9/7/2023	4/1/2023

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					
2023	0.7794	5.5415	7.4068	0.0124	0.1369	0.2652	0.4021	0.0363	0.2474	0.2837	0.0000	1,148.5333	1,148.5333	0.3044	0.0000	1,156.1433
Maximum	**0.7794**	**5.5415**	**7.4068**	**0.0124**	**0.1369**	**0.2652**	**0.4021**	**0.0363**	**0.2474**	**0.2837**	**0.0000**	**1,148.5333**	**1,148.5333**	**0.3044**	**0.0000**	**1,156.1433**

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					
2023	0.7794	5.5415	7.4068	0.0124	0.1369	0.2652	0.4021	0.0363	0.2474	0.2837	0.0000	1,148.5333	1,148.5333	0.3044	0.0000	1,156.1433
Maximum	**0.7794**	**5.5415**	**7.4068**	**0.0124**	**0.1369**	**0.2652**	**0.4021**	**0.0363**	**0.2474**	**0.2837**	**0.0000**	**1,148.5333**	**1,148.5333**	**0.3044**	**0.0000**	**1,156.1433**

	ROG	NOx	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	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**	**0.0000**	**6.4300e-003**

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	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**	**0.0000**	**6.4300e-003**

	ROG	NOx	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	Paving	Paving	4/1/2023	4/21/2023	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.63

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
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	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
Paving	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7212**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.2 Paving - 2023

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	0.0582	0.0369	0.3859	1.1300e-003	0.1369	8.8000e-004	0.1378	0.0363	8.1000e-004	0.0371		112.4455	112.4455	2.5900e-003		112.5102
Total	**0.0582**	**0.0369**	**0.3859**	**1.1300e-003**	**0.1369**	**8.8000e-004**	**0.1378**	**0.0363**	**8.1000e-004**	**0.0371**		**112.4455**	**112.4455**	**2.5900e-003**		**112.5102**

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	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7212**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

3.2 Paving - 2023

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	0.0582	0.0369	0.3859	1.1300e-003	0.1369	8.8000e-004	0.1378	0.0363	8.1000e-004	0.0371		112.4455	112.4455	2.5900e-003		112.5102
Total	**0.0582**	**0.0369**	**0.3859**	**1.1300e-003**	**0.1369**	**8.8000e-004**	**0.1378**	**0.0363**	**8.1000e-004**	**0.0371**		**112.4455**	**112.4455**	**2.5900e-003**		**112.5102**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Unmitigated	0.0121	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-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	lb/day										lb/day					
Architectural Coating	2.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**		**6.4300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.7800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.6000e-004	3.0000e-005	2.8100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.0400e-003	6.0400e-003	2.0000e-005		6.4300e-003
Total	**0.0121**	**3.0000e-005**	**2.8100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**6.0400e-003**	**6.0400e-003**	**2.0000e-005**		**6.4300e-003**

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

Bufferlands Pipeline Installation Pavement

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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 -

Land Use -

Construction Phase - Paving only

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	40.00

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					
2023	0.0157	0.1252	0.1816	2.9000e-004	1.9100e-003	6.1800e-003	8.0900e-003	5.1000e-004	5.7000e-003	6.2100e-003	0.0000	25.0615	25.0615	7.5000e-003	0.0000	25.2489
Maximum	**0.0157**	**0.1252**	**0.1816**	**2.9000e-004**	**1.9100e-003**	**6.1800e-003**	**8.0900e-003**	**5.1000e-004**	**5.7000e-003**	**6.2100e-003**	**0.0000**	**25.0615**	**25.0615**	**7.5000e-003**	**0.0000**	**25.2489**

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					
2023	0.0157	0.1252	0.1816	2.9000e-004	1.9100e-003	6.1800e-003	8.0900e-003	5.1000e-004	5.7000e-003	6.2100e-003	0.0000	25.0614	25.0614	7.5000e-003	0.0000	25.2489
Maximum	**0.0157**	**0.1252**	**0.1816**	**2.9000e-004**	**1.9100e-003**	**6.1800e-003**	**8.0900e-003**	**5.1000e-004**	**5.7000e-003**	**6.2100e-003**	**0.0000**	**25.0614**	**25.0614**	**7.5000e-003**	**0.0000**	**25.2489**

	ROG	NOx	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	4-1-2023	6-30-2023	0.1410	0.1410
		Highest	0.1410	0.1410

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	5.3400e-003	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6600e-003	1.6600e-003	0.0000	0.0000	1.7700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3400e-003**	**1.0000e-005**	**8.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.6600e-003**	**1.6600e-003**	**0.0000**	**0.0000**	**1.7700e-003**

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	5.3400e-003	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6600e-003	1.6600e-003	0.0000	0.0000	1.7700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3400e-003**	**1.0000e-005**	**8.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.6600e-003**	**1.6600e-003**	**0.0000**	**0.0000**	**1.7700e-003**

	ROG	NOx	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	Paving	Paving	4/1/2023	5/26/2023	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.54

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
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	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
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0129	0.1247	0.1761	2.7000e-004		6.1700e-003	6.1700e-003		5.6900e-003	5.6900e-003	0.0000	23.5449	23.5449	7.4600e-003	0.0000	23.7315
Paving	2.0200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0149**	**0.1247**	**0.1761**	**2.7000e-004**		**6.1700e-003**	**6.1700e-003**		**5.6900e-003**	**5.6900e-003**	**0.0000**	**23.5449**	**23.5449**	**7.4600e-003**	**0.0000**	**23.7315**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	4.8000e-004	5.5500e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9200e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.5166	1.5166	3.0000e-005	0.0000	1.5175
Total	**7.9000e-004**	**4.8000e-004**	**5.5500e-003**	**2.0000e-005**	**1.9100e-003**	**1.0000e-005**	**1.9200e-003**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.5166**	**1.5166**	**3.0000e-005**	**0.0000**	**1.5175**

3.2 Paving - 2023

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	0.0129	0.1247	0.1761	2.7000e-004		6.1700e-003	6.1700e-003		5.6900e-003	5.6900e-003	0.0000	23.5448	23.5448	7.4600e-003	0.0000	23.7314
Paving	2.0200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0149**	**0.1247**	**0.1761**	**2.7000e-004**		**6.1700e-003**	**6.1700e-003**		**5.6900e-003**	**5.6900e-003**	**0.0000**	**23.5448**	**23.5448**	**7.4600e-003**	**0.0000**	**23.7314**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	4.8000e-004	5.5500e-003	2.0000e-005	1.9100e-003	1.0000e-005	1.9200e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.5166	1.5166	3.0000e-005	0.0000	1.5175
Total	**7.9000e-004**	**4.8000e-004**	**5.5500e-003**	**2.0000e-005**	**1.9100e-003**	**1.0000e-005**	**1.9200e-003**	**5.1000e-004**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**1.5166**	**1.5166**	**3.0000e-005**	**0.0000**	**1.5175**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	5.3400e-003	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6600e-003	1.6600e-003	0.0000	0.0000	1.7700e-003
Unmitigated	5.3400e-003	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6600e-003	1.6600e-003	0.0000	0.0000	1.7700e-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	9.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6600e-003	1.6600e-003	0.0000	0.0000	1.7700e-003
Total	**5.3400e-003**	**1.0000e-005**	**8.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6600e-003**	**1.6600e-003**	**0.0000**	**0.0000**	**1.7700e-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	9.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6600e-003	1.6600e-003	0.0000	0.0000	1.7700e-003
Total	**5.3400e-003**	**1.0000e-005**	**8.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6600e-003**	**1.6600e-003**	**0.0000**	**0.0000**	**1.7700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Bufferlands Pipeline Installation Pavement

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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 -

Land Use -

Construction Phase - Paving only

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	40.00

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					
2023	0.7909	6.2573	9.1320	0.0145	0.0989	0.3091	0.4080	0.0262	0.2852	0.3114	0.0000	1,390.1451	1,390.1451	0.4135	0.0000	1,400.4830
Maximum	**0.7909**	**6.2573**	**9.1320**	**0.0145**	**0.0989**	**0.3091**	**0.4080**	**0.0262**	**0.2852**	**0.3114**	**0.0000**	**1,390.1451**	**1,390.1451**	**0.4135**	**0.0000**	**1,400.4830**

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					
2023	0.7909	6.2573	9.1320	0.0145	0.0989	0.3091	0.4080	0.0262	0.2852	0.3114	0.0000	1,390.1451	1,390.1451	0.4135	0.0000	1,400.4830
Maximum	**0.7909**	**6.2573**	**9.1320**	**0.0145**	**0.0989**	**0.3091**	**0.4080**	**0.0262**	**0.2852**	**0.3114**	**0.0000**	**1,390.1451**	**1,390.1451**	**0.4135**	**0.0000**	**1,400.4830**

	ROG	NOx	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	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**	**0.0000**	**0.0156**

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	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**	**0.0000**	**0.0156**

	ROG	NOx	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	Paving	Paving	4/1/2023	5/26/2023	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.54

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
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	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
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6446	6.2357	8.8024	0.0136		0.3084	0.3084		0.2846	0.2846		1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7455**	**6.2357**	**8.8024**	**0.0136**		**0.3084**	**0.3084**		**0.2846**	**0.2846**		**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.2 Paving - 2023

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	0.0455	0.0216	0.3297	9.3000e-004	0.0989	6.3000e-004	0.0995	0.0262	5.8000e-004	0.0268		92.4571	92.4571	2.1400e-003		92.5105
Total	**0.0455**	**0.0216**	**0.3297**	**9.3000e-004**	**0.0989**	**6.3000e-004**	**0.0995**	**0.0262**	**5.8000e-004**	**0.0268**		**92.4571**	**92.4571**	**2.1400e-003**		**92.5105**

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	0.6446	6.2357	8.8024	0.0136		0.3084	0.3084		0.2846	0.2846	0.0000	1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7455**	**6.2357**	**8.8024**	**0.0136**		**0.3084**	**0.3084**		**0.2846**	**0.2846**	**0.0000**	**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.2 Paving - 2023

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	0.0455	0.0216	0.3297	9.3000e-004	0.0989	6.3000e-004	0.0995	0.0262	5.8000e-004	0.0268		92.4571	92.4571	2.1400e-003		92.5105
Total	**0.0455**	**0.0216**	**0.3297**	**9.3000e-004**	**0.0989**	**6.3000e-004**	**0.0995**	**0.0262**	**5.8000e-004**	**0.0268**		**92.4571**	**92.4571**	**2.1400e-003**		**92.5105**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Unmitigated	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156

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	5.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0237					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**		**0.0156**

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	5.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0237					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**		**0.0156**

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

Bufferlands Pipeline Installation Pavement

Sacramento County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	67.00	1000sqft	1.54	67,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2024
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 -

Land Use -

Construction Phase - Paving only

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	40.00

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					
2023	0.7875	6.2623	9.0811	0.0144	0.0989	0.3091	0.4080	0.0262	0.2852	0.3114	0.0000	1,378.8986	1,378.8986	0.4133	0.0000	1,389.2299
Maximum	**0.7875**	**6.2623**	**9.0811**	**0.0144**	**0.0989**	**0.3091**	**0.4080**	**0.0262**	**0.2852**	**0.3114**	**0.0000**	**1,378.8986**	**1,378.8986**	**0.4133**	**0.0000**	**1,389.2299**

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					
2023	0.7875	6.2623	9.0811	0.0144	0.0989	0.3091	0.4080	0.0262	0.2852	0.3114	0.0000	1,378.8986	1,378.8986	0.4133	0.0000	1,389.2299
Maximum	**0.7875**	**6.2623**	**9.0811**	**0.0144**	**0.0989**	**0.3091**	**0.4080**	**0.0262**	**0.2852**	**0.3114**	**0.0000**	**1,378.8986**	**1,378.8986**	**0.4133**	**0.0000**	**1,389.2299**

	ROG	NOx	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	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**	**0.0000**	**0.0156**

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	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**	**0.0000**	**0.0156**

	ROG	NOx	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	Paving	Paving	4/1/2023	5/26/2023	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 1.54

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
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	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
Paving	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6446	6.2357	8.8024	0.0136		0.3084	0.3084		0.2846	0.2846		1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7455**	**6.2357**	**8.8024**	**0.0136**		**0.3084**	**0.3084**		**0.2846**	**0.2846**		**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.2 Paving - 2023

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	0.0420	0.0266	0.2787	8.2000e-004	0.0989	6.3000e-004	0.0995	0.0262	5.8000e-004	0.0268		81.2106	81.2106	1.8700e-003		81.2574
Total	**0.0420**	**0.0266**	**0.2787**	**8.2000e-004**	**0.0989**	**6.3000e-004**	**0.0995**	**0.0262**	**5.8000e-004**	**0.0268**		**81.2106**	**81.2106**	**1.8700e-003**		**81.2574**

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	0.6446	6.2357	8.8024	0.0136		0.3084	0.3084		0.2846	0.2846	0.0000	1,297.6880	1,297.6880	0.4114		1,307.9725
Paving	0.1009					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7455**	**6.2357**	**8.8024**	**0.0136**		**0.3084**	**0.3084**		**0.2846**	**0.2846**	**0.0000**	**1,297.6880**	**1,297.6880**	**0.4114**		**1,307.9725**

3.2 Paving - 2023

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	0.0420	0.0266	0.2787	8.2000e-004	0.0989	6.3000e-004	0.0995	0.0262	5.8000e-004	0.0268		81.2106	81.2106	1.8700e-003		81.2574
Total	**0.0420**	**0.0266**	**0.2787**	**8.2000e-004**	**0.0989**	**6.3000e-004**	**0.0995**	**0.0262**	**5.8000e-004**	**0.0268**		**81.2106**	**81.2106**	**1.8700e-003**		**81.2574**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.566033	0.037143	0.208217	0.113428	0.016713	0.004955	0.018463	0.024036	0.001978	0.001883	0.005758	0.000618	0.000776

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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**

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	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Unmitigated	0.0295	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156

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	5.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0237					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**		**0.0156**

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	5.1000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0237					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.3000e-004	6.0000e-005	6.8300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0147	0.0147	4.0000e-005		0.0156
Total	**0.0295**	**6.0000e-005**	**6.8300e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0147**	**0.0147**	**4.0000e-005**		**0.0156**

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

SMAQMD Road Construction Emissions Model (RCEM) Outputs

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Groundwater Accounting - Electrical 2023

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.23	9.72	11.31	8.26	0.56	7.70	2.11	0.51	1.60	0.02	1,934.35	0.40	0.02	1,950.39
Grading/Excavation	0.42	6.59	4.13	7.92	0.22	7.70	1.78	0.18	1.60	0.01	1,081.02	0.27	0.02	1,094.52
Drainage/Utilities/Sub-Grade	0.36	5.20	3.26	7.89	0.19	7.70	1.76	0.15	1.60	0.01	880.53	0.20	0.02	891.87
Paving	0.48	5.88	4.07	0.23	0.23	0.00	0.20	0.20	0.00	0.01	991.39	0.24	0.01	1,001.22
Maximum (pounds/day)	2.49	27.39	22.77	24.29	1.19	23.10	5.84	1.04	4.80	0.05	4,887.30	1.11	0.08	4,938.00
Total (tons/construction project)	0.00	0.04	0.03	0.04	0.00	0.04	0.01	0.00	0.01	0.00	6.01	0.00	0.00	6.08

Notes:

Project Start Year ->	2023
Project Length (months) ->	1
Total Project Area (acres) ->	10
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	300	0
Grading/Excavation	0	0	0	0	300	17
Drainage/Utilities/Sub-Grade	0	0	0	0	300	17
Paving	0	9	0	0	300	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Groundwater Accounting - Electrical 2023

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	0.97
Grading/Excavation	0.00	0.02	0.01	0.02	0.00	0.02	0.00	0.00	0.00	0.00	2.68	0.00	0.00	2.46
Drainage/Utilities/Sub-Grade	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	1.45	0.00	0.00	1.34
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.75
Maximum (tons/phase)	0.00	0.02	0.01	0.02	0.00	0.02	0.00	0.00	0.00	0.00	2.68	0.00	0.00	2.46
Total (tons/construction project)	0.00	0.04	0.03	0.04	0.00	0.04	0.01	0.00	0.01	0.00	6.01	0.00	0.00	5.52

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Groundwater Accounting - Electrical 2023	
Construction Start Year	2023	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	0.50	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	1.50	miles
Total Project Area	9.50	acres
Maximum Area Disturbed/Day	0.77	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00		
Asphalt	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00	9.00	

Mitigation Options

On-road Fleet Emissions Mitigation	
Off-road Equipment Emissions Mitigation	

Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation).
Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.05	4/1/2023	1/1/2023
Grading/Excavation		0.23	4/1/2023	1/3/2023
Drainage/Utilities/Sub-Grade		0.15	4/1/2023	1/10/2023
Paving		0.08	4/1/2023	1/15/2023
Totals (Months)	1			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				1	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip	15		Calculated	Calculated
One-way trips/day	2		Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing	10		20	300.00
No. of employees: Grading/Excavation	10		20	300.00
No. of employees: Drainage/Utilities/Sub-Grade	10		20	300.00
No. of employees: Paving	10		20	300.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Pounds per day - Grading/Excavation	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.53
Pounds per day - Drainage/Utilities/Sub-Grade	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.35
Pounds per day - Paving	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.18
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	1.17	0.00	0.00	1.18

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust								0.00
Grading/Excavation - Exhaust	1		2.00			8.50		17.00
Drainage/Utilities/Subgrade	1		2.00			8.50		17.00
Paving								0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.17
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.28

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period
Fugitive Dust - Grubbing/Land Clearing			7.70	0.00	1.60	0.00
Fugitive Dust - Grading/Excavation			7.70	0.02	1.60	0.00
Fugitive Dust - Drainage/Utilities/Subgrade			7.70	0.01	1.60	0.00

Attachment C

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing

Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.33	3.66	2.58	0.13	0.13	0.01	592.67	0.03
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.68	3.11	7.13	0.32	0.30	0.01	827.00	0.27
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.15	2.23	1.54	0.08	0.07	0.00	301.58	0.10
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase	Units	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grubbing/Land Clearing	pounds per day	1.17	9.00	11.25	0.53	0.49	0.02	1,721.24	0.39
Grubbing/Land Clearing	tons per phase	0.00	0.00	0.01	0.00	0.00	0.00	0.95	0.00

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.07	1.39	0.86	0.03	0.03	0.00	200.49	0.06
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grading/Excavation	pounds per day	0.37	5.85	3.94	0.18	0.17	0.01	803.64	0.26
Grading/Excavation	tons per phase	0.00	0.01	0.01	0.00	0.00	0.00	1.99	0.00

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Drainage/Utilities/Sub-Grade	pounds per day	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
Drainage/Utilities/Sub-Grade	tons per phase	0.00	0.01	0.01	0.00	0.00	0.00	1.00	0.00

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.19	2.88	1.88	0.09	0.08	0.00	455.22	0.15
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Plate Compactors	0.08	0.42	0.50	0.02	0.02	0.00	68.96	0.01
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rollers	0.15	1.85	1.61	0.09	0.08	0.00	254.11	0.08
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Paving	pounds per day	0.43	5.16	4.00	0.20	0.18	0.01	778.28	0.24
Paving	tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00
Total Emissions all Phases (tons per construction period) =>		0.00	0.03	0.02	0.00	0.00	0.00	4.57	0.00

N2O	CO2e
pounds/day	pounds/day
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	594.72
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
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
0.00	0.00
0.00	0.00
0.01	835.91
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	304.82
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,735.45
0.00	0.95

N2O	CO2e
pounds/day	pounds/day
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
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
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
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	202.65
0.00	0.00
0.00	0.00
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	812.29
0.00	2.01

N2O	CO2e
pounds/day	pounds/day
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
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
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
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
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	609.64
0.00	1.01

N2O	CO2e
pounds/day	pounds/day
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
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
0.00	0.00
0.00	0.00
0.00	460.13
0.00	0.00
0.00	69.31
0.00	0.00
0.00	0.00
0.00	256.85
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
0.00	0.00
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	786.28
0.00	0.65
0.00	4.62

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Groundwater Accounting - Electrical 2024

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.19	9.29	11.27	8.24	0.54	7.70	2.10	0.50	1.60	0.02	1,806.49	0.40	0.02	1,821.43
Grading/Excavation	0.39	6.15	4.09	7.90	0.20	7.70	1.77	0.17	1.60	0.01	953.16	0.26	0.02	965.55
Drainage/Utilities/Sub-Grade	0.33	4.77	3.23	7.87	0.17	7.70	1.75	0.15	1.60	0.01	752.67	0.20	0.02	762.91
Paving	0.45	5.45	4.02	0.21	0.21	0.00	0.19	0.19	0.00	0.01	863.53	0.24	0.01	872.26
Maximum (pounds/day)	2.36	25.65	22.61	24.21	1.11	23.10	5.81	1.01	4.80	0.05	4,375.84	1.09	0.06	4,422.15
Total (tons/construction project)	0.01	0.08	0.06	0.09	0.00	0.09	0.02	0.00	0.02	0.00	13.37	0.00	0.00	13.53

Notes:

Project Start Year ->	2024
Project Length (months) ->	1
Total Project Area (acres) ->	22
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	120	0
Grading/Excavation	0	0	0	0	120	17
Drainage/Utilities/Sub-Grade	0	0	0	0	120	17
Paving	0	0	0	0	120	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Groundwater Accounting - Electrical 2024

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.01	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00	2.50	0.00	0.00	2.29
Grading/Excavation	0.00	0.04	0.03	0.05	0.00	0.05	0.01	0.00	0.01	0.00	5.94	0.00	0.00	5.46
Drainage/Utilities/Sub-Grade	0.00	0.02	0.01	0.03	0.00	0.03	0.01	0.00	0.01	0.00	3.13	0.00	0.00	2.88
Paving	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	0.00	0.00	1.65
Maximum (tons/phase)	0.00	0.04	0.03	0.05	0.00	0.05	0.01	0.00	0.01	0.00	5.94	0.00	0.00	5.46
Total (tons/construction project)	0.01	0.08	0.06	0.09	0.00	0.09	0.02	0.00	0.02	0.00	13.37	0.00	0.00	12.28

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Groundwater Accounting - Electrical 2024	
Construction Start Year	2024	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	1.26	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	3.90	miles
Total Project Area	21.70	acres
Maximum Area Disturbed/Day	0.77	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00		
Asphalt	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00		

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.13	4/1/2023	1/1/2024
Grading/Excavation		0.57	4/1/2023	1/5/2024
Drainage/Utilities/Sub-Grade		0.38	4/1/2023	1/23/2024
Paving		0.19	4/1/2023	2/4/2024
Totals (Months)	1			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip	15		Calculated	Calculated
One-way trips/day	2		Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing	4		8	120.00
No. of employees: Grading/Excavation	4		8	120.00
No. of employees: Drainage/Utilities/Sub-Grade	4		8	120.00
No. of employees: Paving	4		8	120.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Drainage/Utilities/Sub-Grade (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Drainage/Utilities/Sub-Grade (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.02	0.29	0.02	0.01	0.01	0.00	85.24	0.00	0.00	85.98
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Pounds per day - Grading/Excavation	0.02	0.29	0.02	0.01	0.01	0.00	85.24	0.00	0.00	85.98
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.54
Pounds per day - Drainage/Utilities/Sub-Grade	0.02	0.29	0.02	0.01	0.01	0.00	85.24	0.00	0.00	85.98
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.36
Pounds per day - Paving	0.02	0.29	0.02	0.01	0.01	0.00	85.24	0.00	0.00	85.98
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.18
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	1.18	0.00	0.00	1.19

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust								0.00
Grading/Excavation - Exhaust	1		2.00			8.50		17.00
Drainage/Utilities/Subgrade	1		2.00			8.50		17.00
Paving								0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Drainage/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.42
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.28
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.70

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing			7.70	0.01	1.60	0.00
Fugitive Dust - Grading/Excavation			7.70	0.05	1.60	0.01
Fugitive Dust - Drainage/Utilities/Subgrade			7.70	0.03	1.60	0.01

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.33	3.66	2.58	0.13	0.13	0.01	592.67	0.03
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.68	3.11	7.13	0.32	0.30	0.01	827.00	0.27
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.15	2.23	1.54	0.08	0.07	0.00	301.58	0.10
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grubbing/Land Clearing	pounds per day	1.17	9.00	11.25	0.53	0.49	0.02	1,721.24	0.39
Grubbing/Land Clearing	tons per phase	0.00	0.01	0.02	0.00	0.00	0.00	2.39	0.00

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.07	1.39	0.86	0.03	0.03	0.00	200.49	0.06
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grading/Excavation	pounds per day	0.37	5.85	3.94	0.18	0.17	0.01	803.64	0.26
Grading/Excavation	tons per phase	0.00	0.04	0.02	0.00	0.00	0.00	5.01	0.00

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Drainage/Utilities/Sub-Grade	pounds per day	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
Drainage/Utilities/Sub-Grade	tons per phase	0.00	0.02	0.01	0.00	0.00	0.00	2.51	0.00

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.19	2.88	1.88	0.09	0.08	0.00	455.22	0.15
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Plate Compactors	0.08	0.42	0.50	0.02	0.02	0.00	68.96	0.01
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rollers	0.15	1.85	1.61	0.09	0.08	0.00	254.11	0.08
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
	Paving	pounds per day	0.43	5.16	4.00	0.20	0.18	0.01	778.28	0.24
	Paving	tons per phase	0.00	0.01	0.01	0.00	0.00	0.00	1.62	0.00
Total Emissions all Phases (tons per construction period) =>			0.01	0.08	0.06	0.00	0.00	0.00	11.52	0.00

N2O	CO2e
pounds/day	pounds/day
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	594.72
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
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
0.00	0.00
0.00	0.00
0.01	835.91
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	304.82
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,735.45
0.00	2.41

N2O	CO2e
pounds/day	pounds/day
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
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
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
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	202.65
0.00	0.00
0.00	0.00
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	812.29
0.00	5.07

N2O	CO2e
pounds/day	pounds/day
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
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
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
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
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	609.64
0.00	2.53

N2O	CO2e
pounds/day	pounds/day
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
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
0.00	0.00
0.00	0.00
0.00	460.13
0.00	0.00
0.00	69.31
0.00	0.00
0.00	0.00
0.00	256.85
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
0.00	0.00
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	786.28
0.00	1.63
0.00	11.64

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Groundwater Accounting - Pipeline 2023

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.23	9.72	11.31	6.76	0.56	6.20	1.80	0.51	1.29	0.02	1,934.35	0.40	0.02	1,950.39
Grading/Excavation	0.61	9.85	6.00	6.49	0.29	6.20	1.54	0.25	1.29	0.02	1,581.13	0.43	0.03	1,600.01
Drainage/Utilities/Sub-Grade	0.55	8.46	4.81	6.46	0.26	6.20	1.51	0.22	1.29	0.01	1,380.64	0.36	0.03	1,397.37
Paving	0.48	5.88	4.08	0.23	0.23	0.00	0.20	0.20	0.00	0.01	991.39	0.24	0.01	1,001.22
Maximum (pounds/day)	2.87	33.91	26.20	19.94	1.34	18.60	5.04	1.18	3.87	0.06	5,887.51	1.43	0.09	5,948.99
Total (tons/construction project)	0.01	0.13	0.08	0.08	0.00	0.08	0.02	0.00	0.02	0.00	20.99	0.01	0.00	21.23

Notes:

Project Start Year ->	2023
Project Length (months) ->	1
Total Project Area (acres) ->	23
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	300	0
Grading/Excavation	516	0	0	0	300	17
Drainage/Utilities/Sub-Grade	0	0	0	0	300	17
Paving	0	21	0	0	300	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Groundwater Accounting - Pipeline 2023

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.01	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00	2.77	0.00	0.00	2.53
Grading/Excavation	0.00	0.06	0.04	0.04	0.00	0.04	0.01	0.00	0.01	0.00	10.17	0.00	0.00	9.34
Drainage/Utilities/Sub-Grade	0.00	0.04	0.02	0.03	0.00	0.03	0.01	0.00	0.01	0.00	5.92	0.00	0.00	5.44
Paving	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13	0.00	0.00	1.95
Maximum (tons/phase)	0.00	0.06	0.04	0.04	0.00	0.04	0.01	0.00	0.01	0.00	10.17	0.00	0.00	9.34
Total (tons/construction project)	0.01	0.13	0.08	0.08	0.00	0.08	0.02	0.00	0.02	0.00	20.99	0.01	0.00	19.26

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Groundwater Accounting - Pipeline 2023	
Construction Start Year	2023	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	1.30	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	4.17	miles
Total Project Area	22.70	acres
Maximum Area Disturbed/Day	0.62	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		515.60
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00		
Asphalt	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00	21.00	

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer□
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.13	4/1/2023	1/1/2023
Grading/Excavation		0.59	4/1/2023	1/5/2023
Drainage/Utilities/Sub-Grade		0.39	4/1/2023	1/23/2023
Paving		0.20	4/1/2023	2/4/2023
Totals (Months)	1			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				33	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				2	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip	15		Calculated	Calculated
One-way trips/day	2		Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing	10		20	300.00
No. of employees: Grading/Excavation	10		20	300.00
No. of employees: Drainage/Utilities/Sub-Grade	10		20	300.00
No. of employees: Paving	10		20	300.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.31
Pounds per day - Grading/Excavation	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.37	0.00	0.00	1.38
Pounds per day - Drainage/Utilities/Sub-Grade	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.00	0.00	0.92
Pounds per day - Paving	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.46
Total tons per construction project	0.00	0.01	0.00	0.00	0.00	0.00	3.05	0.00	0.00	3.07

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust								0.00
Grading/Excavation - Exhaust	1		2.00			8.50		17.00
Drainage/Utilities/Subgrade	1		2.00			8.50		17.00
Paving								0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.43
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.29
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.72

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period
Fugitive Dust - Grubbing/Land Clearing			6.20	0.01	1.29	0.00
Fugitive Dust - Grading/Excavation			6.20	0.04	1.29	0.01
Fugitive Dust - Drainage/Utilities/Subgrade			6.20	0.03	1.29	0.01

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.33	3.66	2.58	0.13	0.13	0.01	592.67	0.03
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.68	3.11	7.13	0.32	0.30	0.01	827.00	0.27
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.15	2.23	1.54	0.08	0.07	0.00	301.58	0.10
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grubbing/Land Clearing	pounds per day	1.17	9.00	11.25	0.53	0.49	0.02	1,721.24	0.39
Grubbing/Land Clearing	tons per phase	0.00	0.01	0.02	0.00	0.00	0.00	2.46	0.00

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.19	3.26	1.55	0.08	0.07	0.01	500.11	0.16
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.07	1.39	0.86	0.03	0.03	0.00	200.49	0.06
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grading/Excavation	pounds per day	0.56	9.11	5.48	0.26	0.24	0.01	1,303.75	0.42
Grading/Excavation	tons per phase	0.00	0.06	0.04	0.00	0.00	0.00	8.39	0.00

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.19	3.26	1.55	0.08	0.07	0.01	500.11	0.16
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Drainage/Utilities/Sub-Grade	pounds per day		0.49	7.72	4.62	0.23	0.21	0.01	1,103.26	0.36
Drainage/Utilities/Sub-Grade	tons per phase		0.00	0.03	0.02	0.00	0.00	0.00	4.73	0.00

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.19	2.88	1.88	0.09	0.08	0.00	455.22	0.15
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Plate Compactors	0.08	0.42	0.50	0.02	0.02	0.00	68.96	0.01
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rollers	0.15	1.85	1.61	0.09	0.08	0.00	254.11	0.08
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
	Paving	pounds per day	0.43	5.16	4.00	0.20	0.18	0.01	778.28	0.24
	Paving	tons per phase	0.00	0.01	0.01	0.00	0.00	0.00	1.67	0.00
Total Emissions all Phases (tons per construction period) =>			0.01	0.12	0.08	0.00	0.00	0.00	17.25	0.01

N2O	CO2e
pounds/day	pounds/day
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	594.72
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
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
0.00	0.00
0.00	0.00
0.01	835.91
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	304.82
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,735.45
0.00	2.48

N2O	CO2e
pounds/day	pounds/day
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
0.00	505.50
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
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
0.00	0.00
0.00	202.65
0.00	0.00
0.00	0.00
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,317.79
0.00	8.48

N2O	CO2e
pounds/day	pounds/day
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
0.00	505.50
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
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
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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
0.01	1,115.14
0.00	4.78

N2O	CO2e
pounds/day	pounds/day
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
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
0.00	0.00
0.00	0.00
0.00	460.13
0.00	0.00
0.00	69.31
0.00	0.00
0.00	0.00
0.00	256.85
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
0.00	0.00
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	786.28
0.00	1.69
0.00	17.43

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Groundwater Accounting - Pipeline 2024

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.23	9.72	11.31	6.76	0.56	6.20	1.80	0.51	1.29	0.02	1,934.35	0.40	0.02	1,950.39
Grading/Excavation	0.61	9.85	5.88	6.49	0.29	6.20	1.54	0.25	1.29	0.02	1,581.13	0.43	0.03	1,600.01
Drainage/Utilities/Sub-Grade	0.55	8.46	4.81	6.46	0.26	6.20	1.51	0.22	1.29	0.01	1,380.64	0.36	0.03	1,397.37
Paving	0.48	5.88	4.06	0.23	0.23	0.00	0.20	0.20	0.00	0.01	991.39	0.24	0.01	1,001.22
Maximum (pounds/day)	2.87	33.91	26.06	19.94	1.34	18.60	5.04	1.18	3.87	0.06	5,887.51	1.43	0.09	5,948.99
Total (tons/construction project)	0.01	0.08	0.05	0.05	0.00	0.05	0.01	0.00	0.01	0.00	13.40	0.00	0.00	13.55

Notes:

Project Start Year ->	2024
Project Length (months) ->	1
Total Project Area (acres) ->	14
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	300	0
Grading/Excavation	326	0	0	0	300	17
Drainage/Utilities/Sub-Grade	0	0	0	0	300	17
Paving	0	0	0	0	300	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Groundwater Accounting - Pipeline 2024

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.01	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	1.77	0.00	0.00	1.62
Grading/Excavation	0.00	0.04	0.02	0.03	0.00	0.03	0.01	0.00	0.01	0.00	6.50	0.00	0.00	5.96
Drainage/Utilities/Sub-Grade	0.00	0.02	0.01	0.02	0.00	0.02	0.00	0.00	0.00	0.00	3.78	0.00	0.00	3.47
Paving	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	0.00	0.00	1.24
Maximum (tons/phase)	0.00	0.04	0.02	0.03	0.00	0.03	0.01	0.00	0.01	0.00	6.50	0.00	0.00	5.96
Total (tons/construction project)	0.01	0.08	0.05	0.05	0.00	0.05	0.01	0.00	0.01	0.00	13.40	0.00	0.00	12.30

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Groundwater Accounting - Pipeline 2024	
Construction Start Year	2024	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	0.83	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	2	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	2.50	miles
Total Project Area	13.60	acres
Maximum Area Disturbed/Day	0.62	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		325.89
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00		
Asphalt	Grubbing/Land Clearing	16.00		
	Grading/Excavation	16.00		
	Drainage/Utilities/Sub-Grade	16.00		
	Paving	16.00		

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.08	4/1/2023	1/1/2024
Grading/Excavation		0.37	4/1/2023	1/4/2024
Drainage/Utilities/Sub-Grade		0.25	4/1/2023	1/16/2024
Paving		0.12	4/1/2023	1/24/2024
Totals (Months)	1			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				21	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker			
User Input	Commute Default Values	Default Values		
Miles/ one-way trip	15		Calculated	Calculated
One-way trips/day	2		Daily Trips	Daily VMT
No. of employees: Grubbing/Land Clearing	10		20	300.00
No. of employees: Grading/Excavation	10		20	300.00
No. of employees: Drainage/Utilities/Sub-Grade	10		20	300.00
No. of employees: Paving	10		20	300.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.20
Pounds per day - Grading/Excavation	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.00	0.88
Pounds per day - Drainage/Utilities/Sub-Grade	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pounds per day - Paving	0.06	0.72	0.06	0.03	0.01	0.00	213.11	0.01	0.01	214.94
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.29
Total tons per construction project	0.00	0.01	0.00	0.00	0.00	0.00	1.95	0.00	0.00	1.96

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust								0.00
Grading/Excavation - Exhaust	1		2.00			8.50		17.00
Drainage/Utilities/Subgrade	1		2.00			8.50		17.00
Paving								0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.28
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.02	0.13	0.00	0.00	0.00	64.28	0.00	0.01	67.29
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.18
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.46

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max	Default	PM10	PM10	PM2.5	PM2.5
	Acreage Disturbed/Day	Maximum Acreage/Day	pounds/day	tons/per period	pounds/day	tons/per period
Fugitive Dust - Grubbing/Land Clearing			6.20	0.01	1.29	0.00
Fugitive Dust - Grading/Excavation			6.20	0.03	1.29	0.01
Fugitive Dust - Drainage/Utilities/Subgrade			6.20	0.02	1.29	0.00

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Concrete/Industrial Saws	0.33	3.66	2.58	0.13	0.13	0.01	592.67	0.03
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.68	3.11	7.13	0.32	0.30	0.01	827.00	0.27
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.15	2.23	1.54	0.08	0.07	0.00	301.58	0.10
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grubbing/Land Clearing		pounds per day	1.17	9.00	11.25	0.53	0.49	0.02	1,721.24	0.39
Grubbing/Land Clearing		tons per phase	0.00	0.01	0.01	0.00	0.00	0.00	1.57	0.00

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.19	3.26	1.55	0.08	0.07	0.01	500.11	0.16
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Skid Steer Loaders	0.07	1.39	0.86	0.03	0.03	0.00	200.49	0.06
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grading/Excavation	pounds per day	0.56	9.11	5.48	0.26	0.24	0.01	1,303.75	0.42
Grading/Excavation	tons per phase	0.00	0.04	0.02	0.00	0.00	0.00	5.36	0.00

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.19	3.26	1.55	0.08	0.07	0.01	500.11	0.16
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Drainage/Utilities/Sub-Grade	pounds per day	0.49	7.72	4.62	0.23	0.21	0.01	1,103.26	0.36
Drainage/Utilities/Sub-Grade	tons per phase	0.00	0.02	0.01	0.00	0.00	0.00	3.02	0.00

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.19	2.88	1.88	0.09	0.08	0.00	455.22	0.15
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00			Model Default Tier	Plate Compactors	0.08	0.42	0.50	0.02	0.02	0.00	68.96	0.01
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rollers	0.15	1.85	1.61	0.09	0.08	0.00	254.11	0.08
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
	Paving	pounds per day	0.43	5.16	4.00	0.20	0.18	0.01	778.28	0.24
	Paving	tons per phase	0.00	0.01	0.01	0.00	0.00	0.00	1.07	0.00
Total Emissions all Phases (tons per construction period) =>			0.01	0.07	0.05	0.00	0.00	0.00	11.02	0.00

N2O	CO2e
pounds/day	pounds/day
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	594.72
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
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
0.00	0.00
0.00	0.00
0.01	835.91
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	304.82
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,735.45
0.00	1.58

N2O	CO2e
pounds/day	pounds/day
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
0.00	505.50
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
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
0.00	0.00
0.00	202.65
0.00	0.00
0.00	0.00
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,317.79
0.00	5.41

N2O	CO2e
pounds/day	pounds/day
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
0.00	505.50
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
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
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.01	609.64
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	1,115.14
0.00	3.05

N2O	CO2e
pounds/day	pounds/day
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
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
0.00	0.00
0.00	0.00
0.00	460.13
0.00	0.00
0.00	69.31
0.00	0.00
0.00	0.00
0.00	256.85
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
0.00	0.00
0.00	0.00
0.00	0.00

N2O	CO2e
pounds/day	pounds/day
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

0.01	786.28
0.00	1.08
0.00	11.13

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

Miscellaneous Calculations

Pavement Conversion

				Total				Per Day			
Component	Total SF of Area	Assumed Thickness (foot)*	Debris Volume (cu. ft)	Debris Volume (cu. yard)	Hauling Capacity	Total Trips	Total Round Trips	Debris Volume (cu. Yard/day)	Hauling Capacity	Total Trips	Total Round Trips
Pipeline - Phase 1	67,000	0.333	22,333	827	16	52	26	21	16	1	1
Electrical Lines - Phase 1	27,600	0.333	9,200	341	17	20	10	9	17	1	0

*Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Conneticut Cooperative Extension System, 1999.