

Appendix A

Air Quality and Greenhouse Gas Emissions Memorandum

MEMORANDUM

To: Greg Keppler, PE, Vista Irrigation District
From: Adam Poll, Dudek
Subject: Vista Irrigation District – E Reservoir Project, Air Quality and Greenhouse Gas Emissions Memorandum
Date: January 17, 2020
cc: Samantha Wang, Dudek
Attachment(s): Attachment A – CalEEMod Output Files

The purpose of this memorandum is to estimate criteria air pollutant and greenhouse gas (GHG) emissions from construction and operation of the Vista Irrigation District – E Reservoir Project (project), in the City of Vista (Vista), and evaluates potential environmental impacts resulting from project implementation. The contents and organization of this memorandum are as follows: (1) project description; (2) general methodology and analysis assumptions, including construction and operation assumptions; (3) air quality assessment including an overview of criteria air pollutants, thresholds of significance, and impact analysis; (4) GHG emissions assessment including an overview of GHGs, thresholds of significance, and impact analysis; (5) conclusions; and (6) references cited.

1 Project Description

In accordance with its 2017 Potable Water Master Plan, the Vista Irrigation District (VID or District) is proposing the replacement of the existing oval shaped, partially buried, 1.5 million gallon (MG) E Reservoir with a new reservoir and construction of a new pump station (proposed project). The project is located on a 1.88-acre property comprised of one parcel (APN: 174-240-33) located at 2330 Edgehill Road in unincorporated County of San Diego (County), California just east of the City of Vista. The new reservoir would increase storage capacity and provide the VID with a facility that meets applicable current codes and standards. The new pump station would provide a redundant water supply to higher-pressure zones within the VID’s service area when disruptions occur to primary water supplies.

The project would require the demolition of the existing E Reservoir and accessory facilities. Within a similar footprint, the proposed project would construct a cast-in-place hexagonal shaped structure that would increase the onsite capacity to approximately 2.92 MG, which is a 1.42 MG net increase. The hexagonal shape would allow for more easily maintained water quality. The proposed project would also construct a new water pump station. The pumps, control panel, and other electric and SCADA equipment would be housed in an above ground structure with approximate dimensions of 20-feet by 38-feet that would match the architectural features of the existing adjacent pressure reducing station (PRS) facility.

2 General Methodology and Analysis Assumptions

The project site is located within the San Diego Air Basin (SDAB) and is subject to the San Diego Air Pollution Control District (SDAPCD) guidelines and regulations. The SDAB is one of 15 air basins that geographically divide the State of California. Project-generated air pollutant and GHG emissions are estimated using the most recent version of the California Emissions Estimator Model (CalEEMod) Version 2016.3.2.

Construction phasing specifications and construction equipment mix were provided by the project's engineering team (Dudek 2019) and based on typical construction practices. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site up to 8 hours per day (with a few exceptions), 5 days per week (22 days per month) during project construction. Construction-worker estimates, vendor truck trips, and haul truck trips and trip lengths were based on information provided by the project engineering team and CalEEMod default values.

2.1 Project Construction Assumptions

Emissions from the construction phase of the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 (CAPCOA 2017).

As described in Section 1, Project Description, the proposed project would replace an existing reservoir with a new reservoir and pump station. For the purposes of modeling, it was assumed that construction of the proposed project would commence in September 2020¹ and would last approximately 18 months, ending in February 2022. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate):

- Demolition – three months
- Site Preparation and Grading – three months
- Reservoir Construction – 12 months
- Pump Station Construction – 4 months
- Paving – 1 week
- Piping – 4 months
- Retaining Wall Construction – 1 month
- Architectural Coating – 1 week

The majority of the phases listed above would occur concurrently and would not occur sequentially in isolation. The estimated construction duration was provided by the project engineering team. Detailed construction equipment modeling assumptions are provided in Appendix A, CalEEMod Outputs.

¹ The analysis assumes a construction start date of September 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

The construction equipment mix used for estimating the construction emissions of the proposed project is based on information provided by the project applicant and is shown in Table 1.

Table 1. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Demolition	12	4	64	Excavators	2	8
				Skid Steer Loaders	1	8
				Tractors/Loaders/Backhoes	1	8
Site Preparation and Grading	16	0	476	Crawler Tractors	1	8
				Excavators	2	8
				Skid Steer Loaders	1	8
				Tractors/Loaders/Backhoes	3	8
				Bore/Drill Rigs	1	8
Reservoir Construction	20	0	800	Excavators	2	8
				Skid Steer Loaders	1	8
				Tractors/Loaders/Backhoes	1	8
Pump Station Construction	8	0	100	NA	NA	NA
Paving	4	2	0	Pavers	1	8
				Rollers	1	8
Piping	8	0	20	Excavators	1	8
Retaining Wall Construction	8	0	10	NA	NA	NA
Architectural Coating	8	0	0	Air Compressors	1	8

Note: See Appendix A for details.

For the analysis, it was assumed that heavy construction equipment would be operating five days per week (22 days per month) during proposed project construction. Construction worker and vendor trips were based on CalEEMod default assumptions and rounded up to the nearest whole number to account for whole round trips.

Proposed project construction would include 1,830 cubic yards of cut and 1,337 cubic yards of fill as represented in the site preparation and grading phase. It is anticipated that earth movement would be primarily, if not completely, accomplished using off-road equipment (e.g., scrapers and excavators); however, on-site truck trips were conservatively assumed in the event cut and fill would be transported via trucks within the site boundary. There would also be export of approximately 650 tons of waste during the demolition phase.

Construction of proposed project components would be subject to SDAPCD Rule 55, Fugitive Dust Control, which requires that proposed construction include steps to restrict visible emissions of fugitive dust beyond the property

line (SDAPCD 2009b). Compliance with Rule 55 would limit fugitive dust (PM₁₀ and PM_{2.5}) that may be generated during proposed grading and construction activities.

A detailed depiction of the construction schedule—including information regarding subphases and equipment used during each subphase—is included in Appendix A of this report. The information contained in Appendix A was used as CalEEMod model inputs.

Blasting

Based on the known geotechnical conditions of the project site, there is some potential for blasting to be required to excavate the underlying rock. It should be noted that conventional means of excavation would be exhausted prior to the use of blasting. However, because there is some potential, the analysis presented in this report conservatively assumes blasting would be required. Rock blasting is the controlled use of explosives to excavate, break down, or remove rock. The result of rock blasting is often known as a rock cut. The most commonly used explosives today are ammonium nitrate/fuel oil (ANFO)–based blends due to their lower cost compared to dynamite. The chemistry of ANFO detonation is the reaction of ammonium nitrate with a long-chain alkane to form NO_x, carbon dioxide, and water. When detonation conditions are optimal, these gases are the only products. In practical use, such conditions are impossible to attain, and blasts produce moderate amounts of other gases. The EPA’s Compilation of Air Pollutant Emission Factors (AP-42), Section 13.3 – Explosives Detonation (EPA 1980), provided the emissions factors for CO, NO_x, and SO_x used in this assessment. According to AP-42, “Unburned hydrocarbons also result from explosions, but in most instances, methane is the only species that has been reported” (EPA 1980); methane is not a VOC, and a methane emission factor has not been determined for ANFO.

AP-42 states that CO is the pollutant produced in greatest quantity from explosives detonation. All explosives produce measurable amounts of CO. Particulates are produced as well, but such large quantities of particulate are generated during shattering of the rock and earth by the explosive that the quantity of particulates from the explosive charge cannot be distinguished. Accordingly, AP-42, Section 11.9 – Western Surface Coal Mining (EPA 1998), provided the basis for the PM₁₀ and PM_{2.5} emissions factors. The emissions factors are based on the horizontal area disturbed during blasting.

It is anticipated that blasting operations would occur during the site preparation and grading phase. No more than one blast per day would occur during construction activities. An average of 8 pounds of ANFO would be applied per blast (Dudek 2019). All blasting activity would require appropriate permits and approvals consistent with local and state requirements, such Section 96.1.5601.2 of the County of San Diego 2017 Consolidated Fire Code. The blasting information and additional calculation assumptions are provided in Table 2.

Table 2. Blasting Characteristics

Activity	
Total Rock Requiring Blasting (cubic yards)	2,000
Rock Blasted per Blast (cubic yards per blast)	50
Maximum Blasts per Day (blasts per day)	1
Maximum Explosive per Blast (pounds ANFO per blast)	8
Total Explosives Used (pounds ANFO)	320
Maximum Area Blasted per Day (square feet per day)	13
Total Area Blasted (square feet)	178

Sources: Dudek 2019.
ANFO = ammonium nitrate/fuel oil

2.2 Project Operational Assumptions

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from architectural coatings. VOC off-gassing emissions result from evaporation of solvents contained in surface coatings, such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from the application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emissions factor is based on the VOC content of the surface coatings, and SDAPCD's Rule 67.0.1 (Architectural Coatings) governs the VOC content for interior and exterior coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015). The model default reapplication rate of 10 percent of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the surface area for painting equals 2.7 times the floor square footage, with 75 percent assumed for interior coating and 25 percent assumed for exterior surface coating (CAPCOA 2017).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site. The project would not have natural gas use. It is estimated that the project would use up to 196,049 kilowatt-hours of electricity per year from three, 50-horsepower pumps (Dudek 2019).

Mobile Sources

Following the completion of construction activities, the proposed project would generate criteria pollutant emissions from mobile sources (vehicular traffic) as a result of monthly maintenance inspections. Project-related traffic was assumed to include a mixture of vehicles in accordance with the associated use, as modeled within the CalEEMod. Emission factors representing the vehicle mix and emissions for 2022 were used to estimate emissions associated with vehicular sources.

3 Air Quality Assessment

3.1 Air Quality Setting

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants that are evaluated include volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (PM₁₀), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size (PM_{2.5}). VOCs and NO_x are important because they are precursors to ozone (O₃). Criteria air pollutant emissions

associated with construction of the project were estimated for the following emission sources: operation of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. Operational emissions include those from maintenance vehicles and architectural coating off-gassing.

San Diego Air Pollution Control District

Although CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The project is located within the SDAB and is subject to SDAPCD guidelines and regulations. In San Diego County, O₃ and particulate matter are the pollutants of main concern, because exceedances of the CAAQS for those pollutants are experienced here in most years. For this reason, the SDAB has been designated as a nonattainment area for the state PM₁₀, PM_{2.5}, and O₃ (1-hour and 8-hour) standards. The SDAB is also designated as a federal O₃ maintenance attainment area for the 1997 8-hour NAAQS and a marginal nonattainment area for the 2008 8-hour NAAQS for O₃.

SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The Regional Air Quality Strategy (RAQS) for the SDAB was initially adopted in 1991, and is updated every 3 years (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O₃. The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

The 8-Hour Ozone Attainment Plan for San Diego County indicates that local controls and state programs would allow the region to reach attainment of the federal 8-hour O₃ standard by 2018 (SDAPCD 2016b). In this plan, SDAPCD relies on the RAQS to demonstrate how the region will comply with the federal O₃ standard. The RAQS details how the region will manage and reduce O₃ precursors (NO_x and VOCs) by identifying measures and regulations intended to reduce these contaminants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and EPA. Incentive programs for reduction of emissions from heavy-duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

In December 2005, SDAPCD prepared a report titled "Measures to Reduce Particulate Matter in San Diego County" to address implementation of Senate Bill (SB) 656 in San Diego County (SB 656 required additional controls to reduce ambient concentrations of PM₁₀ and PM_{2.5}). In the report, SDAPCD evaluates the implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion.

San Diego Air Basin Attainment Designation

An area is designated as "in attainment" when it is in compliance with the NAAQS and/or the CAAQS. These standards are set by the EPA and CARB, respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. The criteria pollutants of

primary concern that are considered in this air quality assessment include O₃, nitrogen dioxide (NO₂), CO, sulfur dioxide (SO₂), PM₁₀, and PM_{2.5}. Although there are no ambient standards for VOCs or NO_x, they are important as precursors to O₃.

The SDAB is designated as an attainment area for the 1997 8-hour O₃ NAAQS and as a nonattainment area for the 2008 8-hour O₃ NAAQS. The SDAB is designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5} CAAQS. The portion of the SDAB where the project site is located is designated as attainment or unclassifiable/unclassified for all other criteria pollutants under the NAAQS and CAAQS.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005).

The project site is bounded by agriculture and residential land to the north; open land including the San Marcos mountain range and residential buildings to the east; commercial and residential development to the south; and commercial and residential uses to the west. The land uses near the project alignment that are considered sensitive receptor land uses with regard to air quality concerns include the residential land uses.

3.2 Thresholds of Significance

3.2.1 CEQA Guidelines

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), which provides guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. 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.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

3.2.2 SDAPCD Thresholds

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the project would have a significant impact on air quality. As part of its air quality permitting process, SDAPCD has established thresholds in Rule 20.2 requiring the preparation of Air Quality Impact Assessments for permitted stationary sources. SDAPCD sets forth quantitative emission thresholds below

which a stationary source would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3 are exceeded.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project’s total emissions would not result in a significant impact to air quality.

The thresholds listed in Table 3 represent screening-level thresholds that can be used to evaluate whether project-related emissions could cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. For nonattainment pollutants, if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality. A project that involves a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

Table 3. San Diego Air Pollution Control District Air Quality Significance Thresholds

Construction Emissions			
Pollutant	Total Emissions (Pounds per Day)		
Respirable particulate matter (PM ¹⁰)	100		
Fine particulate matter (PM _{2.5})	55		
Oxides of nitrogen (NO _x)	250		
Sulfur oxides (SO _x)	250		
Carbon monoxide (CO)	550		
Volatile organic compounds (VOC)	137 ^a		
Operational Emissions			
Pollutant	Total Emissions		
	Pounds per Hour	Pounds per Day	Tons per Year
Respirable particulate matter (PM ₁₀)	–	100	15
Fine particulate matter (PM _{2.5})	–	55	10
Oxides of nitrogen (NO _x)	25	250	40
Sulfur oxides (SO _x)	25	250	40
Carbon monoxide (CO)	100	550	100
Lead and lead compounds	–	3.2	0.6
Volatile organic compounds (VOC)	–	137 ^a	13.7

Source: SDAPCD Rules 1501 and 20.2(d)(2).

^a VOC threshold based on South Coast Air Quality Management District (SCAQMD) levels per the SCAQMD and the Monterey Bay Air Pollution Control District, which have similar federal and state attainment status to San Diego.

3.3 Impact Analysis

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

The SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the ambient air quality standards in the basin—specifically, the State Implementation Plan (SIP) and RAQS.² The federal O₃ maintenance plan, which is part of the SIP, was adopted in 2012. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the basin based on the NAAQS. The RAQS was initially adopted in 1991 and is updated every 3 years (most recently in 2016). The RAQS outlines SDAPCD’s plans and control measures designed to attain the state air quality standards for O₃. The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions as well as information regarding projected growth in the County as a whole and the cities in the County, to project future emissions and determine the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans.

If a project involves development that is greater than that anticipated in the local plan and SANDAG’s growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. As the project is located at the existing reservoir site, the project would not conflict with the existing zoning and General Plan land use designations. Implementation of the project would not be growth inducing. Additionally, the project would neither include a residential component that would increase local population growth, nor provide additional water supplies that would result in growth-inducing effects.

In summary, the project would not provide for residential development growth or local employment growth; therefore, the project would not result in development in excess of that anticipated in local plans or increases in population/housing growth beyond those contemplated by SANDAG. As such, vehicle trip generation and planned development for the various project-proposed maintenance activities is considered to be anticipated in the SIP and RAQS. Because the proposed project activities and associated vehicle trips are anticipated in local air quality plans, the project would be consistent at a regional level with the underlying growth forecasts in the RAQS. Impacts as a result of project-level activities would be **less than significant**.

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

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for

² For the purpose of this discussion, the relevant federal air quality plan is the Ozone Maintenance Plan (SDAPCD 2012). The RAQS is the applicable plan for purposes of State air quality planning. Both plans reflect growth projections in the basin.

criteria pollutants are relevant in the determination of whether a project’s individual emissions would have a cumulatively significant impact on air quality.

A quantitative analysis was conducted to determine whether construction of the project may result in emissions of criteria air pollutants that may cause exceedances of federal and/or state ambient air quality standards or contribute to existing nonattainment of ambient air quality standards. The following discussion identifies potential short-term impacts that would result from implementation of the project and concludes that impacts would be less than significant. The project would not involve routine daily activities following construction; therefore, the project is not anticipated to generate long-term operational criteria air pollutant emissions.

Construction Emissions

Construction of the proposed project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (worker vehicle trips). Construction emissions can vary substantially day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions.

Criteria air pollutant emissions associated with construction activity were quantified using CalEEMod. Default values provided by the program were used where detailed proposed project information was not available. A detailed depiction of the construction schedule—including information regarding phasing, equipment used during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Section 2.4.2.1, Construction. The information contained in Appendix A was used as CalEEMod inputs.

Implementation of the proposed project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, asphalt pavement application, and architectural coatings. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM₁₀ and PM_{2.5} emissions. The proposed project would be subject to SDAPCD Rule 55, Fugitive Dust Control. This rule requires that the proposed project take steps to restrict visible emissions of fugitive dust beyond the property line. Compliance with Rule 55 would limit fugitive dust (PM₁₀ and PM_{2.5}) generated during grading and construction activities.

Exhaust from internal combustion engines used by construction equipment and worker vehicles would result in emissions of VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. The application of asphalt pavement and architectural coatings would also produce VOC emissions. Table 4 shows the estimated maximum daily construction emissions associated with construction of the proposed project without mitigation. Complete details of the emissions calculations are provided in Appendix A.

Table 4. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
2020 ¹	2.99	33.95	30.78	0.07	2.29	1.51
2021	7.81	33.37	33.74	0.07	2.43	1.56
2022	0.39	4.03	4.89	0.01	0.25	0.20

Table 4. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
<i>Maximum</i>	7.81	33.95	33.74	0.07	2.43	1.56
<i>SDAPCD Threshold</i>	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes:

¹ Emissions include blasting calculated outside of CalEEMod.

VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SDAPCD = San Diego Air Pollution Control District; CalEEMod = California Emissions Estimator Model.

See Appendix A for complete results.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. Although not considered mitigation, these emissions reflect the CalEEMod “mitigated” output, which accounts for the required compliance with SDAPCD Rule 55 (Fugitive Dust) and Rule 67.0.1 (Architectural Coatings).

As shown in Table 4, daily construction emissions would not exceed the significance thresholds for any criteria air pollutant. Therefore, impacts during construction would be less than significant.

Operational Emissions

Operation of the proposed project would generate VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} emissions from mobile sources (vehicle trips), area sources (consumer products, landscape maintenance equipment), and energy sources. As discussed in Section 2.4.2.2, Operation, pollutant emissions associated with long-term operations were quantified using CalEEMod. Project-generated mobile source emissions were estimated in CalEEMod based on project-specific trip rates. CalEEMod default values were used to estimate emissions from the proposed project area and energy sources.

Table 5 presents the maximum daily area, energy, and mobile source emissions associated with operation (Year 2022) of the proposed project. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix A.

Table 5. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Emission Source	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	Pounds per day					
Area	0.01	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.01	0.04	0.00	0.01	0.00
Total	0.01	0.01	0.04	0.00	0.01	0.00
<i>SDAPCD Threshold</i>	75	250	550	250	100	55
Threshold Exceeded?	No	No	No	No	No	No

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = coarse particulate matter; PM_{2.5} = fine particulate matter; SDAPCD = San Diego Air Pollution Control District; CalEEMod = California Emissions Estimator Model.

See Appendix A for complete results.

Negative values are presented in parentheses.

The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect the CalEEMod “mitigated” output, which accounts for compliance with SDAPCD Rule 67.0.1 (Architectural Coatings).

As shown in Table 5, the combined daily area, energy, and mobile source emissions would not exceed the SDAPCD’s operational thresholds for VOC, NO_x, CO, SO_x, PM₁₀, and PM_{2.5}. The SDAB is a nonattainment area for O₃ under the NAAQS and CAAQS. The poor air quality in the SDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOCs and NO_x for O₃) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project’s contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If the project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, a project would only be considered to have a significant cumulative impact if the project’s contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a “cumulatively considerable contribution” to the cumulative air quality impact).

Additionally, for the SDAB, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure the SDAB continues to make progress toward NAAQS- and CAAQS-attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections.

The SDAB has been designated as a federal nonattainment area for O₃ and a state nonattainment area for O₃, PM₁₀, and PM_{2.5}. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the basin. As discussed previously, the proposed project would not exceed significance thresholds during construction or operation.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As stated previously, the proposed project would be consistent with the existing zoning and land use designation for the site and would not result in significant regional growth that is not accounted for within the RAQS. As a result, the proposed project would not result in a cumulatively considerable contribution to regional O₃ concentrations or other criteria pollutant emissions. Cumulative impacts would be **less than significant** during construction and operation.

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

Carbon Monoxide Hotspots

Mobile-source impacts occur on two basic scales of motion. Regionally, Project-related travel will add to regional trip generation and increase the VMT within the local airshed and the SDAB. Locally, proposed project traffic will be added to the City's roadway system. If such traffic occurs during periods of poor atmospheric ventilation, consists of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the basin is steadily decreasing.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the Project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The potential for CO hotspots was evaluated based on the results of the traffic report. County of San Diego's Guidelines (County of San Diego 2007) CO hotspot screening guidance was followed to determine if the Project would require a site-specific hotspot analysis. The County recommends that a quantitative analysis of CO hotspots be performed for intersections operating at or below a LOS of "E" and have peak-hour trips exceeding 3,000 trips.

The project would not generate trips during construction or operation to exceed the screening thresholds set forth above. Therefore, the project would not cause a CO hotspot and would have a less than significant impact.

Health Impacts of Toxic Air Contaminants

In addition to impacts from criteria pollutants, Project impacts may include emissions of pollutants identified by the state and federal government as TACs or hazardous air pollutants (HAPs). The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks, and the associated health impacts to sensitive receptors. The closest sensitive receptors would be existing residents located directly adjacent to the proposed facility.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SDAPCD recommends an incremental cancer risk threshold of 10 in a million. "Incremental cancer risk" is the likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 70-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Construction of Project components would not require the extensive use of heavy-duty construction equipment, which is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce diesel particulate emissions, and would not involve extensive use of diesel trucks, which are also subject to an ATCM. Construction of the Project would occur over a period of 18 months and would be periodic and short term within each phase. Following completion of construction activities, Project-related TAC emissions would cease. Additionally, there are no diesel powered equipment that would operate during Project operation.

Health Impacts of Criteria Air Pollutants

Construction and operation of the Project would not result in emissions that exceed the SDAPCD's emission thresholds for any criteria air pollutants. Regarding VOCs, some VOCs would be associated with motor vehicles and construction equipment, while others are associated with architectural coatings, the emissions of which would not result in the exceedances of the SDAPCD's thresholds. Generally, the VOCs in architectural coatings are of relatively low toxicity. Additionally, SDAPCD Rule 67.0.1 restricts the VOC content of coatings for both construction and operational applications.

In addition, VOCs and NO_x are precursors to O₃, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by the EPA as an attainment area for the 1-hour O₃ NAAQS standard and 1997 8-hour NAAQS standard). The health effects associated with O₃, as discussed in Section 3.1, are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O₃ concentrations is the result of complex photochemistry. The increases in O₃ concentrations in the SDAB due to O₃ precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O₃ concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O₃ AAQS tend to occur between April and October when solar radiation is highest.

The holistic effect of a single project's emissions of O₃ precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and NO_x emissions associated with Project construction could minimally contribute to regional O₃ concentrations and the associated health impacts. Due to the minimal contribution during construction and operation, as well as the existing good air quality in coastal San Diego areas, health impacts would be considered less than significant.

Similar to O₃, construction of the Project would not exceed thresholds for PM₁₀ or PM_{2.5} and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter. The Project would also not result in substantial DPM emissions during construction and operation and therefore, would not result in significant health effects related to DPM exposure. Due to the minimal contribution of particulate matter during construction and operation, health impacts would be considered less than significant.

Regarding NO₂, according to the construction emissions analysis, construction of the Project would not contribute to exceedances of the NAAQS and CAAQS for NO₂. NO₂ and NO_x health impacts are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, these operations would be relatively short term, and the Project would be required to comply with SDAPCD Rule 55 which limits the amount of fugitive dust generated during construction. Additionally, off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. Construction of the Project would not require any stationary emission sources that would create substantial, localized NO_x impacts. Therefore, health impacts would be considered less than significant.

The VOC and NO_x emissions, as described previously, would minimally contribute to regional O₃ concentrations and the associated health effects. In addition to O₃, NO_x emissions would not contribute to potential exceedances of the NAAQS and CAAQS for NO₂. The existing NO₂ concentrations in the area are well below the NAAQS and CAAQS standards. Thus, it is not expected the Project's operational NO_x

emissions would result in exceedances of the NO₂ standards or contribute to the associated health effects. CO tends to be a localized impact associated with congested intersections. The associated CO “hotspots” were discussed previously as a less-than-significant impact. Thus, the Project’s CO emissions would not contribute to significant health effects associated with this pollutant. PM₁₀ and PM_{2.5} would not contribute to potential exceedances of the NAAQS and CAAQS for particulate matter and would not obstruct the SDAB from coming into attainment for these pollutants and would not contribute to significant health effects associated with particulates. Therefore, health impacts associated with criteria air pollutants would be considered **less than significant**.

d) ***Would the project create objectionable odors affecting a substantial number of people?***

Odor is a form of air pollution that is possibly most obvious to the general public. Odors can present significant problems for the source and its surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern. Construction and operation of the project would not create objectionable odors affecting a substantial number of people.

Construction

Potential sources that may emit odors during construction activities include diesel equipment, gasoline fumes, and asphalt paving material. Odors from these sources would be localized and generally confined to the project site. The project would use typical construction techniques in compliance with SDAPCD rules. Additionally, any odors would be temporary. As such, project construction would not cause an odor nuisance, and odor impacts would be **less than significant**.

Operation

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (CARB 2005). The project would only expand the size of the existing reservoir and thus would not create a new source of odors. Therefore, project operations would result in a **less-than-significant** odor impact.

4 Greenhouse Gas Emissions Assessment

4.1 Greenhouse Gas Emissions Setting

GHGs are gases that absorb infrared radiation in the atmosphere. The greenhouse effect is a natural process that contributes to regulating the Earth’s temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. Principal GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), O₃, and water vapor. If the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere will gradually increase. Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed,

with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (Climate Action Team (CAT) 2010).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of pounds, tons, or metric tons (MT) of CO₂ equivalent (CO₂e).³ The analysis contained herein estimated emissions in terms of MT of CO₂ CO₂e.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective (California Air Pollution Control Officers Association (CAPCOA) 2008). Per the *Final Statement of Reasons for Regulatory Action* for amendments to the CEQA Guidelines, an environmental impact report or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (California Natural Resources Agency (CNRA) 2009).

GHG emissions associated with construction of the project were estimated for the following emission sources: operation of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. No operational GHG emissions were estimated as the project is not anticipated to result in routine operational vehicle trips or associated emissions. As discussed in Section 2.2, Project Operational Assumptions, although the pump station is anticipated to consume electricity resulting in indirect (off-site) GHG emissions, electricity demand for recycled water is currently unknown so the annual electricity usage cannot be determined based on the available information at the time of analysis preparation. In addition, the pump station would not operate 365 days per year, and daily operational hours would fluctuate throughout the year depending on the demand. As such, operational impacts are conservatively estimated.

³ The CO₂e for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of CO₂e (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for CH₄ is 25, which means that emissions of 1 metric ton of CH₄ are equivalent to emissions of 25 metric tons of CO₂, and the GWP for N₂O is 298, based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. Although the IPCC has released subsequent Assessment Reports with updated GWPs, CARB reporting and other statewide documents utilize the GWP in the IPCC Fourth Assessment Report. As such, it is appropriate to use the hardwired GWP values in CalEEMod from the IPCC Fourth Assessment Report.

4.2 Thresholds of Significance

4.2.1 CEQA Guidelines

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should “make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate” GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a “model or methodology” to quantify the emissions or by relying on “qualitative analysis or other performance based standards” (14 CCR 15000 et seq.). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that “[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence” (14 CCR 15064.7(c)). Similarly, the revisions to Appendix G, Environmental Checklist Form, which is often used as a basis for lead agencies’ selection of significance thresholds, do not prescribe specific thresholds. Rather, the CEQA Guidelines establish two new CEQA thresholds related to GHGs, and these will therefore be used to discuss significance of project impacts:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Accordingly, the CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency’s discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (14 CCR 15000 et seq.).

OPR Guidance

The OPR’s Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that “public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact” (OPR 2008). Furthermore, the advisory document indicates that “in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a ‘significant

impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

Cumulative Nature of Climate Change

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the San Diego Air Basin, such as the project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change.

While the project would result in emissions of GHGs during construction and operation, no guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant adverse impact on global climate. However, it is generally believed that an individual project is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory as scientific uncertainty regarding the significance a project's individual and cumulative effects on global climate change remains.

Thus, GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the CNRA, which noted in its Public Notice for the proposed CEQA amendments (pursuant to SB97) that the evidence before it indicates that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009). Similarly, the Final Statement of Reasons for Regulatory Action on the CEQA Amendments confirm that an EIR or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009). Accordingly, further discussion of the project's GHG emissions and their impact on global climate are addressed in Section 4.3.

As the project is located within the geographic bounds of the County, the County's CAP Consistency Checklist is relied upon for determining significance. In regards to evaluating the project's significance with respect to CEQA Guidelines checklist #1 and checklist question #2, the project will be evaluated against the County's CAP, AB 32, and SANDAG's RTP/SCS. A project's consistency with the County's CAP is evaluated in a two-step process. Step 1 in the CAP Checklist assesses a project's consistency with the growth projections and land use assumptions made in the CAP. If a project is consistent with the projections in the CAP, its associated growth in terms of GHG emissions was accounted for in the CAP's projections and would not increase emissions beyond what is anticipated in the CAP or inhibit the County from reaching its reduction targets. If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the Checklist. Step 2 of the Checklist identifies CAP GHG reduction measures that would apply to discretionary projects and establishes clear questions that can be used to assess a project's consistency with CAP measures. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval. The project must provide substantial evidence that demonstrates how the proposed project would implement each applicable Checklist requirement described in Appendix A to the satisfaction of the Director of Planning and Development Services.

4.3 Impact Analysis

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**
- b) **Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

Construction Emissions

Construction of the proposed project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. GHG emissions associated with temporary construction activity were quantified using CalEEMod. A detailed depiction of the construction schedule—including information regarding phasing, equipment utilized during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Section 2.1 of this report.

Table 6 shows the estimated annual GHG construction emissions associated with the proposed project, as well as the amortized construction emissions over a 30-year project life.

Table 6. Estimated Annual Construction GHG Emissions

Year	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons per Year			
2020 ¹	122.27	0.03	0.00	123.12
2021	302.64	0.08	0.00	304.65
2022	0.72	0.00	0.00	0.73
Total				428.50
Amortized Emissions				14.28

Notes: ¹ Emissions include blasting calculated outside of CalEEMod.
 CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent.
 See Appendix A for complete results.

Total construction emissions for the proposed project were estimated to be 429 MT CO₂e. Estimated amortized project-generated construction emissions over 30 years would be approximately 14 MT CO₂e per year. As with project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the proposed project would be short-term in nature, lasting only for the duration of the construction period for each phase, and would not represent a long-term source of GHG emissions.

Operational Emissions

Operation of the proposed project would generate GHG emissions through motor vehicle trips to and from the project site and energy use (generation of electricity consumed by the proposed project). CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 2.2, Operation. The GHG emissions from the existing golf course were also estimated and are presented below.

Table 7 shows the estimated operational (year 2022) project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation.

Table 7. Estimated Annual Operational GHG Emissions

Emission Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
	Metric Tons per Year			
Area	0.00	0.00	0.00	0.00
Energy	64.08	0.00	0.00	64.29
Mobile	1.63	0.00	0.00	1.64
Total				65.93
<i>Amortized Construction Emissions</i>				<i>14.28</i>
Operation + Amortized Construction Total				80.21

Notes: CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent. See Appendix A for detailed results. These emissions reflect California Emissions Estimator Model “mitigated” output and operational year 2022.

As shown in Table 7, estimated annual project-generated GHG emissions in 2022 would be approximately 66 MT CO₂e per year as a result of proposed project operations. Estimated annual project-generated emissions in 2022 from area, energy, and mobile sources and amortized project-generated construction emissions would be approximately 80 MT CO₂e per year.

Consistency with Applicable Plans and Policies

Consistency with SANDAG’s San Diego Forward: The Regional Plan

Regarding consistency with SANDAG’s Regional Plan, the proposed project would include site design elements and project design features developed to support the policy objectives of the RTP and SB 375. SANDAG’s Regional Plan is a regional growth-management strategy that targets per-capita GHG reduction from passenger vehicles and light-duty trucks in the San Diego region. The Regional Plan will integrate land use and transportation strategies to meet GHG emissions reduction targets that are forecasted to achieve the state’s 2035 and 2050 GHG reduction goals. The Regional Plan incorporates local land use projections and circulation networks in city and county general plans. Typically, a project would be consistent with the Regional Plan if it does not exceed the underlying growth assumptions within the Regional Plan. The proposed project is not growth inducing. Therefore, the proposed project would be consistent with the total VMT per capita, growth projections, and GHG reductions assumed within the Regional Plan.

Table 8 illustrates the proposed project’s consistency with all applicable goals and policies of SANDAG’s Regional Plan (SANDAG 2015).

Table 8. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
The Regional Plan – Policy Objectives		
Mobility Choices	Provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to provide safe, secure, healthy, affordable, and convenient travel choices between the places where people live, work, and play.
Mobility Choices	Take advantage of new technologies to make the transportation system more efficient and environmentally friendly.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to take advantage of new technologies to make the transportation system more efficient and environmentally friendly.
Habitat and Open Space Preservation	Focus growth in areas that are already urbanized, allowing the region to set aside and restore more open space in our less developed areas.	<i>Consistent.</i> The proposed project would be developed on the existing developed site of the current E Reservoir thus not impacting open space.
Habitat and Open Space Preservation	Protect and restore our region’s urban canyons, coastlines, beaches, and water resources.	<i>Consistent.</i> The proposed project would be developed on the existing developed site of the current E Reservoir thus not impacting open space.
Regional Economic Prosperity	Invest in transportation projects that provide access for all communities to a variety of jobs with competitive wages.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to invest in transportation projects available to all members of the Community.
Regional Economic Prosperity	Build infrastructure that makes the movement of freight in our community more efficient and environmentally friendly.	<i>Not Applicable.</i> The proposed project does not propose regional freight movement, nor would it impair SANDAG’s ability to preserve and expand options for regional freight movement.
Partnerships/Collaboration	Collaborate with Native American tribes, Mexico, military bases, neighboring counties, infrastructure providers, the private sector, and local communities to design a transportation system that connects to the mega-region and national network, works for everyone, and fosters a high quality of life for all.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico, neighboring counties, and tribal nations.
Partnerships/Collaboration	As we plan for our region, recognize the vital economic, environmental, cultural, and community linkages between the San Diego region and Baja California.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to provide transportation choices to better connect the San Diego region with Mexico.
Healthy and Complete Communities	Create great places for everyone to live, work, and play.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to create great places for everyone to live, work, and play.
Healthy and Complete Communities	Connect communities through a variety of transportation choices that promote	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to

Table 8. San Diego Forward: The Regional Plan Consistency Analysis

Category	Policy Objective or Strategy	Consistency Analysis
	healthy lifestyles, including walking and biking.	connect communities through a variety of transportation choices that promote healthy lifestyles, including walking and biking.
Environmental Stewardship	Make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to make transportation investments that result in cleaner air, environmental protection, conservation, efficiency, and sustainable living.
Environmental Stewardship	Support energy programs that promote sustainability.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to support energy programs that promote sustainability.
Sustainable Communities Strategy – Strategies		
Strategy #1	Focus housing and job growth in urbanized areas where there is existing and planned transportation infrastructure, including transit.	<i>Consistent.</i> The proposed project would be located close to major urban and employment centers.
Strategy #2	Protect the environment and help ensure the success of smart growth land use policies by preserving sensitive habitat, open space, cultural resources, and farmland.	<i>Consistent.</i> The proposed project would be developed on the existing developed site of the current E Reservoir thus not impacting open space.
Strategy #3	Invest in a transportation network that gives people transportation choices and reduces greenhouse gas emissions.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to invest in a transportation network that gives people transportation choices and reduces greenhouse gas emissions.
Strategy #4	Address the housing needs of all economic segments of the population.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to address the housing needs of all economic segments of the population.
Strategy #5	Implement the Regional Plan through incentives and collaboration.	<i>Not Applicable.</i> The proposed project would not impair the ability of SANDAG to implement the Regional Transportation Plan through incentives and collaborations.

Source: SANDAG 2015.

Notes: proposed project = Vista E Reservoir Replacement; SANDAG = San Diego Association of Governments.

As shown in Table 8, the proposed project would be consistent with all applicable Regional Plan policy objectives or strategies. The second of the four objectives of the SANDAG Regional Housing Needs Assessment is to promote infill development and socioeconomic equity, the protection of environmental and agricultural resources, and the encouragement of efficient development patterns. Also, one of the key achievements projected for the Regional Plan is for nearly three-quarters of multi-family housing to be built on redevelopment or infill sites. The proposed project would be consistent with that goal as it would

be developed on an existing developed site. As shown in Table 8, the proposed project would be consistent with policy objectives of SANDAG’s Regional Plan. Impacts would be **less than significant**.

Consistency with CARB’s Scoping Plan

The Scoping Plan, approved by CARB on December 12, 2008, provides a framework for actions to reduce California’s GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Relatedly, in the Final Statement of Reasons for the Amendments to the CEQA Guidelines, the CNRA observed that “[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan” (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., low-carbon fuel standard), among others. The proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions. Table 9 highlights measures that have been developed under the Scoping Plan and the proposed project’s consistency with those measures. The table also includes measures proposed in the 2017 Scoping Plan Update. To the extent that these regulations are applicable to the proposed project, its inhabitants, or uses, the proposed project would comply with all applicable regulations adopted in furtherance of the Scoping Plan.

Table 9. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	The proposed project’s employees would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Low Carbon Fuel Standard	T-2	Motor vehicles driven by the proposed project’s employees would use compliant fuels.
Low Carbon Fuel Standard (18 percent reduction in carbon intensity by 2030)	NA	Motor vehicles driven by the proposed project’s employees would use compliant fuels.

Table 9. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Regional Transportation-Related GHG Targets	T-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Advanced Clean Transit	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Last Mile Delivery	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduction in Vehicle Miles Traveled	NA	The proposed project is located on an infill site, which promotes compact walkable communities with an emphasis on proximity and accessibility.
Vehicle Efficiency Measures <ol style="list-style-type: none"> 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing 	T-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Ship Electrification at Ports (Shore Power)	T-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Goods Movement Efficiency Measures <ol style="list-style-type: none"> 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction 	T-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
California Sustainable Freight Action Plan	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Heavy-Duty Vehicle GHG Emission Reduction <ol style="list-style-type: none"> 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I) 	T-7	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 9. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Medium and Heavy-Duty GHG Phase 2	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
High-Speed Rail	T-9	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed project would not employ solar water heating as part of the design.
Combined Heat and Power	E-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Renewable Portfolios Standard (33 percent by 2020)	E-3	The proposed project would use energy supplied by San Diego Gas and Electric, which is in compliance with the Renewable Portfolio Standard.
Renewable Portfolios Standard (50 percent by 2050)	NA	The proposed project would use energy supplied by San Diego Gas and Electric, which is in compliance with the Renewable Portfolio Standard.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Water Sector		
Water Use Efficiency	W-1	The project would not consume water.
Water Recycling	W-2	Recycled water will not be used on site.
Water System Energy Efficiency	W-3	This is applicable for the transmission and treatment of water, but it is not applicable for the proposed project.

Table 9. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Reuse Urban Runoff	W-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Renewable Energy Production	W-5	Applicable for wastewater treatment systems. Not applicable for the proposed project.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	The proposed project’s buildings would meet green building standards that are in effect at the time of construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduce GHG Emissions by 20 percent in Oil Refinery Sector	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Refinery Flare Recovery Process Improvements	I-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 9. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Mandatory Commercial Recycling	RW-3	During both construction and operation of the proposed project, the proposed project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Anaerobic/Aerobic Digestion	RW-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Extended Producer Responsibility	RW-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Environmentally Preferable Purchasing	RW-7	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Forests Sector		
Sustainable Forest Target	F-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
High Global Warming Potential Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
SF ₆ Limits in Non-Utility and Non-Semiconductor Applications	H-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 9. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Limit High Global Warming Potential Use in Consumer Products	H-4	The proposed project’s employees would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
SF ₆ Leak Reduction Gas Insulated Switchgear	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
40 percent reduction in methane and hydrofluorocarbon emissions	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
50 percent reduction in black carbon emissions	NA	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Source: CARB 2008, 2017.

Notes: GHG = greenhouse gas; proposed project = Vista E Reservoir Replacement; CARB = California Air Resources Board; EV = electric vehicle; SF₆ = sulfur hexafluoride.

Based on the analysis in Table 9, the proposed project would be consistent with the applicable strategies and measures in the Scoping Plan.

In addition to the measures outlined in the Table 9, the Scoping Plan also highlights, in several areas, the goals and importance of infill projects. Specifically, the Scoping Plan calls out an ongoing and proposed measure to streamline CEQA compliance and other barriers to infill development. The plan encourages infill projects and sees them as crucial to achieving the State’s long-term climate goals. The plan encourages accelerating equitable and affordable infill development through enhanced financing and policy incentives and mechanisms.

The state will completed an Integrated Natural and Working Lands Climate Change Action Plan (Action Plan) in 2018, which will consider aggregation of eco-regional plans and efforts to achieve net sequestration goals. The Action Plan will include goals and plans to promote and provide incentives for infill development

through community revitalization and urban greening and promote the adoption of regional transportation and development plans, such as SB 375 SCS and Climate Action Plans, which prioritize infill and compact development and also consider the climate change impacts of land use and management.

The following strategies were outlined to expand infill development within the Scoping Plan:

- Encouraging regional transfer of development rights programs to allow owners of natural and working lands to sell their development rights to developers who can use those rights to add additional density to development projects in preferred infill areas.
- Promoting regional transit-oriented development funds that leverage public resources with private-sector investment capital to provide flexible capital for transit-oriented development projects.
- Rebates for low-VMT/location-efficient housing, similar to programs that use rebates to encourage adoption of energy-efficient appliances, ZEVs, water-efficient yards, or renewable energy installation. For example, the rebate could reimburse residents for a portion of the down payment for purchasing or renting a qualified home in exchange for a minimum term of residence.
- Promotion of cross-subsidizing multi-station financing districts along transit corridors to leverage revenues from development in strong-market station areas in order to seed needed infrastructure and development in weaker-market station areas.
- Abatement of residential property tax increases in exchange for property-based improvements in distressed infill areas.
- Ways to promote reduced parking in areas where viable transportation alternatives are present.
- Additional creative financing mechanisms to enhance the viability of priority infill projects.
- Ways to promote and strengthen urban growth boundaries to promote infill development and conservation of natural and working lands by defining and limiting developable land within a metropolitan area according to projected growth needs.

County of San Diego Climate Action Plan

This consistency analysis is provided for information only as the County's CAP is currently subject to ongoing litigation and thus is not relied upon for determining significance.

Step 1 – Land Use Consistency

The project would be consistent with the existing General Plan for the site. Therefore, the project would answer YES to question 1 of Step 1. Therefore, the project can process to Step 2 of the Checklist.

Step 2 – CAP Consistency Checklist

As a reservoir replacement project, the project is a unique development that is not addressed in the County's CAP Consistency Checklist. The Project does not include a residential component, typical commuting workers (such as commuters travelling to an office land use), or agricultural operations, which are addressed in the CAP Consistency Checklist. Implementation of the Project would not interfere with the County's implementation of the Consistency Checklist action items on projects where they are applicable. Further, the CAP was developed to reduce GHG emissions throughout the County over time;

therefore, any project that is contemplated in the CAP and/or would be consistent with the CAP would directly aid in the County’s reduction of GHG emissions throughout the County’s jurisdictional area.

Each CAP Checklist item and why each specific measure does not apply to the Project is outlined in Table 10.

Table 10. Climate Action Plan Consistency Checklist

CAP Checklist Item	Project Compliance
<p>1a. Reducing Vehicle Miles Traveled: Non-Residential: For non-residential projects with anticipated tenant occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated.</p>	<p>Not Applicable. The Project would have no tenants or employees commuting to the site on a regular basis.</p>
<p>2a. Shared and Reduced Parking: Non-Residential: For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT? Check “N/A” if the project is a residential project or if the project would accommodate 25 or more tenant-occupants.</p>	<p>Not Applicable. Employee trips would only be related to periodic maintenance activities associated with operation of the reservoir and pump station. The project would not have employees commuting to the site on a regular basis.</p>
<p>3a. Electric or Alternately-Fueled Water Heating Systems Residential: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternately-fueled water heating system(s)?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Solar thermal water heater <input type="checkbox"/> Tankless electric water heater <input type="checkbox"/> Storage electric water heaters <input type="checkbox"/> Electric heat pump water heater <input type="checkbox"/> Tankless gas water heater <input type="checkbox"/> Other 	<p>Not Applicable. The Project does not include a residential component.</p>
<p>4a. Water Efficient Appliances and Plumbing Fixtures Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs?</p> <ol style="list-style-type: none"> 1. Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 pounds per square inch (psi). Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi. 2. Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit. 	<p>Not Applicable. The Project does not include a residential component.</p>

Table 10. Climate Action Plan Consistency Checklist

CAP Checklist Item	Project Compliance
<p>5a. Rain Barrel Installations: Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area? Check “N/A” if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted.</p>	<p>Not Applicable. The Project does not include a residential component.</p>
<p>6a. Reduce Outdoor Water: <u>Residential:</u> Will the project submit a Landscape Document Package that is compliant with the County’s Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use? <u>Non-Residential:</u> Will the project submit a Landscape Document Package that is compliant with the County’s Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use?</p>	<p>Not Applicable. The Project would not include additional landscaping.</p>
<p>7a. Agricultural and Farming Equipment: Will the project use the San Diego County Air Pollution Control District’s (SDAPCD’s) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment? Check “N/A” if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.</p>	<p>Not Applicable. The Project would not include gas or diesel-powered farm equipment and would not contain any agricultural or farming operations.</p>
<p>8a. Electric Irrigation Pumps: Will the project use SDAPCD’s farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps? Check “N/A” if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted.</p>	<p>Not Applicable. This is not applicable to the Project, as the Project would not include irrigation pumps and would not contain any agricultural or farming operations.</p>
<p>9a. Tree Planting: Residential: For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed? Check “N/A” if the project is a non-residential project</p>	<p>Not Applicable. The Project does not include a residential component.</p>

Source: County of San Diego 2018

Although the CAP Consistency Checklist individual GHG measures would not apply to the Project, the Project would be consistent with the underlying assumptions of the CAP and would support goals within the CAP. Therefore, the Project would have a **less than significant** impact on GHG emissions.

In summary, the proposed project would be consistent with the applicable measures and policy goals as shown in Tables 8, 9, and 10. Therefore, the proposed project would be consistent with SANDAG’s Regional Plan, CARB’s Scoping Plan, and the County’s CAP. Finally, the SDAPCD has not adopted GHG reduction measures that would apply to the GHG emissions associated with the proposed project. Therefore, this impact would be **less than significant**.

5 References

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Memorandum

Subject: Vista Irrigation District – E Reservoir Project, Air Quality and Greenhouse Gas Emissions Memorandum

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SDAPCD. 2015. SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings. June 24. Accessed May 2017. http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Prohibitions/APCD_R67-0-1.pdf.

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Attachment A

CalEEMod Output Files

Vista E Reservoir Project - San Diego County, Annual

Vista E Reservoir Project
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - Based on engineering team data.

Land Use - Land use surrogate. Construction and operational inputs are from engineering team estimates.

Construction Phase - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Trips and VMT - Based on engineering team data.

On-road Fugitive Dust - CalEEMod defaults.

Demolition - Based on engineering team data.

Grading - Based on engineering team data.

Architectural Coating - CalEEMod defaults.

Vehicle Trips - Based on one maintenance trip per month.

Consumer Products - no consumer products

Area Coating - CalEEMod defaults.

Landscape Equipment - no landscaping

Energy Use - Based on engineering team data.

Water And Wastewater - No water use.

Solid Waste - No solid waste.

Construction Off-road Equipment Mitigation - water twice daily

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	65.00

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tblConstructionPhase	NumDays	1.00	55.00
tblConstructionPhase	NumDays	100.00	261.00
tblConstructionPhase	NumDays	100.00	88.00
tblConstructionPhase	NumDays	100.00	22.00
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	NumDays	5.00	2.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-21
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	1E-21
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	1E-21
tblEnergyUse	LightingElect	2.83	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.21	196.05
tblEnergyUse	T24NG	4.31	0.00
tblGrading	MaterialExported	0.00	1,830.00
tblGrading	MaterialImported	0.00	1,337.00
tblLandscapeEquipment	NumberSummerDays	180	1E-20
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	1.24	0.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	WD_TR	1.50	2.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

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2.0 Emissions Summary

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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					
2020	0.0629	0.7042	0.6754	1.3700e-003	0.0323	0.0307	0.0629	5.4600e-003	0.0282	0.0337	0.0000	122.2733	122.2733	0.0341	0.0000	123.1250
2021	0.1535	1.4149	1.8099	3.3800e-003	0.0557	0.0626	0.1183	0.0125	0.0576	0.0701	0.0000	302.6407	302.6407	0.0802	0.0000	304.6456
2022	3.9000e-004	4.0300e-003	4.8900e-003	1.0000e-005	5.0000e-005	2.0000e-004	2.5000e-004	1.0000e-005	1.8000e-004	2.0000e-004	0.0000	0.7223	0.7223	2.1000e-004	0.0000	0.7276
Maximum	0.1535	1.4149	1.8099	3.3800e-003	0.0557	0.0626	0.1183	0.0125	0.0576	0.0701	0.0000	302.6407	302.6407	0.0802	0.0000	304.6456

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					
2020	0.0629	0.7042	0.6754	1.3700e-003	0.0202	0.0307	0.0509	3.9900e-003	0.0282	0.0322	0.0000	122.2732	122.2732	0.0341	0.0000	123.1248
2021	0.1535	1.4149	1.8099	3.3800e-003	0.0476	0.0626	0.1102	0.0116	0.0576	0.0693	0.0000	302.6404	302.6404	0.0802	0.0000	304.6453
2022	3.9000e-004	4.0300e-003	4.8900e-003	1.0000e-005	5.0000e-005	2.0000e-004	2.5000e-004	1.0000e-005	1.8000e-004	2.0000e-004	0.0000	0.7223	0.7223	2.1000e-004	0.0000	0.7276
Maximum	0.1535	1.4149	1.8099	3.3800e-003	0.0476	0.0626	0.1102	0.0116	0.0576	0.0693	0.0000	302.6404	302.6404	0.0802	0.0000	304.6453

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	22.90	0.00	11.11	13.06	0.00	2.26	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	9-1-2020	11-30-2020	0.4524	0.4524
2	12-1-2020	2-28-2021	0.7748	0.7748
3	3-1-2021	5-31-2021	0.3729	0.3729
4	6-1-2021	8-31-2021	0.3224	0.3224
5	9-1-2021	11-30-2021	0.2976	0.2976
6	12-1-2021	2-28-2022	0.1046	0.1046
		Highest	0.7748	0.7748

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1600e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	64.0709	64.0709	2.5800e-003	5.3000e-004	64.2943
Mobile	4.1000e-004	1.8500e-003	5.0100e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.6346	1.6346	8.0000e-005	0.0000	1.6367
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5700e-003	1.8500e-003	5.0100e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	65.7055	65.7055	2.6600e-003	5.3000e-004	65.9311

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.1600e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	64.0709	64.0709	2.5800e-003	5.3000e-004	64.2943
Mobile	4.1000e-004	1.8500e-003	5.0100e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.6346	1.6346	8.0000e-005	0.0000	1.6367
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5700e-003	1.8500e-003	5.0100e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	65.7055	65.7055	2.6600e-003	5.3000e-004	65.9311

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

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	11/30/2020	5	65	
2	Site Preparation and Grading	Site Preparation	11/15/2020	1/29/2021	5	55	
3	Reservoir Construction	Building Construction	1/1/2021	12/31/2021	5	261	
4	Architectural Coating	Architectural Coating	1/1/2021	1/7/2021	5	5	
5	Piping	Building Construction	3/1/2021	6/30/2021	5	88	
6	Retaining Wall Construction	Building Construction	7/1/2021	7/30/2021	5	22	
7	Pump Station Construction	Building Construction	8/1/2021	12/31/2021	5	110	
8	Paving	Paving	2/1/2022	2/2/2022	5	2	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation and Grading	Crawler Tractors	1	8.00	212	0.43
Site Preparation and Grading	Excavators	2	8.00	158	0.38
Site Preparation and Grading	Graders	0	8.00	187	0.41

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Site Preparation and Grading	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation and Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Reservoir Construction	Cranes	0	4.00	231	0.29
Reservoir Construction	Excavators	2	8.00	158	0.38
Reservoir Construction	Forklifts	0	6.00	89	0.20
Reservoir Construction	Skid Steer Loaders	1	8.00	65	0.37
Reservoir Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48
Pump Station Construction	Cranes	0	4.00	231	0.29
Pump Station Construction	Forklifts	0	6.00	89	0.20
Pump Station Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Piping	Cranes	0	4.00	231	0.29
Piping	Excavators	1	8.00	158	0.38
Piping	Forklifts	0	6.00	89	0.20
Piping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Retaining Wall Construction	Cranes	0	4.00	231	0.29
Retaining Wall Construction	Forklifts	0	6.00	89	0.20
Retaining Wall Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation and Grading	Bore/Drill Rigs	1	8.00	221	0.50

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	12.00	4.00	64.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	0	16.00	0.00	476.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Reservoir Construction	0	20.00	0.00	800.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	4.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Construction	0	8.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Piping	0	8.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Retaining Wall Construction	0	8.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.0400e-003	0.0000	7.0400e-003	1.0700e-003	0.0000	1.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.2427	0.3132	4.8000e-004		0.0123	0.0123		0.0114	0.0114	0.0000	42.0429	42.0429	0.0136	0.0000	42.3829
Total	0.0236	0.2427	0.3132	4.8000e-004	7.0400e-003	0.0123	0.0194	1.0700e-003	0.0114	0.0124	0.0000	42.0429	42.0429	0.0136	0.0000	42.3829

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3.2 Demolition - 2020

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	2.6000e-004	9.1000e-003	2.0800e-003	2.0000e-005	5.5000e-004	3.0000e-005	5.8000e-004	1.5000e-004	3.0000e-005	1.8000e-004	0.0000	2.4680	2.4680	2.2000e-004	0.0000	2.4736
Vendor	5.0000e-004	0.0148	3.9400e-003	4.0000e-005	8.6000e-004	7.0000e-005	9.4000e-004	2.5000e-004	7.0000e-005	3.2000e-004	0.0000	3.4302	3.4302	2.6000e-004	0.0000	3.4368
Worker	1.4400e-003	1.0600e-003	0.0104	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.8270	2.8270	8.0000e-005	0.0000	2.8291
Total	2.2000e-003	0.0250	0.0165	9.0000e-005	4.5400e-003	1.2000e-004	4.6700e-003	1.2300e-003	1.2000e-004	1.3500e-003	0.0000	8.7252	8.7252	5.6000e-004	0.0000	8.7395

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					3.1700e-003	0.0000	3.1700e-003	4.8000e-004	0.0000	4.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.2427	0.3132	4.8000e-004		0.0123	0.0123		0.0114	0.0114	0.0000	42.0429	42.0429	0.0136	0.0000	42.3828
Total	0.0236	0.2427	0.3132	4.8000e-004	3.1700e-003	0.0123	0.0155	4.8000e-004	0.0114	0.0118	0.0000	42.0429	42.0429	0.0136	0.0000	42.3828

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3.2 Demolition - 2020

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	2.6000e-004	9.1000e-003	2.0800e-003	2.0000e-005	5.5000e-004	3.0000e-005	5.8000e-004	1.5000e-004	3.0000e-005	1.8000e-004	0.0000	2.4680	2.4680	2.2000e-004	0.0000	2.4736
Vendor	5.0000e-004	0.0148	3.9400e-003	4.0000e-005	8.6000e-004	7.0000e-005	9.4000e-004	2.5000e-004	7.0000e-005	3.2000e-004	0.0000	3.4302	3.4302	2.6000e-004	0.0000	3.4368
Worker	1.4400e-003	1.0600e-003	0.0104	3.0000e-005	3.1300e-003	2.0000e-005	3.1500e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.8270	2.8270	8.0000e-005	0.0000	2.8291
Total	2.2000e-003	0.0250	0.0165	9.0000e-005	4.5400e-003	1.2000e-004	4.6700e-003	1.2300e-003	1.2000e-004	1.3500e-003	0.0000	8.7252	8.7252	5.6000e-004	0.0000	8.7395

3.3 Site Preparation and Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0148	0.0000	0.0148	1.6100e-003	0.0000	1.6100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0349	0.3939	0.3289	6.6000e-004		0.0180	0.0180		0.0166	0.0166	0.0000	58.1863	58.1863	0.0188	0.0000	58.6568
Total	0.0349	0.3939	0.3289	6.6000e-004	0.0148	0.0180	0.0328	1.6100e-003	0.0166	0.0182	0.0000	58.1863	58.1863	0.0188	0.0000	58.6568

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3.3 Site Preparation and Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1800e-003	0.0419	9.5900e-003	1.1000e-004	3.6900e-003	1.3000e-004	3.8200e-003	9.8000e-004	1.3000e-004	1.1000e-003	0.0000	11.3472	11.3472	1.0200e-003	0.0000	11.3727
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	7.2800e-003	2.0000e-005	2.1800e-003	2.0000e-005	2.2000e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.9717	1.9717	6.0000e-005	0.0000	1.9731
Total	2.1800e-003	0.0426	0.0169	1.3000e-004	5.8700e-003	1.5000e-004	6.0200e-003	1.5600e-003	1.4000e-004	1.6900e-003	0.0000	13.3188	13.3188	1.0800e-003	0.0000	13.3459

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					6.6600e-003	0.0000	6.6600e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0349	0.3939	0.3289	6.6000e-004		0.0180	0.0180		0.0166	0.0166	0.0000	58.1862	58.1862	0.0188	0.0000	58.6567
Total	0.0349	0.3939	0.3289	6.6000e-004	6.6600e-003	0.0180	0.0247	7.2000e-004	0.0166	0.0173	0.0000	58.1862	58.1862	0.0188	0.0000	58.6567

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3.3 Site Preparation and Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1800e-003	0.0419	9.5900e-003	1.1000e-004	3.6900e-003	1.3000e-004	3.8200e-003	9.8000e-004	1.3000e-004	1.1000e-003	0.0000	11.3472	11.3472	1.0200e-003	0.0000	11.3727
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-003	7.4000e-004	7.2800e-003	2.0000e-005	2.1800e-003	2.0000e-005	2.2000e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.9717	1.9717	6.0000e-005	0.0000	1.9731
Total	2.1800e-003	0.0426	0.0169	1.3000e-004	5.8700e-003	1.5000e-004	6.0200e-003	1.5600e-003	1.4000e-004	1.6900e-003	0.0000	13.3188	13.3188	1.0800e-003	0.0000	13.3459

3.3 Site Preparation and Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0148	0.0000	0.0148	1.6100e-003	0.0000	1.6100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2204	0.2018	4.1000e-004		9.8600e-003	9.8600e-003		9.0700e-003	9.0700e-003	0.0000	35.9653	35.9653	0.0116	0.0000	36.2561
Total	0.0200	0.2204	0.2018	4.1000e-004	0.0148	9.8600e-003	0.0247	1.6100e-003	9.0700e-003	0.0107	0.0000	35.9653	35.9653	0.0116	0.0000	36.2561

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3.3 Site Preparation and Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-004	0.0237	5.8500e-003	7.0000e-005	3.4500e-003	7.0000e-005	3.5200e-003	8.9000e-004	7.0000e-005	9.6000e-004	0.0000	6.9211	6.9211	6.2000e-004	0.0000	6.9367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.2000e-004	4.2000e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3600e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1769	1.1769	3.0000e-005	0.0000	1.1777
Total	1.2600e-003	0.0242	0.0101	8.0000e-005	4.8000e-003	8.0000e-005	4.8800e-003	1.2500e-003	8.0000e-005	1.3300e-003	0.0000	8.0979	8.0979	6.5000e-004	0.0000	8.1144

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					6.6600e-003	0.0000	6.6600e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0200	0.2204	0.2018	4.1000e-004		9.8600e-003	9.8600e-003		9.0700e-003	9.0700e-003	0.0000	35.9652	35.9652	0.0116	0.0000	36.2560
Total	0.0200	0.2204	0.2018	4.1000e-004	6.6600e-003	9.8600e-003	0.0165	7.2000e-004	9.0700e-003	9.7900e-003	0.0000	35.9652	35.9652	0.0116	0.0000	36.2560

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3.3 Site Preparation and Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-004	0.0237	5.8500e-003	7.0000e-005	3.4500e-003	7.0000e-005	3.5200e-003	8.9000e-004	7.0000e-005	9.6000e-004	0.0000	6.9211	6.9211	6.2000e-004	0.0000	6.9367
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.2000e-004	4.2000e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3600e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1769	1.1769	3.0000e-005	0.0000	1.1777
Total	1.2600e-003	0.0242	0.0101	8.0000e-005	4.8000e-003	8.0000e-005	4.8800e-003	1.2500e-003	8.0000e-005	1.3300e-003	0.0000	8.0979	8.0979	6.5000e-004	0.0000	8.1144

3.4 Reservoir Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0941	0.9404	1.3303	2.0200e-003		0.0472	0.0472		0.0434	0.0434	0.0000	177.7569	177.7569	0.0575	0.0000	179.1942
Total	0.0941	0.9404	1.3303	2.0200e-003		0.0472	0.0472		0.0434	0.0434	0.0000	177.7569	177.7569	0.0575	0.0000	179.1942

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3.4 Reservoir Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-003	0.1045	0.0258	3.1000e-004	6.8400e-003	3.2000e-004	7.1600e-003	1.8800e-003	3.0000e-004	2.1800e-003	0.0000	30.4649	30.4649	2.7500e-003	0.0000	30.5336
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0700e-003	6.4700e-003	0.0652	2.0000e-004	0.0209	1.5000e-004	0.0211	5.5600e-003	1.4000e-004	5.7000e-003	0.0000	18.2836	18.2836	5.2000e-004	0.0000	18.2967
Total	0.0121	0.1109	0.0910	5.1000e-004	0.0278	4.7000e-004	0.0282	7.4400e-003	4.4000e-004	7.8800e-003	0.0000	48.7485	48.7485	3.2700e-003	0.0000	48.8303

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	0.0941	0.9404	1.3303	2.0200e-003		0.0472	0.0472		0.0434	0.0434	0.0000	177.7567	177.7567	0.0575	0.0000	179.1940
Total	0.0941	0.9404	1.3303	2.0200e-003		0.0472	0.0472		0.0434	0.0434	0.0000	177.7567	177.7567	0.0575	0.0000	179.1940

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3.4 Reservoir Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-003	0.1045	0.0258	3.1000e-004	6.8400e-003	3.2000e-004	7.1600e-003	1.8800e-003	3.0000e-004	2.1800e-003	0.0000	30.4649	30.4649	2.7500e-003	0.0000	30.5336
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0700e-003	6.4700e-003	0.0652	2.0000e-004	0.0209	1.5000e-004	0.0211	5.5600e-003	1.4000e-004	5.7000e-003	0.0000	18.2836	18.2836	5.2000e-004	0.0000	18.2967
Total	0.0121	0.1109	0.0910	5.1000e-004	0.0278	4.7000e-004	0.0282	7.4400e-003	4.4000e-004	7.8800e-003	0.0000	48.7485	48.7485	3.2700e-003	0.0000	48.8303

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-004	5.0900e-003	6.0600e-003	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	0.8511	0.8511	6.0000e-005	0.0000	0.8525
Total	0.0123	5.0900e-003	6.0600e-003	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	0.8511	0.8511	6.0000e-005	0.0000	0.8525

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3.5 Architectural Coating - 2021

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	7.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1401	0.1401	0.0000	0.0000	0.1402
Total	7.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1401	0.1401	0.0000	0.0000	0.1402

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.3000e-004	5.0900e-003	6.0600e-003	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	0.8511	0.8511	6.0000e-005	0.0000	0.8525
Total	0.0123	5.0900e-003	6.0600e-003	1.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	0.8511	0.8511	6.0000e-005	0.0000	0.8525

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3.5 Architectural Coating - 2021

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	7.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1401	0.1401	0.0000	0.0000	0.1402
Total	7.0000e-005	5.0000e-005	5.0000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1401	0.1401	0.0000	0.0000	0.1402

3.6 Piping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0101	0.0948	0.1440	2.3000e-004		4.6000e-003	4.6000e-003		4.2300e-003	4.2300e-003	0.0000	19.9657	19.9657	6.4600e-003	0.0000	20.1272
Total	0.0101	0.0948	0.1440	2.3000e-004		4.6000e-003	4.6000e-003		4.2300e-003	4.2300e-003	0.0000	19.9657	19.9657	6.4600e-003	0.0000	20.1272

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3.6 Piping - 2021

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	8.0000e-005	2.6100e-003	6.4000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7616	0.7616	7.0000e-005	0.0000	0.7633
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	8.7000e-004	8.7900e-003	3.0000e-005	2.8200e-003	2.0000e-005	2.8400e-003	7.5000e-004	2.0000e-005	7.7000e-004	0.0000	2.4658	2.4658	7.0000e-005	0.0000	2.4676
Total	1.3000e-003	3.4800e-003	9.4300e-003	4.0000e-005	2.9900e-003	3.0000e-005	3.0200e-003	8.0000e-004	3.0000e-005	8.2000e-004	0.0000	3.2275	3.2275	1.4000e-004	0.0000	3.2310

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	0.0101	0.0948	0.1440	2.3000e-004		4.6000e-003	4.6000e-003		4.2300e-003	4.2300e-003	0.0000	19.9657	19.9657	6.4600e-003	0.0000	20.1271
Total	0.0101	0.0948	0.1440	2.3000e-004		4.6000e-003	4.6000e-003		4.2300e-003	4.2300e-003	0.0000	19.9657	19.9657	6.4600e-003	0.0000	20.1271

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3.8 Pump Station Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0131	3.2200e-003	4.0000e-005	8.6000e-004	4.0000e-005	9.0000e-004	2.3000e-004	4.0000e-005	2.7000e-004	0.0000	3.8081	3.8081	3.4000e-004	0.0000	3.8167
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5300e-003	1.0900e-003	0.0110	3.0000e-005	3.5300e-003	2.0000e-005	3.5500e-003	9.4000e-004	2.0000e-005	9.6000e-004	0.0000	3.0823	3.0823	9.0000e-005	0.0000	3.0845
Total	1.9100e-003	0.0142	0.0142	7.0000e-005	4.3900e-003	6.0000e-005	4.4500e-003	1.1700e-003	6.0000e-005	1.2300e-003	0.0000	6.8904	6.8904	4.3000e-004	0.0000	6.9012

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7000e-004	3.8200e-003	4.7400e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.6435	0.6435	2.1000e-004	0.0000	0.6487
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.7000e-004	3.8200e-003	4.7400e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.6435	0.6435	2.1000e-004	0.0000	0.6487

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3.9 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	1.9000e-004	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0518	0.0518	0.0000	0.0000	0.0519
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0270	0.0270	0.0000	0.0000	0.0270
Total	2.0000e-005	2.0000e-004	1.4000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0789

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7000e-004	3.8200e-003	4.7400e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.6435	0.6435	2.1000e-004	0.0000	0.6487
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.7000e-004	3.8200e-003	4.7400e-003	1.0000e-005		2.0000e-004	2.0000e-004		1.8000e-004	1.8000e-004	0.0000	0.6435	0.6435	2.1000e-004	0.0000	0.6487

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3.9 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	1.9000e-004	5.0000e-005	0.0000	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0518	0.0518	0.0000	0.0000	0.0519
Worker	1.0000e-005	1.0000e-005	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0270	0.0270	0.0000	0.0000	0.0270
Total	2.0000e-005	2.0000e-004	1.4000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0788	0.0788	0.0000	0.0000	0.0789

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive 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	4.1000e-004	1.8500e-003	5.0100e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.6346	1.6346	8.0000e-005	0.0000	1.6367
Unmitigated	4.1000e-004	1.8500e-003	5.0100e-003	2.0000e-005	1.5700e-003	1.0000e-005	1.5900e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.6346	1.6346	8.0000e-005	0.0000	1.6367

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2.00	0.00	0.00	4,171	4,171
Total	2.00	0.00	0.00	4,171	4,171

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

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5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	196050	64.0709	2.5800e-003	5.3000e-004	64.2943
Total		64.0709	2.5800e-003	5.3000e-004	64.2943

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					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	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	1.1600e-003	0.0000	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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					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	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	1.1600e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail

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7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

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7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

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8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

Vista E Reservoir Project - San Diego County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Vista E Reservoir Project - San Diego County, Summer

Vista E Reservoir Project
San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vista E Reservoir Project - San Diego County, Summer

Project Characteristics - Based on engineering team data.

Land Use - Land use surrogate. Construction and operational inputs are from engineering team estimates.

Construction Phase - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Trips and VMT - Based on engineering team data.

On-road Fugitive Dust - CalEEMod defaults.

Demolition - Based on engineering team data.

Grading - Based on engineering team data.

Architectural Coating - CalEEMod defaults.

Vehicle Trips - Based on one maintenance trip per month.

Consumer Products - no consumer products

Area Coating - CalEEMod defaults.

Landscape Equipment - no landscaping

Energy Use - Based on engineering team data.

Water And Wastewater - No water use.

Solid Waste - No solid waste.

Construction Off-road Equipment Mitigation - water twice daily

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	65.00

Vista E Reservoir Project - San Diego County, Summer

tblConstructionPhase	NumDays	1.00	55.00
tblConstructionPhase	NumDays	100.00	261.00
tblConstructionPhase	NumDays	100.00	88.00
tblConstructionPhase	NumDays	100.00	22.00
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	NumDays	5.00	2.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-21
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	1E-21
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	1E-21
tblEnergyUse	LightingElect	2.83	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.21	196.05
tblEnergyUse	T24NG	4.31	0.00
tblGrading	MaterialExported	0.00	1,830.00
tblGrading	MaterialImported	0.00	1,337.00
tblLandscapeEquipment	NumberSummerDays	180	1E-20
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

Vista E Reservoir Project - San Diego County, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	1.24	0.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	WD_TR	1.50	2.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

Vista E Reservoir Project - San Diego County, Summer

2.0 Emissions Summary

Vista E Reservoir Project - San Diego County, Summer

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					
2020	2.9756	33.8488	30.5000	0.0647	1.2512	1.4532	2.7044	0.2236	1.3373	1.5609	0.0000	6,377.9006	6,377.9006	1.7699	0.0000	6,422.1470
2021	7.7920	33.3335	33.7425	0.0711	1.2898	1.4374	2.7273	0.2560	1.3328	1.5888	0.0000	7,001.9176	7,001.9176	1.8303	0.0000	7,047.6746
2022	0.3919	4.0255	4.8921	8.1800e-003	0.0464	0.1998	0.2462	0.0126	0.1838	0.1964	0.0000	798.4669	798.4669	0.2343	0.0000	804.3247
Maximum	7.7920	33.8488	33.7425	0.0711	1.2898	1.4532	2.7273	0.2560	1.3373	1.5888	0.0000	7,001.9176	7,001.9176	1.8303	0.0000	7,047.6746

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					
2020	2.9756	33.8488	30.5000	0.0647	0.8360	1.4532	2.2891	0.1734	1.3373	1.5107	0.0000	6,377.9006	6,377.9006	1.7699	0.0000	6,422.1470
2021	7.7920	33.3335	33.7425	0.0711	0.9938	1.4374	2.4312	0.2238	1.3328	1.5566	0.0000	7,001.9176	7,001.9176	1.8303	0.0000	7,047.6746
2022	0.3919	4.0255	4.8921	8.1800e-003	0.0464	0.1998	0.2462	0.0126	0.1838	0.1964	0.0000	798.4669	798.4669	0.2343	0.0000	804.3247
Maximum	7.7920	33.8488	33.7425	0.0711	0.9938	1.4532	2.4312	0.2238	1.3373	1.5566	0.0000	7,001.9176	7,001.9176	1.8303	0.0000	7,047.6746

Vista E Reservoir Project - San Diego 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	27.49	0.00	12.53	16.74	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.00

Vista E Reservoir Project - San Diego County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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
Mobile	3.3400e-003	0.0138	0.0398	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4100e-003		14.4748	14.4748	7.2000e-004		14.4929
Total	9.7000e-003	0.0138	0.0399	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4100e-003		14.4750	14.4750	7.2000e-004	0.0000	14.4931

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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
Mobile	3.3400e-003	0.0138	0.0398	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4100e-003		14.4748	14.4748	7.2000e-004		14.4929
Total	9.7000e-003	0.0138	0.0399	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4100e-003		14.4750	14.4750	7.2000e-004	0.0000	14.4931

Vista E Reservoir Project - San Diego 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	11/30/2020	5	65	
2	Site Preparation and Grading	Site Preparation	11/15/2020	1/29/2021	5	55	
3	Reservoir Construction	Building Construction	1/1/2021	12/31/2021	5	261	
4	Architectural Coating	Architectural Coating	1/1/2021	1/7/2021	5	5	
5	Piping	Building Construction	3/1/2021	6/30/2021	5	88	
6	Retaining Wall Construction	Building Construction	7/1/2021	7/30/2021	5	22	
7	Pump Station Construction	Building Construction	8/1/2021	12/31/2021	5	110	
8	Paving	Paving	2/1/2022	2/2/2022	5	2	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38

Vista E Reservoir Project - San Diego County, Summer

Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation and Grading	Crawler Tractors	1	8.00	212	0.43
Site Preparation and Grading	Excavators	2	8.00	158	0.38
Site Preparation and Grading	Graders	0	8.00	187	0.41
Site Preparation and Grading	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation and Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Reservoir Construction	Cranes	0	4.00	231	0.29
Reservoir Construction	Excavators	2	8.00	158	0.38
Reservoir Construction	Forklifts	0	6.00	89	0.20
Reservoir Construction	Skid Steer Loaders	1	8.00	65	0.37
Reservoir Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48
Pump Station Construction	Cranes	0	4.00	231	0.29
Pump Station Construction	Forklifts	0	6.00	89	0.20
Pump Station Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Piping	Cranes	0	4.00	231	0.29
Piping	Excavators	1	8.00	158	0.38
Piping	Forklifts	0	6.00	89	0.20
Piping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Retaining Wall Construction	Cranes	0	4.00	231	0.29
Retaining Wall Construction	Forklifts	0	6.00	89	0.20

Vista E Reservoir Project - San Diego County, Summer

Retaining Wall Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation and Grading	Bore/Drill Rigs	1	8.00	221	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	12.00	4.00	64.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	0	16.00	0.00	476.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Reservoir Construction	0	20.00	0.00	800.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	4.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Construction	0	8.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Piping	0	8.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Retaining Wall Construction	0	8.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Vista E Reservoir Project - San Diego County, Summer

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2167	0.0000	0.2167	0.0328	0.0000	0.0328			0.0000			0.0000
Off-Road	0.7270	7.4665	9.6354	0.0147		0.3796	0.3796		0.3492	0.3492		1,425.9820	1,425.9820	0.4612		1,437.5117
Total	0.7270	7.4665	9.6354	0.0147	0.2167	0.3796	0.5962	0.0328	0.3492	0.3820		1,425.9820	1,425.9820	0.4612		1,437.5117

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	7.7800e-003	0.2747	0.0624	7.7000e-004	0.0172	8.8000e-004	0.0181	4.7200e-003	8.4000e-004	5.5500e-003		84.3152	84.3152	7.4300e-003		84.5009
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9100e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0440	0.0297	0.3402	1.0100e-003	0.0986	6.9000e-004	0.0993	0.0262	6.4000e-004	0.0268		101.1297	101.1297	3.0200e-003		101.2051
Total	0.0668	0.7554	0.5174	2.8800e-003	0.1429	3.7800e-003	0.1466	0.0387	3.5900e-003	0.0422		303.0609	303.0609	0.0191		303.5390

Vista E Reservoir Project - San Diego County, Summer

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0975	0.0000	0.0975	0.0148	0.0000	0.0148			0.0000			0.0000
Off-Road	0.7270	7.4665	9.6354	0.0147		0.3796	0.3796		0.3492	0.3492	0.0000	1,425.9820	1,425.9820	0.4612		1,437.5117
Total	0.7270	7.4665	9.6354	0.0147	0.0975	0.3796	0.4771	0.0148	0.3492	0.3640	0.0000	1,425.9820	1,425.9820	0.4612		1,437.5117

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	7.7800e-003	0.2747	0.0624	7.7000e-004	0.0172	8.8000e-004	0.0181	4.7200e-003	8.4000e-004	5.5500e-003		84.3152	84.3152	7.4300e-003		84.5009
Vendor	0.0150	0.4510	0.1149	1.1000e-003	0.0271	2.2100e-003	0.0293	7.8000e-003	2.1100e-003	9.9100e-003		117.6160	117.6160	8.6800e-003		117.8330
Worker	0.0440	0.0297	0.3402	1.0100e-003	0.0986	6.9000e-004	0.0993	0.0262	6.4000e-004	0.0268		101.1297	101.1297	3.0200e-003		101.2051
Total	0.0668	0.7554	0.5174	2.8800e-003	0.1429	3.7800e-003	0.1466	0.0387	3.5900e-003	0.0422		303.0609	303.0609	0.0191		303.5390

Vista E Reservoir Project - San Diego County, Summer

3.3 Site Preparation and Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5383	0.0000	0.5383	0.0585	0.0000	0.0585			0.0000			0.0000
Off-Road	2.0548	23.1730	19.3455	0.0390		1.0612	1.0612		0.9763	0.9763		3,772.9064	3,772.9064	1.2202		3,803.4122
Total	2.0548	23.1730	19.3455	0.0390	0.5383	1.0612	1.5996	0.0585	0.9763	1.0348		3,772.9064	3,772.9064	1.2202		3,803.4122

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	0.0684	2.4143	0.5482	6.7800e-003	0.2219	7.7000e-003	0.2296	0.0588	7.3700e-003	0.0662		741.1118	741.1118	0.0653		742.7438
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	0.0587	0.0396	0.4535	1.3500e-003	0.1314	9.2000e-004	0.1324	0.0349	8.5000e-004	0.0357		134.8395	134.8395	4.0300e-003		134.9402
Total	0.1271	2.4539	1.0017	8.1300e-003	0.3533	8.6200e-003	0.3620	0.0937	8.2200e-003	0.1019		875.9513	875.9513	0.0693		877.6840

Vista E Reservoir Project - San Diego County, Summer

3.3 Site Preparation and Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2423	0.0000	0.2423	0.0263	0.0000	0.0263			0.0000			0.0000
Off-Road	2.0548	23.1730	19.3455	0.0390		1.0612	1.0612		0.9763	0.9763	0.0000	3,772.9064	3,772.9064	1.2202		3,803.4122
Total	2.0548	23.1730	19.3455	0.0390	0.2423	1.0612	1.3035	0.0263	0.9763	1.0026	0.0000	3,772.9064	3,772.9064	1.2202		3,803.4122

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	0.0684	2.4143	0.5482	6.7800e-003	0.2219	7.7000e-003	0.2296	0.0588	7.3700e-003	0.0662		741.1118	741.1118	0.0653		742.7438
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	0.0587	0.0396	0.4535	1.3500e-003	0.1314	9.2000e-004	0.1324	0.0349	8.5000e-004	0.0357		134.8395	134.8395	4.0300e-003		134.9402
Total	0.1271	2.4539	1.0017	8.1300e-003	0.3533	8.6200e-003	0.3620	0.0937	8.2200e-003	0.1019		875.9513	875.9513	0.0693		877.6840

Vista E Reservoir Project - San Diego County, Summer

3.3 Site Preparation and Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5383	0.0000	0.5383	0.0585	0.0000	0.0585			0.0000			0.0000
Off-Road	1.9048	20.9886	19.2233	0.0390		0.9388	0.9388		0.8637	0.8637		3,775.7070	3,775.7070	1.2211		3,806.2355
Total	1.9048	20.9886	19.2233	0.0390	0.5383	0.9388	1.4772	0.0585	0.8637	0.9222		3,775.7070	3,775.7070	1.2211		3,806.2355

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	0.0642	2.2184	0.5427	6.6700e-003	0.3365	6.7700e-003	0.3433	0.0869	6.4800e-003	0.0934		731.8979	731.8979	0.0647		733.5142
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	0.0553	0.0360	0.4244	1.3100e-003	0.1314	9.1000e-004	0.1323	0.0349	8.4000e-004	0.0357		130.3105	130.3105	3.7200e-003		130.4035
Total	0.1196	2.2544	0.9671	7.9800e-003	0.4679	7.6800e-003	0.4756	0.1218	7.3200e-003	0.1291		862.2084	862.2084	0.0684		863.9177

Vista E Reservoir Project - San Diego County, Summer

3.3 Site Preparation and Grading - 2021

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					0.2423	0.0000	0.2423	0.0263	0.0000	0.0263			0.0000			0.0000
Off-Road	1.9048	20.9886	19.2233	0.0390		0.9388	0.9388		0.8637	0.8637	0.0000	3,775.7070	3,775.7070	1.2211		3,806.2355
Total	1.9048	20.9886	19.2233	0.0390	0.2423	0.9388	1.1811	0.0263	0.8637	0.8900	0.0000	3,775.7070	3,775.7070	1.2211		3,806.2355

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	0.0642	2.2184	0.5427	6.6700e-003	0.3365	6.7700e-003	0.3433	0.0869	6.4800e-003	0.0934		731.8979	731.8979	0.0647		733.5142
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	0.0553	0.0360	0.4244	1.3100e-003	0.1314	9.1000e-004	0.1323	0.0349	8.4000e-004	0.0357		130.3105	130.3105	3.7200e-003		130.4035
Total	0.1196	2.2544	0.9671	7.9800e-003	0.4679	7.6800e-003	0.4756	0.1218	7.3200e-003	0.1291		862.2084	862.2084	0.0684		863.9177

Vista E Reservoir Project - San Diego County, Summer

3.4 Reservoir Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326		1,501.4824	1,501.4824	0.4856		1,513.6226
Total	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326		1,501.4824	1,501.4824	0.4856		1,513.6226

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	0.0228	0.7857	0.1922	2.3600e-003	0.0536	2.4000e-003	0.0560	0.0147	2.2900e-003	0.0170		259.2124	259.2124	0.0229		259.7848
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	0.0692	0.0449	0.5305	1.6300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		162.8882	162.8882	4.6500e-003		163.0044
Total	0.0919	0.8306	0.7227	3.9900e-003	0.2179	3.5300e-003	0.2214	0.0583	3.3400e-003	0.0616		422.1005	422.1005	0.0276		422.7892

Vista E Reservoir Project - San Diego County, Summer

3.4 Reservoir Construction - 2021

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	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326	0.0000	1,501.4824	1,501.4824	0.4856		1,513.6226
Total	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326	0.0000	1,501.4824	1,501.4824	0.4856		1,513.6226

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	0.0228	0.7857	0.1922	2.3600e-003	0.0536	2.4000e-003	0.0560	0.0147	2.2900e-003	0.0170		259.2124	259.2124	0.0229		259.7848
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	0.0692	0.0449	0.5305	1.6300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		162.8882	162.8882	4.6500e-003		163.0044
Total	0.0919	0.8306	0.7227	3.9900e-003	0.2179	3.5300e-003	0.2214	0.0583	3.3400e-003	0.0616		422.1005	422.1005	0.0276		422.7892

Vista E Reservoir Project - San Diego County, Summer

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6350					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255		375.2641	375.2641	0.0258		375.9079
Total	4.9269	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255		375.2641	375.2641	0.0258		375.9079

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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018

Vista E Reservoir Project - San Diego County, Summer

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6350					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255	0.0000	375.2641	375.2641	0.0258		375.9079
Total	4.9269	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255	0.0000	375.2641	375.2641	0.0258		375.9079

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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018

Vista E Reservoir Project - San Diego County, Summer

3.6 Piping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961		500.1920	500.1920	0.1618		504.2363
Total	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961		500.1920	500.1920	0.1618		504.2363

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.6900e-003	0.0583	0.0143	1.8000e-004	3.9700e-003	1.8000e-004	4.1500e-003	1.0900e-003	1.7000e-004	1.2600e-003		19.2200	19.2200	1.7000e-003		19.2625
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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0294	0.0762	0.2264	8.3000e-004	0.0697	6.3000e-004	0.0703	0.0185	5.9000e-004	0.0191		84.3753	84.3753	3.5600e-003		84.4642

Vista E Reservoir Project - San Diego County, Summer

3.6 Piping - 2021

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	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961	0.0000	500.1920	500.1920	0.1618		504.2363
Total	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961	0.0000	500.1920	500.1920	0.1618		504.2363

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.6900e-003	0.0583	0.0143	1.8000e-004	3.9700e-003	1.8000e-004	4.1500e-003	1.0900e-003	1.7000e-004	1.2600e-003		19.2200	19.2200	1.7000e-003		19.2625
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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0294	0.0762	0.2264	8.3000e-004	0.0697	6.3000e-004	0.0703	0.0185	5.9000e-004	0.0191		84.3753	84.3753	3.5600e-003		84.4642

Vista E Reservoir Project - San Diego County, Summer

3.7 Retaining Wall Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.3700e-003	0.1165	0.0285	3.5000e-004	7.9400e-003	3.6000e-004	8.3000e-003	2.1800e-003	3.4000e-004	2.5200e-003		38.4400	38.4400	3.4000e-003		38.5249
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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0310	0.1345	0.2407	1.0000e-003	0.0737	8.1000e-004	0.0745	0.0196	7.6000e-004	0.0204		103.5953	103.5953	5.2600e-003		103.7267

Vista E Reservoir Project - San Diego County, Summer

3.7 Retaining Wall Construction - 2021

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	0.0000	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 Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.3700e-003	0.1165	0.0285	3.5000e-004	7.9400e-003	3.6000e-004	8.3000e-003	2.1800e-003	3.4000e-004	2.5200e-003		38.4400	38.4400	3.4000e-003		38.5249
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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0310	0.1345	0.2407	1.0000e-003	0.0737	8.1000e-004	0.0745	0.0196	7.6000e-004	0.0204		103.5953	103.5953	5.2600e-003		103.7267

Vista E Reservoir Project - San Diego County, Summer

3.8 Pump Station Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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

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	6.7500e-003	0.2330	0.0570	7.0000e-004	0.0159	7.1000e-004	0.0166	4.3500e-003	6.8000e-004	5.0300e-003		76.8800	76.8800	6.7900e-003		77.0498
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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0344	0.2510	0.2692	1.3500e-003	0.0816	1.1600e-003	0.0828	0.0218	1.1000e-003	0.0229		142.0353	142.0353	8.6500e-003		142.2516

Vista E Reservoir Project - San Diego County, Summer

3.8 Pump Station Construction - 2021

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	0.0000	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 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	6.7500e-003	0.2330	0.0570	7.0000e-004	0.0159	7.1000e-004	0.0166	4.3500e-003	6.8000e-004	5.0300e-003		76.8800	76.8800	6.7900e-003		77.0498
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	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0344	0.2510	0.2692	1.3500e-003	0.0816	1.1600e-003	0.0828	0.0218	1.1000e-003	0.0229		142.0353	142.0353	8.6500e-003		142.2516

Vista E Reservoir Project - San Diego County, Summer

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833		709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833		709.3618	709.3618	0.2294		715.0973

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.6200e-003	0.1925	0.0492	5.4000e-004	0.0135	3.7000e-004	0.0139	3.9000e-003	3.5000e-004	4.2500e-003		57.7228	57.7228	4.0400e-003		57.8237
Worker	0.0131	8.2000e-003	0.0987	3.1000e-004	0.0329	2.2000e-004	0.0331	8.7200e-003	2.0000e-004	8.9200e-003		31.3824	31.3824	8.5000e-004		31.4037
Total	0.0187	0.2007	0.1478	8.5000e-004	0.0464	5.9000e-004	0.0470	0.0126	5.5000e-004	0.0132		89.1052	89.1052	4.8900e-003		89.2274

Vista E Reservoir Project - San Diego County, Summer

3.9 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833	0.0000	709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833	0.0000	709.3618	709.3618	0.2294		715.0973

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.6200e-003	0.1925	0.0492	5.4000e-004	0.0135	3.7000e-004	0.0139	3.9000e-003	3.5000e-004	4.2500e-003		57.7228	57.7228	4.0400e-003		57.8237
Worker	0.0131	8.2000e-003	0.0987	3.1000e-004	0.0329	2.2000e-004	0.0331	8.7200e-003	2.0000e-004	8.9200e-003		31.3824	31.3824	8.5000e-004		31.4037
Total	0.0187	0.2007	0.1478	8.5000e-004	0.0464	5.9000e-004	0.0470	0.0126	5.5000e-004	0.0132		89.1052	89.1052	4.8900e-003		89.2274

4.0 Operational Detail - Mobile

Vista E Reservoir Project - San Diego County, Summer

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	3.3400e-003	0.0138	0.0398	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4100e-003		14.4748	14.4748	7.2000e-004		14.4929
Unmitigated	3.3400e-003	0.0138	0.0398	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4100e-003		14.4748	14.4748	7.2000e-004		14.4929

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2.00	0.00	0.00	4,171	4,171
Total	2.00	0.00	0.00	4,171	4,171

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

Vista E Reservoir Project - San Diego County, Summer

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

Vista E Reservoir Project - San Diego County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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					
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

Vista E Reservoir Project - San Diego 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	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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	lb/day										lb/day					
Architectural Coating	6.3500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Vista E Reservoir Project - San Diego County, Summer

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	6.3500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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

Vista E Reservoir Project - San Diego County, Summer

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

Vista E Reservoir Project - San Diego County, Winter

Vista E Reservoir Project
San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Vista E Reservoir Project - San Diego County, Winter

Project Characteristics - Based on engineering team data.

Land Use - Land use surrogate. Construction and operational inputs are from engineering team estimates.

Construction Phase - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Off-road Equipment - Based on engineering team data.

Trips and VMT - Based on engineering team data.

On-road Fugitive Dust - CalEEMod defaults.

Demolition - Based on engineering team data.

Grading - Based on engineering team data.

Architectural Coating - CalEEMod defaults.

Vehicle Trips - Based on one maintenance trip per month.

Consumer Products - no consumer products

Area Coating - CalEEMod defaults.

Landscape Equipment - no landscaping

Energy Use - Based on engineering team data.

Water And Wastewater - No water use.

Solid Waste - No solid waste.

Construction Off-road Equipment Mitigation - water twice daily

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	65.00

Vista E Reservoir Project - San Diego County, Winter

tblConstructionPhase	NumDays	1.00	55.00
tblConstructionPhase	NumDays	100.00	261.00
tblConstructionPhase	NumDays	100.00	88.00
tblConstructionPhase	NumDays	100.00	22.00
tblConstructionPhase	NumDays	100.00	110.00
tblConstructionPhase	NumDays	5.00	2.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-21
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	1E-21
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	1E-21
tblEnergyUse	LightingElect	2.83	0.00
tblEnergyUse	NT24E	4.27	0.00
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.21	196.05
tblEnergyUse	T24NG	4.31	0.00
tblGrading	MaterialExported	0.00	1,830.00
tblGrading	MaterialImported	0.00	1,337.00
tblLandscapeEquipment	NumberSummerDays	180	1E-20
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00

Vista E Reservoir Project - San Diego County, Winter

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	PhaseName		Site Preparation and Grading
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	1.24	0.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	WD_TR	1.50	2.00
tblWater	IndoorWaterUseRate	231,250.00	0.00

Vista E Reservoir Project - San Diego County, Winter

2.0 Emissions Summary

Vista E Reservoir Project - San Diego County, Winter

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					
2020	2.9921	33.8828	30.5076	0.0644	1.2512	1.4534	2.7046	0.2236	1.3375	1.5611	0.0000	6,346.2561	6,346.2561	1.7725	0.0000	6,390.5689
2021	7.8148	33.3716	33.7188	0.0707	1.2898	1.4376	2.7275	0.2560	1.3330	1.5890	0.0000	6,962.8409	6,962.8409	1.8326	0.0000	7,008.6557
2022	0.3940	4.0258	4.8915	8.1500e-003	0.0464	0.1998	0.2462	0.0126	0.1838	0.1964	0.0000	795.0433	795.0433	0.2345	0.0000	800.9060
Maximum	7.8148	33.8828	33.7188	0.0707	1.2898	1.4534	2.7275	0.2560	1.3375	1.5890	0.0000	6,962.8409	6,962.8409	1.8326	0.0000	7,008.6557

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					
2020	2.9921	33.8828	30.5076	0.0644	0.8360	1.4534	2.2893	0.1734	1.3375	1.5109	0.0000	6,346.2561	6,346.2561	1.7725	0.0000	6,390.5689
2021	7.8148	33.3716	33.7188	0.0707	0.9938	1.4376	2.4314	0.2238	1.3330	1.5568	0.0000	6,962.8409	6,962.8409	1.8326	0.0000	7,008.6557
2022	0.3940	4.0258	4.8915	8.1500e-003	0.0464	0.1998	0.2462	0.0126	0.1838	0.1964	0.0000	795.0433	795.0433	0.2345	0.0000	800.9060
Maximum	7.8148	33.8828	33.7188	0.0707	0.9938	1.4534	2.4314	0.2238	1.3375	1.5568	0.0000	6,962.8409	6,962.8409	1.8326	0.0000	7,008.6557

Vista E Reservoir Project - San Diego 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	27.49	0.00	12.53	16.74	0.00	2.46	0.00	0.00	0.00	0.00	0.00	0.00

Vista E Reservoir Project - San Diego County, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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
Mobile	3.2400e-003	0.0142	0.0389	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4200e-003		13.7325	13.7325	7.2000e-004		13.7507
Total	9.6000e-003	0.0142	0.0390	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4200e-003		13.7328	13.7328	7.2000e-004	0.0000	13.7509

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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
Mobile	3.2400e-003	0.0142	0.0389	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4200e-003		13.7325	13.7325	7.2000e-004		13.7507
Total	9.6000e-003	0.0142	0.0390	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4200e-003		13.7328	13.7328	7.2000e-004	0.0000	13.7509

Vista E Reservoir Project - San Diego 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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	11/30/2020	5	65	
2	Site Preparation and Grading	Site Preparation	11/15/2020	1/29/2021	5	55	
3	Reservoir Construction	Building Construction	1/1/2021	12/31/2021	5	261	
4	Architectural Coating	Architectural Coating	1/1/2021	1/7/2021	5	5	
5	Piping	Building Construction	3/1/2021	6/30/2021	5	88	
6	Retaining Wall Construction	Building Construction	7/1/2021	7/30/2021	5	22	
7	Pump Station Construction	Building Construction	8/1/2021	12/31/2021	5	110	
8	Paving	Paving	2/1/2022	2/2/2022	5	2	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38

Vista E Reservoir Project - San Diego County, Winter

Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation and Grading	Crawler Tractors	1	8.00	212	0.43
Site Preparation and Grading	Excavators	2	8.00	158	0.38
Site Preparation and Grading	Graders	0	8.00	187	0.41
Site Preparation and Grading	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation and Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Reservoir Construction	Cranes	0	4.00	231	0.29
Reservoir Construction	Excavators	2	8.00	158	0.38
Reservoir Construction	Forklifts	0	6.00	89	0.20
Reservoir Construction	Skid Steer Loaders	1	8.00	65	0.37
Reservoir Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48
Pump Station Construction	Cranes	0	4.00	231	0.29
Pump Station Construction	Forklifts	0	6.00	89	0.20
Pump Station Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Piping	Cranes	0	4.00	231	0.29
Piping	Excavators	1	8.00	158	0.38
Piping	Forklifts	0	6.00	89	0.20
Piping	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Retaining Wall Construction	Cranes	0	4.00	231	0.29
Retaining Wall Construction	Forklifts	0	6.00	89	0.20

Vista E Reservoir Project - San Diego County, Winter

Retaining Wall Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation and Grading	Bore/Drill Rigs	1	8.00	221	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	12.00	4.00	64.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation and Grading	0	16.00	0.00	476.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Reservoir Construction	0	20.00	0.00	800.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	4.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station Construction	0	8.00	0.00	100.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Piping	0	8.00	0.00	20.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Retaining Wall Construction	0	8.00	0.00	10.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Vista E Reservoir Project - San Diego County, Winter

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2167	0.0000	0.2167	0.0328	0.0000	0.0328			0.0000			0.0000
Off-Road	0.7270	7.4665	9.6354	0.0147		0.3796	0.3796		0.3492	0.3492		1,425.9820	1,425.9820	0.4612		1,437.5117
Total	0.7270	7.4665	9.6354	0.0147	0.2167	0.3796	0.5962	0.0328	0.3492	0.3820		1,425.9820	1,425.9820	0.4612		1,437.5117

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	8.0000e-003	0.2773	0.0665	7.6000e-004	0.0172	8.9000e-004	0.0181	4.7200e-003	8.6000e-004	5.5700e-003		82.8687	82.8687	7.6800e-003		83.0608
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0271	2.2500e-003	0.0293	7.8000e-003	2.1500e-003	9.9500e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0499	0.0333	0.3207	9.5000e-004	0.0986	6.9000e-004	0.0993	0.0262	6.4000e-004	0.0268		94.9358	94.9358	2.8600e-003		95.0073
Total	0.0735	0.7613	0.5147	2.7800e-003	0.1429	3.8300e-003	0.1467	0.0387	3.6500e-003	0.0423		292.3894	292.3894	0.0198		292.8834

Vista E Reservoir Project - San Diego County, Winter

3.2 Demolition - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0975	0.0000	0.0975	0.0148	0.0000	0.0148			0.0000			0.0000
Off-Road	0.7270	7.4665	9.6354	0.0147		0.3796	0.3796		0.3492	0.3492	0.0000	1,425.9820	1,425.9820	0.4612		1,437.5117
Total	0.7270	7.4665	9.6354	0.0147	0.0975	0.3796	0.4771	0.0148	0.3492	0.3640	0.0000	1,425.9820	1,425.9820	0.4612		1,437.5117

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	8.0000e-003	0.2773	0.0665	7.6000e-004	0.0172	8.9000e-004	0.0181	4.7200e-003	8.6000e-004	5.5700e-003		82.8687	82.8687	7.6800e-003		83.0608
Vendor	0.0157	0.4507	0.1275	1.0700e-003	0.0271	2.2500e-003	0.0293	7.8000e-003	2.1500e-003	9.9500e-003		114.5849	114.5849	9.2200e-003		114.8154
Worker	0.0499	0.0333	0.3207	9.5000e-004	0.0986	6.9000e-004	0.0993	0.0262	6.4000e-004	0.0268		94.9358	94.9358	2.8600e-003		95.0073
Total	0.0735	0.7613	0.5147	2.7800e-003	0.1429	3.8300e-003	0.1467	0.0387	3.6500e-003	0.0423		292.3894	292.3894	0.0198		292.8834

Vista E Reservoir Project - San Diego County, Winter

3.3 Site Preparation and Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5383	0.0000	0.5383	0.0585	0.0000	0.0585			0.0000			0.0000
Off-Road	2.0548	23.1730	19.3455	0.0390		1.0612	1.0612		0.9763	0.9763		3,772.9064	3,772.9064	1.2202		3,803.4122
Total	2.0548	23.1730	19.3455	0.0390	0.5383	1.0612	1.5996	0.0585	0.9763	1.0348		3,772.9064	3,772.9064	1.2202		3,803.4122

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	0.0703	2.4375	0.5844	6.6600e-003	0.2219	7.8600e-003	0.2298	0.0588	7.5200e-003	0.0663		728.3972	728.3972	0.0675		730.0851
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	0.0665	0.0444	0.4276	1.2700e-003	0.1314	9.2000e-004	0.1324	0.0349	8.5000e-004	0.0357		126.5811	126.5811	3.8100e-003		126.6764
Total	0.1368	2.4820	1.0120	7.9300e-003	0.3533	8.7800e-003	0.3621	0.0937	8.3700e-003	0.1020		854.9783	854.9783	0.0713		856.7615

Vista E Reservoir Project - San Diego County, Winter

3.3 Site Preparation and Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2423	0.0000	0.2423	0.0263	0.0000	0.0263			0.0000			0.0000
Off-Road	2.0548	23.1730	19.3455	0.0390		1.0612	1.0612		0.9763	0.9763	0.0000	3,772.9064	3,772.9064	1.2202		3,803.4122
Total	2.0548	23.1730	19.3455	0.0390	0.2423	1.0612	1.3035	0.0263	0.9763	1.0026	0.0000	3,772.9064	3,772.9064	1.2202		3,803.4122

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	0.0703	2.4375	0.5844	6.6600e-003	0.2219	7.8600e-003	0.2298	0.0588	7.5200e-003	0.0663		728.3972	728.3972	0.0675		730.0851
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	0.0665	0.0444	0.4276	1.2700e-003	0.1314	9.2000e-004	0.1324	0.0349	8.5000e-004	0.0357		126.5811	126.5811	3.8100e-003		126.6764
Total	0.1368	2.4820	1.0120	7.9300e-003	0.3533	8.7800e-003	0.3621	0.0937	8.3700e-003	0.1020		854.9783	854.9783	0.0713		856.7615

Vista E Reservoir Project - San Diego County, Winter

3.3 Site Preparation and Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5383	0.0000	0.5383	0.0585	0.0000	0.0585			0.0000			0.0000
Off-Road	1.9048	20.9886	19.2233	0.0390		0.9388	0.9388		0.8637	0.8637		3,775.7070	3,775.7070	1.2211		3,806.2355
Total	1.9048	20.9886	19.2233	0.0390	0.5383	0.9388	1.4772	0.0585	0.8637	0.9222		3,775.7070	3,775.7070	1.2211		3,806.2355

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	0.0660	2.2376	0.5769	6.5600e-003	0.3365	6.9100e-003	0.3434	0.0869	6.6100e-003	0.0935		719.2526	719.2526	0.0668		720.9221
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	0.0628	0.0404	0.3989	1.2300e-003	0.1314	9.1000e-004	0.1323	0.0349	8.4000e-004	0.0357		122.3276	122.3276	3.5100e-003		122.4155
Total	0.1288	2.2779	0.9758	7.7900e-003	0.4679	7.8200e-003	0.4757	0.1218	7.4500e-003	0.1292		841.5803	841.5803	0.0703		843.3375

Vista E Reservoir Project - San Diego County, Winter

3.3 Site Preparation and Grading - 2021

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					0.2423	0.0000	0.2423	0.0263	0.0000	0.0263			0.0000			0.0000
Off-Road	1.9048	20.9886	19.2233	0.0390		0.9388	0.9388		0.8637	0.8637	0.0000	3,775.7070	3,775.7070	1.2211		3,806.2355
Total	1.9048	20.9886	19.2233	0.0390	0.2423	0.9388	1.1811	0.0263	0.8637	0.8900	0.0000	3,775.7070	3,775.7070	1.2211		3,806.2355

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	0.0660	2.2376	0.5769	6.5600e-003	0.3365	6.9100e-003	0.3434	0.0869	6.6100e-003	0.0935		719.2526	719.2526	0.0668		720.9221
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	0.0628	0.0404	0.3989	1.2300e-003	0.1314	9.1000e-004	0.1323	0.0349	8.4000e-004	0.0357		122.3276	122.3276	3.5100e-003		122.4155
Total	0.1288	2.2779	0.9758	7.7900e-003	0.4679	7.8200e-003	0.4757	0.1218	7.4500e-003	0.1292		841.5803	841.5803	0.0703		843.3375

Vista E Reservoir Project - San Diego County, Winter

3.4 Reservoir Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326		1,501.4824	1,501.4824	0.4856		1,513.6226
Total	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326		1,501.4824	1,501.4824	0.4856		1,513.6226

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	0.0234	0.7925	0.2043	2.3200e-003	0.0536	2.4500e-003	0.0560	0.0147	2.3400e-003	0.0170		254.7339	254.7339	0.0237		255.3251
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	0.0785	0.0505	0.4987	1.5300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		152.9095	152.9095	4.3900e-003		153.0193
Total	0.1018	0.8429	0.7030	3.8500e-003	0.2179	3.5800e-003	0.2214	0.0583	3.3900e-003	0.0616		407.6434	407.6434	0.0280		408.3445

Vista E Reservoir Project - San Diego County, Winter

3.4 Reservoir Construction - 2021

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	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326	0.0000	1,501.4824	1,501.4824	0.4856		1,513.6226
Total	0.7211	7.2061	10.1938	0.0155		0.3615	0.3615		0.3326	0.3326	0.0000	1,501.4824	1,501.4824	0.4856		1,513.6226

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	0.0234	0.7925	0.2043	2.3200e-003	0.0536	2.4500e-003	0.0560	0.0147	2.3400e-003	0.0170		254.7339	254.7339	0.0237		255.3251
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	0.0785	0.0505	0.4987	1.5300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		152.9095	152.9095	4.3900e-003		153.0193
Total	0.1018	0.8429	0.7030	3.8500e-003	0.2179	3.5800e-003	0.2214	0.0583	3.3900e-003	0.0616		407.6434	407.6434	0.0280		408.3445

Vista E Reservoir Project - San Diego County, Winter

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6350					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255		375.2641	375.2641	0.0258		375.9079
Total	4.9269	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255		375.2641	375.2641	0.0258		375.9079

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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077

Vista E Reservoir Project - San Diego County, Winter

3.5 Architectural Coating - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	4.6350					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255	0.0000	375.2641	375.2641	0.0258		375.9079
Total	4.9269	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255	0.0000	375.2641	375.2641	0.0258		375.9079

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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077

Vista E Reservoir Project - San Diego County, Winter

3.6 Piping - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961		500.1920	500.1920	0.1618		504.2363
Total	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961		500.1920	500.1920	0.1618		504.2363

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7300e-003	0.0588	0.0152	1.7000e-004	3.9700e-003	1.8000e-004	4.1500e-003	1.0900e-003	1.7000e-004	1.2600e-003		18.8879	18.8879	1.7500e-003		18.9318
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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0331	0.0789	0.2146	7.8000e-004	0.0697	6.3000e-004	0.0703	0.0185	5.9000e-004	0.0191		80.0518	80.0518	3.5100e-003		80.1395

Vista E Reservoir Project - San Diego County, Winter

3.6 Piping - 2021

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	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961	0.0000	500.1920	500.1920	0.1618		504.2363
Total	0.2292	2.1534	3.2718	5.1700e-003		0.1044	0.1044		0.0961	0.0961	0.0000	500.1920	500.1920	0.1618		504.2363

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7300e-003	0.0588	0.0152	1.7000e-004	3.9700e-003	1.8000e-004	4.1500e-003	1.0900e-003	1.7000e-004	1.2600e-003		18.8879	18.8879	1.7500e-003		18.9318
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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0331	0.0789	0.2146	7.8000e-004	0.0697	6.3000e-004	0.0703	0.0185	5.9000e-004	0.0191		80.0518	80.0518	3.5100e-003		80.1395

Vista E Reservoir Project - San Diego County, Winter

3.7 Retaining Wall Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4700e-003	0.1175	0.0303	3.4000e-004	7.9400e-003	3.6000e-004	8.3100e-003	2.1800e-003	3.5000e-004	2.5200e-003		37.7759	37.7759	3.5100e-003		37.8636
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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0349	0.1377	0.2298	9.5000e-004	0.0737	8.1000e-004	0.0745	0.0196	7.7000e-004	0.0204		98.9397	98.9397	5.2700e-003		99.0713

Vista E Reservoir Project - San Diego County, Winter

3.7 Retaining Wall Construction - 2021

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	0.0000	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 Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.4700e-003	0.1175	0.0303	3.4000e-004	7.9400e-003	3.6000e-004	8.3100e-003	2.1800e-003	3.5000e-004	2.5200e-003		37.7759	37.7759	3.5100e-003		37.8636
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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0349	0.1377	0.2298	9.5000e-004	0.0737	8.1000e-004	0.0745	0.0196	7.7000e-004	0.0204		98.9397	98.9397	5.2700e-003		99.0713

Vista E Reservoir Project - San Diego County, Winter

3.8 Pump Station Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	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

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	6.9300e-003	0.2350	0.0606	6.9000e-004	0.0159	7.3000e-004	0.0166	4.3500e-003	6.9000e-004	5.0500e-003		75.5518	75.5518	7.0100e-003		75.7271
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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0383	0.2552	0.2601	1.3000e-003	0.0816	1.1800e-003	0.0828	0.0218	1.1100e-003	0.0229		136.7156	136.7156	8.7700e-003		136.9349

Vista E Reservoir Project - San Diego County, Winter

3.8 Pump Station Construction - 2021

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	0.0000	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 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	6.9300e-003	0.2350	0.0606	6.9000e-004	0.0159	7.3000e-004	0.0166	4.3500e-003	6.9000e-004	5.0500e-003		75.5518	75.5518	7.0100e-003		75.7271
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	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0383	0.2552	0.2601	1.3000e-003	0.0816	1.1800e-003	0.0828	0.0218	1.1100e-003	0.0229		136.7156	136.7156	8.7700e-003		136.9349

Vista E Reservoir Project - San Diego County, Winter

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833		709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833		709.3618	709.3618	0.2294		715.0973

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9300e-003	0.1918	0.0547	5.2000e-004	0.0135	3.8000e-004	0.0139	3.9000e-003	3.7000e-004	4.2600e-003		56.2205	56.2205	4.2800e-003		56.3276
Worker	0.0149	9.2000e-003	0.0925	3.0000e-004	0.0329	2.2000e-004	0.0331	8.7200e-003	2.0000e-004	8.9200e-003		29.4610	29.4610	8.0000e-004		29.4811
Total	0.0208	0.2010	0.1473	8.2000e-004	0.0464	6.0000e-004	0.0470	0.0126	5.7000e-004	0.0132		85.6815	85.6815	5.0800e-003		85.8087

Vista E Reservoir Project - San Diego County, Winter

3.9 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833	0.0000	709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833	0.0000	709.3618	709.3618	0.2294		715.0973

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9300e-003	0.1918	0.0547	5.2000e-004	0.0135	3.8000e-004	0.0139	3.9000e-003	3.7000e-004	4.2600e-003		56.2205	56.2205	4.2800e-003		56.3276
Worker	0.0149	9.2000e-003	0.0925	3.0000e-004	0.0329	2.2000e-004	0.0331	8.7200e-003	2.0000e-004	8.9200e-003		29.4610	29.4610	8.0000e-004		29.4811
Total	0.0208	0.2010	0.1473	8.2000e-004	0.0464	6.0000e-004	0.0470	0.0126	5.7000e-004	0.0132		85.6815	85.6815	5.0800e-003		85.8087

4.0 Operational Detail - Mobile

Vista E Reservoir Project - San Diego County, Winter

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	3.2400e-003	0.0142	0.0389	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4200e-003		13.7325	13.7325	7.2000e-004		13.7507
Unmitigated	3.2400e-003	0.0142	0.0389	1.4000e-004	0.0124	1.1000e-004	0.0125	3.3100e-003	1.1000e-004	3.4200e-003		13.7325	13.7325	7.2000e-004		13.7507

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2.00	0.00	0.00	4,171	4,171
Total	2.00	0.00	0.00	4,171	4,171

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

Vista E Reservoir Project - San Diego County, Winter

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

Vista E Reservoir Project - San Diego County, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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					
General Heavy Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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

Vista E Reservoir Project - San Diego 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	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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	lb/day										lb/day					
Architectural Coating	6.3500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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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	6.3500e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	6.3600e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Vista E Reservoir Project - San Diego County, Winter

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

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

Equipment Type	Number
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11.0 Vegetation

**Vista Irrigation District – E Reservoir Project
Blasting Emissions**

Anticipated blasting activities is assumed to include the following:

Assumptions:

- 50 cubic yard/blast
- 1 blast/day
- 0.004 ton explosives/per 50 CY blast (maximum blast)
- 11.24 feet average depth

Project Phase Estimates:

- 2,000 total cubic yard/phase
- 40.0 total blasts
- 0.16 total ton explosives/phase
- 0.00 maximum ton explosives/day
- 178 total square feet blasted/phase
- 13 maximum square feet blasted/day

Emissions Calculations:

Pollutant	Source	Emission Factor	Units	Maximum Daily (lbs/day)	Annual (lbs/year)	Annual (ton/year)
ROG	1	N/A	lb/ton	—	—	—
NOx	1	17	lb/ton	0.07	2.72	0.00
CO	1	67	lb/ton	0.27	10.72	0.01
SOx	1	2	lb/ton	0.01	0.32	0.00
PM ₁₀	2	—	lb/blast	0.00	0.02	0.00
PM _{2.5}	2	—	lb/blast	0.00	0.00	0.00

Source/Reference:

1. AP-42, Section 13.3, Table 13.3-1 for ANFO.
2. AP-42, Section 11.9, Table 11.9-1.
 $PM_{10} = 0.52 \times 0.000014 \times (A)^{1.5}$, where A is the horizontal area blasted.
 $PM_{2.5} = 0.03 \times 0.000014 \times (A)^{1.5}$, where A is the horizontal area blasted.

Notes:

lb = pounds

GHG Emissions Calculation Comparison:

Pollutant	Source	Emission Factor	Units	Maximum Daily (lbs/day)	Annual (lbs/year)	Annual (MT/year)
CO ₂	1	10.35	kg/gallon	--	--	0.03
CO ₂	2	0.1670	MT/MT	--	--	0.02

Source/Reference:

1. The Climate Registry. 2018 Emission Factors. Table 12.1 U.S. Default Factors for Calculating CO2 Emissions from Combustion of Fossil Fuel and Biomass.
2. Australian Government - Department of Heritage Australian Greenhouse Office. *AGO Factors and Methods Workbook*. December 2006

Conversion Values:

7.41 lbs/gallon fuel oil

6.00% composition of fuel oil #2 in ANFO

10.35 kg CO₂/gallon fuel oil #2

2000 lbs/ton

1000 kg/MT

1.102 tons/MT

Notes:

MT = metric tons

kg = kilograms

lb = pounds