

# Appendix A

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Air Quality Technical Report and CalEEMod Results



# Palm Desert Groundwater Replenishment Project

## Air Quality Technical Report

*prepared by*

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# 1 Project Description

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This report is an analysis of the potential air quality and greenhouse gas (GHG) emissions impacts of the proposed Palm Desert Groundwater Replenishment Project located in the City of Palm Desert. The report has been prepared by Rincon Consultants, Inc. under contract to Coachella Valley Water District (CVWD) for use in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the proposed project's Air Quality GHG emissions and the associated impacts to regional climate change.

CVWD is a public agency that provides water service, wastewater management, water resources management, flood control and recycled water service to domestic, agricultural, and industrial users in the desert, Coachella Valley area. In 2003, CVWD certified the Program EIR for the Coachella Valley Water Management Plan and State Water Project Entitlement Transfer (hereafter referred to as "the Water Management Plan"). The Water Management Plan evaluated a suite of water management elements to eliminate overdraft of the Coachella Valley groundwater basin. The Water Management Plan elements included water conservation, additional water supplies, source substitution, and groundwater recharge. The proposed project is designed for consistency with CVWD's goal to eliminate groundwater overdraft in line with the Water Management Plan; as such, objectives of the proposed project include the following:

- Provide an estimated 25,000 acre-feet per year (AFY) of direct groundwater replenishment using imported Colorado River water in the Palm Desert area;
- Enable CVWD to maximize use of its annual allocation of Colorado River water;
- Meet the goals of the Coachella Valley Water Management Plan (CVWD 2002 and 2012) to assure adequate quantities of safe, high-quality water at the lowest cost to CVWD water users;
- Improve local groundwater supply and quality conditions through replenishment activities;
- Upgrade capacity of the existing MVP Pump Station utilizing two empty bays to install 800-HP pumps;
- Implement a new 200-HP pump station at WRP10 to pump Colorado River water from the Backfeed Reservoir to the replenishment ponds;
- Expand existing Secondary Effluent Storage ponds at WRP10; and
- Optimize the availability of recycled water produced at WRP10.

The Colorado River water that CVWD would use for this project (and under existing operations to deliver water within the CVWD jurisdiction) is part of the allocation that CVWD receives per the Quantification Settlement Agreement (QSA) for Colorado River water, which defines the rights of water districts in Southern California to portions of Colorado River water. This water originates at Imperial Dam and is delivered to CVWD via the All American and the Coachella Canal. The QSA quantifies CVWD's full Colorado River entitlement at 330,000 AFY (SDCWA 2017). CVWD's "full" allocation would not be used for the proposed project, as most of the allocated water is currently delivered to agricultural users in the lower valley. However, in order for CVWD to utilize all of its

allocation, the proposed project would direct the currently unused portion of its allocation for groundwater replenishment purposes. In the absence of the proposed project, CVWD would not be able to fully implement the goals of the Water Management Plan (mentioned above), the primary goal of which is to eliminate the overdraft of local groundwater resources.

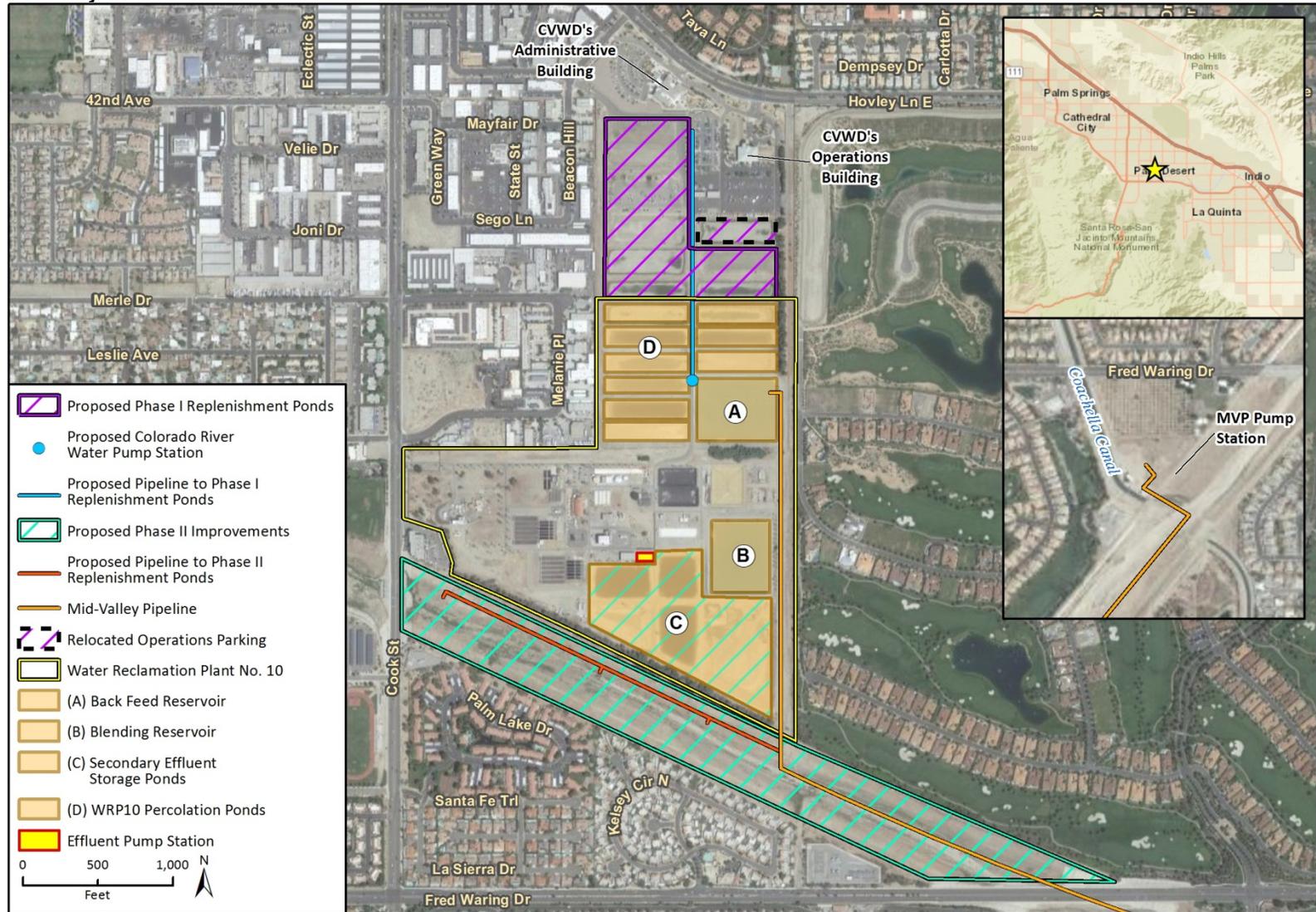
The proposed project would be implemented in two phases.

## 1.1 Phase I

Phase I of the proposed project would occur on and adjacent to the north of CVWD's Water Reclamation Plant No. 10 (WRP10), located at 43-000 Cook Street in Palm Desert, California. Primary components of Phase I of the project are summarized below.

- Re-purpose existing ponds located adjacent to the north of CVWD's WRP10 site, to function as groundwater replenishment basins. Colorado River water would be delivered to the revised ponds for groundwater replenishment.
- Extend existing water transmission pipeline within the WRP10 site to provide transmission of imported Colorado River water from the existing pipeline to the re-purposed ponds located adjacent to the north of CVWD's WRP10 site.
- Install a Colorado River water pump station adjacent to the Back Feed Reservoir, including a minimum of two pumps with a pumping horsepower (HP) in the range of 100 to 200 HP, and a sound wall surrounding the new pump station.
- Relocate the existing WRP10 operations parking area by repurposing the northeastern-most percolation basin currently located within the WRP10 site, in order to concentrate the parking and storage of operations and maintenance vehicles to one area. The parking area will ultimately be relocated north and adjacent to WRP10.
- Install two new 800-HP pumps and a hydropneumatic tank within the existing MVP Pump Station, which is an existing structure and entirely enclosed; the existing MVP Pump Station was designed to accommodate these additional pumps.

Figure 1 Project Site



Imagery provided by Google and its licensors © 2017.  
 Additional data provided by Coachella Valley Water District, 2017.

Fig2 Project Site and Vicinity

## 1.2 Phase II

Phase II of the proposed project would occur on the WRP10 site and within the existing Whitewater River Stormwater Channel, located adjacent to the south-southwest of CVWD's WRP10 site. Primary components of Phase II of the project are summarized below.

- Construct berms using native sediments within the Whitewater River Stormwater Channel for the purposes of creating detention basins to receive and infiltrate Colorado River water for replenishing the underlying groundwater basin.
- Extend the existing MVP within the Whitewater River Stormwater Channel beyond the WRP10 site to convey Colorado River water to the new detention basins included under Phase II of the project.
- Expand and reconfigure the existing secondary effluent storage ponds within the southern portion of the existing WRP10 site to store approximately 100 million gallons of secondary effluent.
- Construct a new Secondary Effluent Pump Station within the WRP10 site to improve the routing of secondary effluent within the existing WRP10 site to the new lower storage ponds and subsequently back to the headworks at the WRP10 site.

## 1.3 Air Quality Background

### Local Climate and Meteorology

The project area is within the Salton Sea Air Basin (SSAB) which is bounded by the Pacific Ocean to the west, Mojave desert to the north and east, and the Mexico border to the south. The SSAB includes Imperial County and most of the low desert areas of central Riverside County.

The regional climate of the Coachella Valley is classified as arid continental, and is characterized by hot, dry summers, moderate to cool winters, gusty high winds, and large diurnal variations in temperature. This arid condition produces low soil moisture, which is responsible for one of the main air pollution problems in the region – fugitive dust.

Temperatures during the hottest months reach above 105 degrees Fahrenheit during the day and drop to the mid-70s in the morning; during the coldest months, temperatures reach approximately 70 degrees during the day and drop to approximately 40 degrees in the morning. Most of the rainfall in the Coachella Valley occurs from November through March. However, precipitation also falls in August and September when tropical storms move north from Mexico.

Frequent gusty winds occur in the Coachella Valley, primarily during the spring and early summer months. Prevailing wind direction is from the northwest. At times, large-scale weather patterns move into the Coachella Valley through mountain passes from the west, causing high winds. In addition, summer thunderstorms produce wind gusts.

Air pollutant emissions within the SSAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to

emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

## Air Quality Regulation

The federal and State governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the Air Resources Board (ARB) is the State equivalent in the California EPA (CalEPA). County-level Air Pollution Control Districts (APCD) or Air Quality Management Districts (AQMD) provide local management of air quality. The ARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 14 air basins Statewide, including the SSAB.

The U.S. EPA has set primary national ambient air quality standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter with a diameter of up to ten microns (PM<sub>10</sub>) and up to 2.5 microns (PM<sub>2.5</sub>), and lead (Pb). Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition, California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards. Table 1 lists the current federal and State standards for regulated pollutants.

**Table 1 Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	---	---
	24-Hour	---	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM <sub>10</sub>	Annual	---	20 µg/m <sup>3</sup>
	24-Hour	150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
PM <sub>25</sub>	Annual	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>
	24-Hour	35 µg/m <sup>3</sup>	---
Lead	30-Day Average	---	1.5 µg/m <sup>3</sup>
	3-Month Average	0.15 µg/m <sup>3</sup>	---

ppm = parts per million;

µg/m<sup>3</sup> = micrograms per cubic meter

Source: ARB 2017a, Ambient Air Quality Standards

<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

The South Coast Air Quality Management District (SCAQMD) is the designated air quality control agency for the SSAB. The Coachella Valley Planning Area is a federal nonattainment area that is part of a sub-region of Riverside County in the SSAB that is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east. The Coachella Valley is designated by U.S. EPA as a nonattainment area for the 2008 8-hour ozone NAAQS of 0.075 ppm, and for the former 1997 8-hour ozone NAAQS of 0.08 ppm. For both 8-hour ozone federal standards, the Coachella Valley is classified as a “severe-15” ozone nonattainment area, indicating that the area has 15 years from the nonattainment designation date to attain the NAAQS. The Coachella Valley is also still designated as a nonattainment area for PM<sub>10</sub>, due to windblown dust events that recur in the area, with a classification of “serious.” The Coachella Valley is in attainment of the current federal standards for NO<sub>2</sub>, CO, lead, and SO<sub>2</sub>.

Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulate matter are described below.

### *Ozone*

Ozone (O<sub>3</sub>) is produced by a photochemical reaction (i.e., triggered by sunlight) between nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG<sup>1</sup>). NO<sub>x</sub> is formed during the combustion of fuels, while ROGs are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it occurs in substantial concentrations mostly between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

### *Carbon Monoxide*

CO is a colorless, odorless, poisonous gas that is found in high concentrations only near fuel combustion equipment and other sources of CO. The primary source of CO is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. CO's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity and impaired mental abilities.

### *Nitrogen Dioxide*

NO<sub>2</sub> is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. Nitrogen dioxide is an acute irritant. A relationship between NO<sub>2</sub> and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts

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<sup>1</sup> Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC). SCAQMD uses the term VOC to denote organic precursors.

per million (ppm) may occur. NO<sub>2</sub> absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM<sub>10</sub> and acid rain.

### *Suspended Particulates*

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM<sub>10</sub> (which measures no more than 10 microns in diameter) and PM<sub>2.5</sub>, (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and PM<sub>2.5</sub> can be different. Major man-made sources of PM<sub>10</sub> are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer, PM<sub>2.5</sub> particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. PM<sub>2.5</sub> is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

## Current Air Quality

In an effort to monitor the various concentrations of air pollutants throughout the basin, the SCAQMD has divided the region into 38 source receptor areas (SRAs) in which over 30 monitoring stations operate. The project is located within SRA 30, which covers the Coachella Valley area. Ambient air pollutant concentrations within SRA 30 are monitored in Palm Springs. Table 2 provides a summary of ambient air quality measured through the period of 2014 to 2016. As of 2016, ambient ozone and PM<sub>10</sub> concentrations in SRA 30 regularly exceed both national and state standards, while standards for the other criteria pollutants have not been exceeded during this period.

**Table 2 Summary of Ambient Air Quality in the Coachella Valley Area (SRA 30)**

Pollutant	Air Quality Standards	Year		
		2014	2015	2016
<b>Ozone</b>				
Maximum 1-hour concentration in ppm		0.108	0.102	0.103
Number of days exceeding State 1-hour standard	>0.09 ppm	9	3	6
Maximum 8-hour concentration in ppm		0.093	0.093	0.092
Number of days exceeding national 8-hour standard	>0.075 ppm	55	47	46
Number of days exceeding State 8-hour standard	>0.070 ppm	61	51	48
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
Maximum 1-hour concentration in ppm		0.046	0.041	0.042
Number of days exceeding State 1-hour standard	>0.25 ppm	0	0	0
<b>Particulate Matter &lt;10 microns (PM<sub>10</sub>)</b>				
Maximum 24-hour concentration in µg/m <sup>3</sup>		313.8	199.0	447.2
Number of days exceeding State 24-hour standard	> 50 µg/m <sup>3</sup>	1	1	1

Pollutant	Air Quality Standards	Year		
		2014	2015	2016
Number of days exceeding national 24-hour standard	> 150 µg/m <sup>3</sup>	2	2	na
<b>Particular Matter &lt;2.5 microns (PM<sub>2.5</sub>)</b>				
Maximum 24-hour concentration in µg/m <sup>3</sup>		15.5	22.7	14.7
Number of days exceeding national 24-hour standard	>0.25 µg/m <sup>3</sup>	na	na	na

n/a = not available, insufficient data available to determine the value  
Carbon Monoxide (CO) data not available  
Source: CARB 2017b

## Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each iteration of the SCAQMD’s Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2016 AQMP, was recently adopted on March 3, 2017. The 2016 AQMP incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 ppm that was finalized in 2015.

The Final 2016 AQMP addresses several State and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and updated meteorological air quality models (SCAQMD 2017). This Plan builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal Clean Air Act, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The Plan also includes attainment demonstrations of the new federal 8-hour ozone standard and vehicle miles travelled (VMT) emissions offsets, as per recent U.S. EPA requirements<sup>2</sup>.

## Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools and hospitals. Sensitive receptors likely to be affected by air quality impacts associated with project construction include single-family residences adjacent to the project site, approximately 100 feet to the east and south and Pam Desert High School (74910 Aztec Rd, Palm Desert, CA 92260), located approximately 400 feet southwest of the site.

<sup>2</sup> The 2016 AQMP is incorporated by reference and available to download at <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>.

## 1.4 Impact Analysis

### 1.4.1 Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the SCAQMD's CEQA Air Quality Handbook (1993). The handbook includes significance thresholds for emissions associated with both construction and operation of proposed project.

#### Methodology

The project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.1. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., residential, parking), and location, to estimate the project's construction emissions. Construction emissions modeled include emissions generated by construction equipment used on-site, such as backhoes and bulldozers, as well as emissions generated by vehicle trips associated with construction, such as hauling trips. The project mainly involves the construction of water storage infrastructure. There would be no air quality emissions associated with the operation of the project since operation would only include the energy required for the secondary effluent pump.

The proposed project was modeled in two phases. Phase I assumes a total acreage of 13.2-acre site and a project operational year of 2019 based on information provided by the project applicant. Because no construction schedule or equipment list was available at the time of analysis, CalEEMod defaults were used for construction phase lengths and the number and type of equipment used during each phase, except for the addition of a trencher that was added. It was assumed the project would comply with all applicable regulatory standards, such as SCAQMD Rule 403, which requires watering of disturbed ground surfaces to maintain soils in a damp condition during earth-moving activities; it was assumed watering would occur two times a day.

#### Significance Thresholds

To determine whether a proposed project would have a significant impact to air quality, Appendix G of the *CEQA Guidelines* questions whether a project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)
- d) Expose sensitive receptors to substantial pollutant concentrations
- e) Create objectionable odors affecting a substantial number of people

The SCAQMD provides numerical thresholds to analyze the significance of a project's construction emissions to regional air quality. These thresholds are designed such that a project consistent with the thresholds would not have an individually or cumulatively significant impact to the Basin's air

quality. Thus, a project that does not exceed these SCAQMD thresholds would have a less than significant impact in regards to items b and c above. These thresholds are detailed below.

*Construction Significance Thresholds*

The SCAQMD has established the following significance thresholds for temporary construction activities within the South Coast Air Basin:

- 75 pounds per day of ROG
- 100 pounds per day of NOX
- 550 pounds per day of CO
- 150 pounds per day of PM10
- 55 pounds per day of PM2.5

*Localized Significance Thresholds*

In addition to the above thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board’s Environmental Justice Enhancement Initiative (1-4), which was prepared to update the CEQA Air Quality Handbook. LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NOX, CO, PM10 and PM2.5. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size; LSTs have been developed for emissions within construction areas up to five acres in size. However, LSTs only apply to emissions within a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008a). As such, LSTs are typically applied only to construction emissions as the majority of operational emissions are associated with project-generated vehicle trips.

The project site is located in Source Receptor Area 30 (SRA 30), Coachella Valley (SCAQMD 2008). The SCAQMD provides lookup tables for project sites that measure one, two, three, four, or five acres. Phase I of the project would involve approximately 13.2 acres of grading and Phase II would involve approximately 50.6 acres of grading and trenching. However, this analysis assumes that there would be no more than five acres under active construction at one time, and relies on the five-acre LSTs for significance determinations. The five-acre LSTs provide a more stringent threshold for construction emissions compared to the analysis of emissions over a larger area. LSTs are provided for receptors at a distance of 82 to 1,640 feet (25 to 500 meters) from the project site boundary. Table 3 identifies allowable emissions from a five-acre site in SRA-30 for a receptor 100 feet away. Sensitive receptors closest to the project site are single-family residential units approximately 100 feet east and south.

**Table 3 SCAQMD LSTs for Construction (SRA-30)**

Pollutant	Allowable emissions from a 5-acre site in SRA-30 for a receptor 100 feet away
Gradual conversion of NO <sub>x</sub> to NO <sub>2</sub>	425
CO	5,331

PM <sub>10</sub>	16
PM <sub>2.5</sub>	67

Source: SCAQMD 2009, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-1st-look-up-tables.pdf?sfvrsn=2> accessed online August 2017

## 1.4.2 Project Impacts

### 1.4.2.1 Construction Impacts

Construction would consist of grading and trenching. These activities would generate temporary air pollutant emissions, including fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) and exhaust emissions from heavy construction vehicles and soil hauling trucks.

Table 4 summarizes the maximum daily emissions of pollutants during the entire construction period as estimated in CalEEMod. As shown in the table, emissions of ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would not exceed SCAQMD regional or localized significance thresholds during project construction.

**Table 4 Project Construction Emissions**

Construction Phase	Estimated Maximum Daily Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Phase I (2018 Maximum lbs/day)	7.6	81.3	54.1	0.09	8.2	5.3
Phase II (2018 Maximum lbs/day)	5.6	63.4	38.6	0.06	7.1	4.4
Total (2018 Maximum lbs/day)	13.2	144.7	92.7	0.15	15.3	9.7
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	No	Yes	No	No	No	No
On-site Emissions	5.5	63.5	37.7	0.06	6.8	4.3
Local Significance Thresholds (LSTs) (On-site only)	n/a	425	5,331	n/a	16	67
Threshold Exceeded?	n/a	No	No	No	No	No

### 1.4.2.1 Long-Term Regional Impacts

#### Air Quality Conformity Determination

As discussed above, the project site is located within the SSAB and is under the jurisdiction of the SCAQMD. The SCSB has been designated as a non-attainment area for the state standard for PM<sub>10</sub> and both the federal and state standards for ozone and PM<sub>2.5</sub>. The Coachella Valley is designated by U.S. EPA as a nonattainment area for ozone and PM<sub>10</sub> due to windblown dust events that recur in

the area.

Table 5 shows the estimated project construction emissions in maximum tons per year.

**Table 5 Worst Annual Construction Emissions – All Stages of Construction (tons per year)**

Phase	Pollutant					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
I	0.76	8.5	5.23	0.00	1.56	0.84
II	0.43	4.84	2.94	0.00	0.54	0.33
2018 Total	1.19	13.34	8.17	0.00	2.10	1.17

As shown in Table 5, the maximum annual project construction emissions would be 1.19 tons per year of reactive organic carbon, 13.34 tons per year of oxides of nitrogen, 8.17 tons per year of carbon monoxide, and 2.10 tons per year of PM<sub>10</sub>.

Under the U.S. Environmental Protection Agency’s (U.S. EPA) general conformity rule (40 CFR Parts 53 and 91), a detailed analysis of conformity with State Implementation Plans is required if emissions from a federally controlled aspect of a project exceed the established *de minimis* level of emissions. The *de minimis* concept refers to a major source threshold below which projects are not subject to these requirements. The *de minimis* level for ozone precursors (ROG and NO<sub>x</sub>) is 25 tons per year, as it is a federal severe nonattainment pollutant. The *de minimis* levels for NO<sub>x</sub>, PM<sub>10</sub>, and CO, as attainment pollutants, are each 100 tons per year. The emissions for all criterial pollutants from the project would be below the federal *de minimis* levels.

In addition, the conformity rule requires that the proposed project must be consistent with emission growth factors (land use and population forecasts that were used to generate emission forecasts) contained in the local air district’s Clean Air Plan (in this instance the SCAQMD’s *2012 Air Quality Management Plan*). The project does not include residential development and would not directly increase population growth. As such, the project would not conflict with the goals of the *2001 Clean Air Plan* or the applicable SIP.

### AQMP Consistency

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding the forecasts used in the development of the AQMP. The 2016 AQMP relies on local city general plans’ and the Southern California Association of Government’s (SCAG) Regional Transportation Plans’ (RTP) forecasts of regional population, housing and employment growth in its own projections for managing Basin air quality.

The proposed project involves the construction of a water storage facility and would not generate any additional employees. Thus, there is no population growth associated with the project and it would not cause an exceedance of official regional population projections. The project would be consistent with the AQMP.

### Carbon Monoxide Hotspot Analysis

A CO hotspot is a localized concentration of CO that is above the State one-hour or eight-hour CO ambient air standards (SCAQMD 2008a). Localized CO hotspots can occur at intersections with

heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 ppm or the State one-hour standard of 20.0 ppm.

A detailed CO analysis was conducted by SCAQMD for the Basin during the preparation of the 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the Basin, which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway, which has an ADT of approximately 100,000 vehicles per day. The concentration of CO at this intersection was 4.6 ppm, which is well below the 35-ppm 1-hour CO federal standard and the State standard of 20 ppm.

While the SCAQMD has not established a formal screening threshold for CO hotspot analysis, the Bay Area Air Quality Management District (BAAQMD) has established the following threshold: under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011).

Since the project involves the construction of water storage infrastructure, trips associated with the project would be temporary and due to construction. The project would not generate any operational trips. Construction trips would result in traffic volumes well below the BAAQMD screening thresholds and below that observed at the busiest intersection in the Basin (100,000 ADT), which did not exceed State or federal CO standards. Project-generated trips would not result in, or substantially contribute to, CO concentrations that exceed the one-hour or eight-hour ambient air quality standards along area roadways.

## Odors

The SCAQMD's 1993 CEQA Air Quality Handbook identifies land uses associated with odor complaints to be agriculture uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Even though the project site is a wastewater treatment plant, the proposed project would only involve the storage of previously filtered water. No additional wastewater treatment activities would occur and the project would not cause any additional odors. In addition, the project would have to comply with SCAQMD Rule 402, which prohibits the discharge of air contaminants that would cause injury, detriment, nuisance, or annoyance to the public. Therefore, the proposed project would not generate objectionable odors affecting a substantial number of people.

## 2 Greenhouse Gases

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This section analyzes greenhouse gas (GHG) emissions associated with the proposed project and potential impacts related to climate change.

### 2.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate is continuously changing, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming during the past 150 years. Per the United Nations Intergovernmental Panel on Climate Change (IPCC 2014), the understanding of anthropogenic warming and cooling influences on climate has led to a high confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-20<sup>th</sup> century (IPCC 2014).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO<sub>2</sub> and CH<sub>4</sub> are emitted in the greatest quantities from human activities. Emissions of CO<sub>2</sub> are largely by-products of fossil fuel combustion, whereas CH<sub>4</sub> results from off-gassing associated with agricultural practices and landfills. Observations of CO<sub>2</sub> concentrations, globally-averaged temperature, and sea level rise are generally well within the range of the extent of the earlier IPCC projections. The recently observed increases in CH<sub>4</sub> and N<sub>2</sub>O concentrations are smaller than those assumed in the scenarios in the previous assessments. Each IPCC assessment has used new projections of future climate change that have become more detailed as the models have become more advanced.

Man-made GHGs, many of which have greater heat-absorption potential than CO<sub>2</sub>, include fluorinated gases and SF<sub>6</sub> (CalEPA 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas, CO<sub>2</sub>, is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as carbon dioxide equivalent (CO<sub>2</sub>e), and is the amount

of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane CH<sub>4</sub> has a GWP of 25, meaning its global warming effect is 25 times greater than CO<sub>2</sub> on a molecule per molecule basis (IPCC 2007).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat trapping effect of GHGs, Earth's surface would be about 34° C cooler (CalEPA 2006). However, it is believed that emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations. The following discusses the primary GHGs of concern.

### 2.1.1 Greenhouse Gas Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 46,000 million metric tons (MMT, or gigaton) CO<sub>2</sub>e in 2010 (IPCC 2014). CO<sub>2</sub> emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, carbon dioxide was the most abundant accounting for 76 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while N<sub>2</sub>O and fluorinated gases account for 6 and 2 percent respectively (IPCC 2014).

Total U.S. GHG emissions were 6,870.5 MMT CO<sub>2</sub>e in 2014 (U.S. EPA 2016). Total U.S. emissions have increased by 7.4 percent since 1990; emissions increased by 1 percent from 2013 to 2014 (U.S. EPA 2016). The increase from 2013 to 2014 was due to relatively cool winter conditions, which led to an increase in fuels consumed for heating and cooling for the residential and commercial sectors. Additionally, transportation emissions increased as a result of a small increase in VMT and fuel use across on-road transportation modes. There also was an increase in industrial production across multiple sectors resulting in slight increases in industrial sector emissions (U.S. EPA 2016). Since 1990, U.S. emissions have increased at an average annual rate of 0.3 percent. In 2014, the industrial and transportation end-use sectors accounted for 29.2 percent and 26.4 percent of CO<sub>2</sub> emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16.6 percent and 17.1 percent of CO<sub>2</sub> emissions, respectively (U.S. EPA 2016).

Based upon the ARB California Greenhouse Gas Inventory for 2000-2014, California produced 441.5 MMT CO<sub>2</sub>e in 2013 (ARB 2016). The major source of GHG in California is transportation, contributing 37 percent of the State's total GHG emissions. Industrial sources are the second largest source of the State's GHG emissions, contributing 24 percent of the State's GHG emissions (ARB 2016). California emissions are due in part to its large size and large population compared to other States. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other States, is its relatively mild climate. The ARB has projected Statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO<sub>2</sub>e (ARB 2016). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

### 2.1.2 State Regulatory Setting

The following regulations address both climate change and GHG emissions.

### 2.1.2.1 California Regulations

The State of California considers GHG emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate the State's impact on climate change through the adoption of policies and legislation. The ARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the State's GHG emissions. Some of the major initiatives are summarized below.

#### **Executive Order S-3-05**

In 2005, the Governor issued Executive Order (EO) S-3-05, which identifies Statewide GHG emission reduction targets to achieve long-term climate stabilization as follows:

- Reduce GHG emissions to 1990 levels by 2020; and
- Reduce GHG emissions to 80 percent below 1990 levels by 2050.

In response to EO S-3-05, California Environmental Protection Agency (CalEPA) created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report identified a recommended list of strategies that the State could pursue to reduce GHG emissions. These are strategies that could be implemented by various State agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the State agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture, etc.

#### **Assembly Bill 32**

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32 (AB 32), the "California Global Warming Solutions Act of 2006," signed into law in 2006. AB 32 codifies the Statewide goal of reducing GHG emissions to 1990 levels by 2020 (essentially a 15 percent reduction below 2005 emission levels; the same requirement as under S-3-05), and requires the Air Resources Board (ARB) to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires ARB to adopt regulations to require reporting and verification of State's largest industrial emitters.

The Air Resources Board approved the initial AB 32 Scoping Plan on December 11, 2008 and a 2020 Statewide GHG emission limit of 427 million metric tons (MMT) of carbon dioxide equivalents (CO<sub>2</sub>e) was established. The Scoping Plan also included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

#### **Senate Bill 97**

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The

adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. Specifically, Section 15183.5(b)(1)A-G of Title 14 of the California Code of Regulations was amended to State that a GHG Reduction Plan, or Climate Action Plan, may be used for tiering and streamlining the analysis of GHG emissions in subsequent CEQA project evaluation provided that the CAP does the following:

- Quantifies GHG emissions both existing and projected over a specific period of time, resulting from activities within a defined geographical area.
- Establishes a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable.
- Identifies and analyzes the GHGs emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specifies measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establishes a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

### **Senate Bill 375**

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On September 23, 2010, CARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035.

### **Senate Bill 2X**

In April 2011, the governor signed SB 2X requiring California to generate 33 percent of its electricity from renewable energy by 2020. SB 350, the Clean Energy and Pollution Reduction Act of 2015, was approved in October 2015. SB 350 has two objectives: to increase the procurement of electricity from renewable sources from 33 percent to 50 percent by 2030 and to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.

### **AB32 Scoping Plan Update**

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The first Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 targets set forth in EO S-3-05. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction targets defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation, and land use (CARB 2017c).

## Executive Order B-30-15

EO B-30-15 established a Statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030. Targets set beyond 2020 provide market certainty to foster investment and growth in industries like clean energy.

## Senate Bill 32

Senate Bill 32 (SB 32) became effective on January 1, 2017 and requires the CARB to develop technologically feasible and cost effective regulations to achieve the targeted 40 percent GHG emission reduction. CARB is currently working to update the Scoping Plan to provide a framework for achieving the 2030 target. The updated Scoping Plan was expected to be completed and adopted by CARB in June 2017. The Proposed Scoping Plan calls for emissions reductions at the State level that meet or exceed the Statewide GHG target, and notes that additional effort will be needed to maintain and continue GHG reductions to meet the mid- (2030) and long-term (2050) targets. Additionally, the proposed Scoping Plan recognizes the need to reach beyond Statewide policy and engage local jurisdictions to develop plans to address local conditions and provide a “fair share” contribution towards the achievement of the State’s GHG reduction targets. To assist local planning efforts with developing strategies to meet these targets, the Proposed Scoping Plan includes annual community-wide thresholds of no more than six metric tons CO<sub>2</sub>e per capita by 2030 and no more than two metric tons CO<sub>2</sub>e per capita by 2050.<sup>3</sup>

### 2.1.2.2 California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *State CEQA Guidelines* for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. To date, a variety of air districts have adopted quantitative significance thresholds for GHGs. The SCAQMD threshold, which was adopted in December 2008 and is designed to achieve emission reductions in the Basin consistent with Statewide GHG reductions codified under AB 32, considers emissions of over 10,000 MT CO<sub>2</sub>e/year to be significant (SCAQMD 2008b). However, the SCAQMD’s threshold applies only to stationary sources and is expressly intended to apply only when the SCAQMD is the CEQA lead agency. Although not yet adopted, the SCAQMD recommends a quantitative threshold for projects of all land use types of 3,000 MT CO<sub>2</sub>e /year (SCAQMD 2010). Note that no air district has the power to establish definitive thresholds that will completely relieve a lead agency of the obligation to determine significance on a case-by-case basis for a specific project.

### 2.1.2.3 Regional Regulations

As discussed above, SB 375 requires MPOs to prepare an RTP/SCS that will achieve regional emission reductions through sustainable transportation and growth strategies. On September 23, 2010, ARB adopted final regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was assigned targets of an 8% reduction in GHGs from transportation sources by 2020 and a 13% reduction in GHGs from

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<sup>3</sup> ARB Proposed Climate Change Scoping Plan Update (2017), 134

transportation sources by 2035. Most recently, SCAG adopted the 2016-2040 RTP/SCS on April 7, 2016. It includes a number of strategies and objectives to encourage transit-oriented and infill development and use of alternative transportation to minimize vehicle use. Due to the growth and complexity of San Bernardino County's transportation and development needs, the San Bernardino Associated Governments (SANBAG) also prepares a County Transportation Plan to supplement the SCAG RTP/SCS. In addition, SANBAG provides input and support to the SCAG RTP/SCS and coordinates with SCAG to implement regional projects, which is memorialized in a Memorandum of Understanding (MOU) with SCAG; this partnership is formally referred to as the RTP/SCS Joint-Work Program.

### 2.1.2.4 Local Regulations

The City of Palm Desert completed its *Environmental Sustainability Plan* in 2010 and GHG inventory in 2008. On December 13, 2007 the Palm Desert City Council adopted Resolution 07-78. It was a major first step by the City towards a systematic approach to lessening greenhouse gas emissions. Palm Desert opted to set its own reduction targets in line with the Kyoto Protocol, and to make a major commitment to meeting it. Over a five year period beginning in 2007, the Resolution called for cutting greenhouse gas emissions to a level 7% below 1990 levels. Thus by 2012, the City would exceed the AB 32 2020 goal of reducing emissions to 1990 levels.

Emissions have continued to climb since 1990, making the 7% reduction goal less attainable. However, the greenhouse gas inventory presents steps to reducing GHGs and achieving state goals over time and Resolution 07-78 began a deliberate process of measuring the City's emissions and developing strategies to reduce them.

This Palm Desert *Environmental Sustainability Plan* presents a broad menu of conservation and efficiency steps and system considerations. The City supports the CVWD efforts to expand its treatment plant to reclaim additional water for landscaping and golf courses. Specifically, Recommended Action WM 20 calls to "Support CVWD efforts to expand water treatment plants." The City's General Plan, adopted in 2004, does not have policies regarding the reduction of GHGs.

## 2.2 Impact Analysis

### 2.2.1 Significance Thresholds

Based on Appendix G of the *State CEQA Guidelines*, impacts related to GHG emissions from the proposed project would be significant if the project would:

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

The vast majority of individual projects do not generate sufficient GHG emissions to create significant project-specific environment effects. However, the environmental effects of a project's GHG emissions can contribute incrementally to cumulative environmental effects that are significant, contributing to climate change, even if an individual project's environmental effects are limited (CEQA Guidelines, §15064[h][1]). The issue of a project's environmental effects and contribution towards climate change typically involves an analysis of whether or not a project's contribution towards climate change is cumulatively considerable. Cumulatively considerable means

that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, §15064[h][1]).

The significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with respect to a regional GHG emissions reduction plan (such as a Climate Action Plan). Although not yet adopted, the SCAQMD has a recommended quantitative GHG emissions threshold for all land use types of 3,000 MT CO<sub>2</sub>e/year (SCAQMD 2010). Because no GHG emissions thresholds have been adopted by the City, project GHG emissions are compared to SCAQMD's recommended GHG emissions threshold.

The SCAQMD threshold was designed to achieve regional GHG reductions consistent with the AB 32 Statewide target of 1990 emission levels by 2020. It is important to note that the threshold has not yet been updated to reflect the more stringent SB 32 Statewide emission reduction target of 40 percent below 1990-level emissions by 2030. However, the ARB Proposed Climate Change Scoping Plan Update which provides guidelines to meet the SB32 emission reduction target has yet to be approved. In the interim, before the Scoping Plan is approved, this analysis continues to use the comparison to the SCAQMD threshold.

## 2.2.2 Study Methodology

Calculations of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions are provided to identify the magnitude and nature of the proposed project's potential GHG emissions and environmental effects. The analysis focuses on CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O because these make up 98.9 percent of all GHG emissions by volume (IPCC 2007) and are the GHG emissions that the project would emit in the largest quantities. Fluorinated gases, such as HFCs, PFCs, and SF<sub>6</sub>, were also considered for the analysis. However, since fluorinated gases are primarily associated with industrial processes, and the proposed project involves an unrefrigerated warehouse, the quantity of fluorinated gases would not be significant. Emissions of all GHGs are converted into their equivalent GWP in MT CO<sub>2</sub>e. Small amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would also be emitted; however, these other GHG emissions would not substantially add to the total GHG emissions. Calculations are based on the methodologies discussed in the California Air Pollution Control Officers Association (CAPCOA) *CEQA and Climate Change* white paper (CAPCOA 2008) and included the use of the California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009).

GHG emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.1 (see Attachment A for CalEEMod worksheets).

### Operational Emissions

The project involves the construction of water storage facilities and would not require regular maintenance. Phase I of the project would include the installation of a new secondary effluent pump station. To be conservative, the analysis assumes that the pump would operate at a maximum of 14 hours per week. The amount of kilowatt hours per year required to operate the 800 horsepower pump was entered into CalEEMod to quantify the emissions associated with the secondary effluent pump.

### Construction Emissions

Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction

activity. As Stated in the *CEQA and Climate Change* white paper, “more study is needed to make this assessment or to develop separate thresholds for construction activity” (CAPCOA 2008). In accordance with SCAQMD’s recommendation, GHG emissions from construction of the proposed project were amortized over a 30-year period and added to annual operational emissions to determine the project’s total annual GHG emissions.

Construction of the proposed project would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. CalEEMod was used to estimate emissions associated with the construction period, based on the CalEEMod defaults. Complete results from CalEEMod and assumptions can be viewed in Attachment A.

### 2.2.3 Project Impacts

#### Consistency with GHG Reduction Plans and Policies

As discussed under *Regional Regulations* and *Local Regulations* sections above, a number of plans and policies have been adopted to reduce GHG emissions in the Southern California region, Riverside County, and City of Palm Desert. Specifically, SCAG’s 2016-2040 RTP/SCS provides transportation and growth strategies to reduce regional emissions, the SANBAG Countywide Transportation Plan (CTP) provides nine focus areas to reduce transportation-related emissions, and the 2010 Environmental Sustainability Plan has a number of policies to support GHG reduction. Many of the regional policies in particular pertain to residential and commercial development and do not apply to the project, which is a water storage project.

The City supports the CVWD efforts to expand its treatment plant to reclaim additional water for landscaping and golf courses. Specifically, Recommended Action WM 20 calls to “Support CVWD efforts to expand water treatment plants.” Therefore, the project is consistent with the local GHG reduction policies including the 2016-2040 SCAG RTP/SCS, SANDBAG CTP, and Palm Desert Environmental Sustainability Plan.

#### Construction GHG Emissions

As shown in Table 6, construction of the proposed project would generate an estimated 1,316 MT of CO<sub>2</sub>e. Following the SCAQMD’s recommended methodology for amortizing construction emissions over a 30-year period (the assumed life of the project), construction of the proposed project would generate an estimated 44 MT CO<sub>2</sub>e per year.

**Table 6 Estimated Construction Emissions of Greenhouse Gases**

Year	Annual Emissions MT CO <sub>2</sub> e/year
Phase I	841
Phase II	475
Total Construction Emissions	1,316
Amortized over 30 years	44

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See Attachment A for CalEEMod results.

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## Operational and Total GHG Emissions

Operation of the proposed project would generate greenhouse gases through an increase in energy use associated with the secondary effluent pump, and repair/replacement of the temporary berms on an as-needed basis. Emissions for energy use due to pumping were calculated using estimated electricity consumption and energy intensity factors from Southern California Edison. Assuming all six pumps are powered by electricity and operating at full pumping capacity of 92+ CFS, the total energy usage would be 18,396,000 kWh per year. Based on the energy intensity factors, operational emissions would result in approximately 5,882 MT CO<sub>2</sub>e per year. Table 7 summarizes the long-term GHG emissions generated by energy use associated with the secondary effluent pump.

**Table 7 Project Operational GHG Emissions from the Secondary Effluent Pump**

<b>Emission Source</b>	<b>Annual Emissions (MT of CO<sub>2</sub>e/year)</b>
Operational Emissions	5,882
Construction Emissions (amortized)	44
Temporary Berms (once every five years)	12
Combined Project Emissions	5,938
<i>SCAQMD Threshold</i>	<i>3,000</i>
<b>Threshold Exceeded?</b>	<b>Yes</b>

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See Attachment A for CalEEMod results.

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The project would generate a total of 5,938 MT CO<sub>2</sub>e per year, which would exceed SCAQMD's threshold, which is based on AB 32. Since the project would conflict with AB 32, subsequently, the project would conflict with SB 32. Therefore, this impact would be significant and unavoidable.

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# Attachment A

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CalEEMod Worksheets

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**CVWD Replenishment Project**  
**Riverside-Mojave Desert SCAQMD County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	300.95	1000sqft	5.30	300,950.00	0
Other Non-Asphalt Surfaces	270.00	1000sqft	6.20	270,000.00	0
Parking Lot	75.90	1000sqft	1.74	75,900.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

Project Characteristics -

Land Use - from PD

Construction Phase - Assumed all grading would occur within 1 year and paving would take a maximum of 1 month

Off-road Equipment -

Off-road Equipment - added due to trenching

Off-road Equipment -

Grading - all material will be kept and used on site

Construction Off-road Equipment Mitigation - compliance with Rule 403

Energy Use - Secondary effluent pump energy

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblEnergyUse	T24E	0.00	12.90
tblLandUse	LotAcreage	6.91	5.30
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	2.2294	2.2294
2	4-1-2018	6-30-2018	2.4705	2.4705
3	7-1-2018	9-30-2018	2.2790	2.2790
		Highest	2.4705	2.4705

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0516	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2,368.0094	2,368.0094	0.0978	0.0202	2,376.4810
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0516</b>	<b>8.0000e-005</b>	<b>8.3100e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>2,368.0255</b>	<b>2,368.0255</b>	<b>0.0978</b>	<b>0.0202</b>	<b>2,376.4982</b>

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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	0.0516	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2,368.0094	2,368.0094	0.0978	0.0202	2,376.4810
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0516</b>	<b>8.0000e-005</b>	<b>8.3100e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>2,368.0255</b>	<b>2,368.0255</b>	<b>0.0978</b>	<b>0.0202</b>	<b>2,376.4982</b>

	ROG	NOx	CO	SO2	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	Grading	Grading	1/1/2018	12/31/2018	5	30	
2	Paving	Paving	5/1/2018	5/31/2018	5	20	

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**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 75**

**Acres of Paving: 13.24**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	1	8.00	78	0.50
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

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**3.2 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1319	0.0000	1.1319	0.4693	0.0000	0.4693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7233	8.2986	4.9252	8.5400e-003		0.3841	0.3841		0.3534	0.3534	0.0000	779.4672	779.4672	0.2427	0.0000	785.5336
<b>Total</b>	<b>0.7233</b>	<b>8.2986</b>	<b>4.9252</b>	<b>8.5400e-003</b>	<b>1.1319</b>	<b>0.3841</b>	<b>1.5160</b>	<b>0.4693</b>	<b>0.3534</b>	<b>0.8227</b>	<b>0.0000</b>	<b>779.4672</b>	<b>779.4672</b>	<b>0.2427</b>	<b>0.0000</b>	<b>785.5336</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0163	0.0123	0.1271	3.3000e-004	0.0330	2.1000e-004	0.0332	8.7600e-003	1.9000e-004	8.9500e-003	0.0000	29.4008	29.4008	8.8000e-004	0.0000	29.4227
<b>Total</b>	<b>0.0163</b>	<b>0.0123</b>	<b>0.1271</b>	<b>3.3000e-004</b>	<b>0.0330</b>	<b>2.1000e-004</b>	<b>0.0332</b>	<b>8.7600e-003</b>	<b>1.9000e-004</b>	<b>8.9500e-003</b>	<b>0.0000</b>	<b>29.4008</b>	<b>29.4008</b>	<b>8.8000e-004</b>	<b>0.0000</b>	<b>29.4227</b>

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**3.2 Grading - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5093	0.0000	0.5093	0.2112	0.0000	0.2112	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7233	8.2986	4.9252	8.5400e-003		0.3841	0.3841		0.3534	0.3534	0.0000	779.4662	779.4662	0.2427	0.0000	785.5327
<b>Total</b>	<b>0.7233</b>	<b>8.2986</b>	<b>4.9252</b>	<b>8.5400e-003</b>	<b>0.5093</b>	<b>0.3841</b>	<b>0.8934</b>	<b>0.2112</b>	<b>0.3534</b>	<b>0.5646</b>	<b>0.0000</b>	<b>779.4662</b>	<b>779.4662</b>	<b>0.2427</b>	<b>0.0000</b>	<b>785.5327</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0163	0.0123	0.1271	3.3000e-004	0.0330	2.1000e-004	0.0332	8.7600e-003	1.9000e-004	8.9500e-003	0.0000	29.4008	29.4008	8.8000e-004	0.0000	29.4227
<b>Total</b>	<b>0.0163</b>	<b>0.0123</b>	<b>0.1271</b>	<b>3.3000e-004</b>	<b>0.0330</b>	<b>2.1000e-004</b>	<b>0.0332</b>	<b>8.7600e-003</b>	<b>1.9000e-004</b>	<b>8.9500e-003</b>	<b>0.0000</b>	<b>29.4008</b>	<b>29.4008</b>	<b>8.8000e-004</b>	<b>0.0000</b>	<b>29.4227</b>

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**3.3 Paving - 2018**

**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	0.0189	0.2015	0.1702	2.6000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	23.9334	23.9334	7.4500e-003	0.0000	24.1196
Paving	2.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0215</b>	<b>0.2015</b>	<b>0.1702</b>	<b>2.6000e-004</b>		<b>0.0110</b>	<b>0.0110</b>		<b>0.0101</b>	<b>0.0101</b>	<b>0.0000</b>	<b>23.9334</b>	<b>23.9334</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>24.1196</b>

**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	9.4000e-004	7.1000e-004	7.3000e-003	2.0000e-005	1.9000e-003	1.0000e-005	1.9100e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6897	1.6897	5.0000e-005	0.0000	1.6910
<b>Total</b>	<b>9.4000e-004</b>	<b>7.1000e-004</b>	<b>7.3000e-003</b>	<b>2.0000e-005</b>	<b>1.9000e-003</b>	<b>1.0000e-005</b>	<b>1.9100e-003</b>	<b>5.0000e-004</b>	<b>1.0000e-005</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>1.6897</b>	<b>1.6897</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.6910</b>

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**3.3 Paving - 2018**

**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	0.0189	0.2015	0.1702	2.6000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	23.9333	23.9333	7.4500e-003	0.0000	24.1196
Paving	2.6200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0215</b>	<b>0.2015</b>	<b>0.1702</b>	<b>2.6000e-004</b>		<b>0.0110</b>	<b>0.0110</b>		<b>0.0101</b>	<b>0.0101</b>	<b>0.0000</b>	<b>23.9333</b>	<b>23.9333</b>	<b>7.4500e-003</b>	<b>0.0000</b>	<b>24.1196</b>

**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	9.4000e-004	7.1000e-004	7.3000e-003	2.0000e-005	1.9000e-003	1.0000e-005	1.9100e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6897	1.6897	5.0000e-005	0.0000	1.6910
<b>Total</b>	<b>9.4000e-004</b>	<b>7.1000e-004</b>	<b>7.3000e-003</b>	<b>2.0000e-005</b>	<b>1.9000e-003</b>	<b>1.0000e-005</b>	<b>1.9100e-003</b>	<b>5.0000e-004</b>	<b>1.0000e-005</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>1.6897</b>	<b>1.6897</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.6910</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0





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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	3.483e+006	1,109.7584	0.0458	9.4800e-003	1,113.7286
Other Non-Asphalt Surfaces	3.88226e+006	1,236.9696	0.0511	0.0106	1,241.3949
Parking Lot	66792	21.2814	8.8000e-004	1.8000e-004	21.3575
<b>Total</b>		<b>2,368.0094</b>	<b>0.0978</b>	<b>0.0202</b>	<b>2,376.4810</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	3.483e+006	1,109.7584	0.0458	9.4800e-003	1,113.7286
Other Non-Asphalt Surfaces	3.88226e+006	1,236.9696	0.0511	0.0106	1,241.3949
Parking Lot	66792	21.2814	8.8000e-004	1.8000e-004	21.3575
<b>Total</b>		<b>2,368.0094</b>	<b>0.0978</b>	<b>0.0202</b>	<b>2,376.4810</b>

**6.0 Area Detail**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0516	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
Unmitigated	0.0516	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171

**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	8.9900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.8000e-004	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
<b>Total</b>	<b>0.0516</b>	<b>8.0000e-005</b>	<b>8.3100e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0161</b>	<b>0.0161</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.0171</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	8.9900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.8000e-004	8.0000e-005	8.3100e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0161	0.0161	4.0000e-005	0.0000	0.0171
<b>Total</b>	<b>0.0516</b>	<b>8.0000e-005</b>	<b>8.3100e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0161</b>	<b>0.0161</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>0.0171</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

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

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**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

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**10.0 Stationary Equipment**

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**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
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**CVWD Replenishment Project**  
**Riverside-Mojave Desert SCAQMD County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	300.95	1000sqft	5.30	300,950.00	0
Other Non-Asphalt Surfaces	270.00	1000sqft	6.20	270,000.00	0
Parking Lot	75.90	1000sqft	1.74	75,900.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Project Characteristics -

Land Use - from PD

Construction Phase - Assumed all grading would occur within 1 year and paving would take a maximum of 1 month

Off-road Equipment -

Off-road Equipment - added due to trenching

Off-road Equipment -

Grading - all material will be kept and used on site

Construction Off-road Equipment Mitigation - compliance with Rule 403

Energy Use - Secondary effluent pump energy

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblEnergyUse	T24E	0.00	12.90
tblLandUse	LotAcreage	6.91	5.30
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2847</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1511</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2847</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1511</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	Grading	Grading	1/1/2018	12/31/2018	5	30	
2	Paving	Paving	5/1/2018	5/31/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 13.24

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

#### OffRoad Equipment

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	1	8.00	78	0.50
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.5428	63.5906	37.7409	0.0654		2.9432	2.9432		2.7078	2.7078		6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>5.5428</b>	<b>63.5906</b>	<b>37.7409</b>	<b>0.0654</b>	<b>8.6733</b>	<b>2.9432</b>	<b>11.6166</b>	<b>3.5965</b>	<b>2.7078</b>	<b>6.3043</b>		<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	5.5428	63.5906	37.7409	0.0654		2.9432	2.9432		2.7078	2.7078	0.0000	6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>5.5428</b>	<b>63.5906</b>	<b>37.7409</b>	<b>0.0654</b>	<b>3.9030</b>	<b>2.9432</b>	<b>6.8462</b>	<b>1.6184</b>	<b>2.7078</b>	<b>4.3262</b>	<b>0.0000</b>	<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.3 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.2279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.8716</b>	<b>17.5209</b>	<b>14.7964</b>	<b>0.0228</b>		<b>0.9561</b>	<b>0.9561</b>		<b>0.8797</b>	<b>0.8797</b>		<b>2,294.0887</b>	<b>2,294.0887</b>	<b>0.7142</b>		<b>2,311.9432</b>

**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	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
<b>Total</b>	<b>0.0881</b>	<b>0.0595</b>	<b>0.6030</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.0500e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.7000e-004</b>	<b>0.0454</b>		<b>157.9077</b>	<b>157.9077</b>	<b>4.6700e-003</b>		<b>158.0245</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.3 Paving - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.2279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.8716</b>	<b>17.5209</b>	<b>14.7964</b>	<b>0.0228</b>		<b>0.9561</b>	<b>0.9561</b>		<b>0.8797</b>	<b>0.8797</b>	<b>0.0000</b>	<b>2,294.0887</b>	<b>2,294.0887</b>	<b>0.7142</b>		<b>2,311.9432</b>

**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	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
<b>Total</b>	<b>0.0881</b>	<b>0.0595</b>	<b>0.6030</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.0500e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.7000e-004</b>	<b>0.0454</b>		<b>157.9077</b>	<b>157.9077</b>	<b>4.6700e-003</b>		<b>158.0245</b>

**4.0 Operational Detail - Mobile**

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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

**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

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
Unmitigated	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2291					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.2500e-003	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
<b>Total</b>	<b>0.2846</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>		<b>0.1511</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2291					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.2500e-003	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
<b>Total</b>	<b>0.2846</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>		<b>0.1511</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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Fire Pumps and Emergency Generators

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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**

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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**CVWD Replenishment Project**  
**Riverside-Mojave Desert SCAQMD County,**  
**Winter with Tier 3 Mitigation**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	300.95	1000sqft	5.30	300,950.00	0
Other Non-Asphalt Surfaces	270.00	1000sqft	6.20	270,000.00	0
Parking Lot	75.90	1000sqft	1.74	75,900.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Project Characteristics -

Land Use - from PD

Construction Phase - Assumed all grading would occur within 1 year and paving would take a maximum of 1 month

Off-road Equipment -

Off-road Equipment - added due to trenching

Off-road Equipment -

Grading - all material will be kept and used on site

Energy Use - Secondary effluent pump energy

Construction Off-road Equipment Mitigation - compliance with Rule 403 and Use of tier 3 equipment as mitigation

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblLandUse	LotAcreage	6.91	5.30
tblProjectCharacteristics	OperationalYear	2018	2020

**2.0 Emissions Summary**

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CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2847</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1511</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.2847</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>0.1511</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	Grading	Grading	1/1/2018	12/31/2018	5	30	
2	Paving	Paving	5/1/2018	5/31/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 13.24

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

#### OffRoad Equipment

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	1	8.00	78	0.50
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Clean Paved Roads

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.5428	63.5906	37.7409	0.0654		2.9432	2.9432		2.7078	2.7078		6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>5.5428</b>	<b>63.5906</b>	<b>37.7409</b>	<b>0.0654</b>	<b>8.6733</b>	<b>2.9432</b>	<b>11.6166</b>	<b>3.5965</b>	<b>2.7078</b>	<b>6.3043</b>		<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	1.6056	31.8629	39.2676	0.0654		1.4315	1.4315		1.4315	1.4315	0.0000	6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>1.6056</b>	<b>31.8629</b>	<b>39.2676</b>	<b>0.0654</b>	<b>3.9030</b>	<b>1.4315</b>	<b>5.3345</b>	<b>1.6184</b>	<b>1.4315</b>	<b>3.0499</b>	<b>0.0000</b>	<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.3 Paving - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.2279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.8716</b>	<b>17.5209</b>	<b>14.7964</b>	<b>0.0228</b>		<b>0.9561</b>	<b>0.9561</b>		<b>0.8797</b>	<b>0.8797</b>		<b>2,294.0887</b>	<b>2,294.0887</b>	<b>0.7142</b>		<b>2,311.9432</b>

**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	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
<b>Total</b>	<b>0.0881</b>	<b>0.0595</b>	<b>0.6030</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.0500e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.7000e-004</b>	<b>0.0454</b>		<b>157.9077</b>	<b>157.9077</b>	<b>4.6700e-003</b>		<b>158.0245</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.3 Paving - 2018**

**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	0.5609	11.2952	17.2957	0.0228		0.5624	0.5624		0.5624	0.5624	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.2279					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.7889</b>	<b>11.2952</b>	<b>17.2957</b>	<b>0.0228</b>		<b>0.5624</b>	<b>0.5624</b>		<b>0.5624</b>	<b>0.5624</b>	<b>0.0000</b>	<b>2,294.0887</b>	<b>2,294.0887</b>	<b>0.7142</b>		<b>2,311.9432</b>

**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	0.0881	0.0595	0.6030	1.5900e-003	0.1677	1.0500e-003	0.1687	0.0445	9.7000e-004	0.0454		157.9077	157.9077	4.6700e-003		158.0245
<b>Total</b>	<b>0.0881</b>	<b>0.0595</b>	<b>0.6030</b>	<b>1.5900e-003</b>	<b>0.1677</b>	<b>1.0500e-003</b>	<b>0.1687</b>	<b>0.0445</b>	<b>9.7000e-004</b>	<b>0.0454</b>		<b>157.9077</b>	<b>157.9077</b>	<b>4.6700e-003</b>		<b>158.0245</b>

**4.0 Operational Detail - Mobile**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

**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

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
Unmitigated	0.2847	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2291					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.2500e-003	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
<b>Total</b>	<b>0.2846</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>		<b>0.1511</b>

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2291					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.2500e-003	6.1000e-004	0.0665	0.0000		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		0.1416	0.1416	3.8000e-004		0.1511
<b>Total</b>	<b>0.2846</b>	<b>6.1000e-004</b>	<b>0.0665</b>	<b>0.0000</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>2.4000e-004</b>	<b>2.4000e-004</b>		<b>0.1416</b>	<b>0.1416</b>	<b>3.8000e-004</b>		<b>0.1511</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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Fire Pumps and Emergency Generators

CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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**

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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**Phase II- CVWD Replenishment Project**  
**Riverside-Mojave Desert SCAQMD County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	2,121.10	1000sqft	48.69	2,121,100.00	0
Other Non-Asphalt Surfaces	82.50	1000sqft	1.89	82,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use -

Construction Phase - based on PD

Off-road Equipment -

Grading -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Off-road Equipment - Trencher added

## Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	110.00	152.00
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2018	5-31-2018	2.2790	2.2790
2	6-1-2018	8-31-2018	2.2790	2.2790
3	9-1-2018	9-30-2018	0.6936	0.6936
		Highest	2.2790	2.2790

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1758	2.6000e-004	0.0283	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0547	0.0547	1.5000e-004	0.0000	0.0584
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1758</b>	<b>2.6000e-004</b>	<b>0.0283</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0547</b>	<b>0.0547</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0584</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1758	2.6000e-004	0.0283	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0547	0.0547	1.5000e-004	0.0000	0.0584
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1758</b>	<b>2.6000e-004</b>	<b>0.0283</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0547</b>	<b>0.0547</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0584</b>

	ROG	NOx	CO	SO2	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	Grading	Grading	3/1/2018	9/28/2018	5	152	

**Acres of Grading (Site Preparation Phase): 0**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**Acres of Grading (Grading Phase): 380**

**Acres of Paving: 50.58**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	1	8.00	78	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
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**3.2 Grading - 2018**

**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					0.6592	0.0000	0.6592	0.2733	0.0000	0.2733	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4213	4.8329	2.8683	4.9700e-003		0.2237	0.2237		0.2058	0.2058	0.0000	453.9426	453.9426	0.1413	0.0000	457.4755
<b>Total</b>	<b>0.4213</b>	<b>4.8329</b>	<b>2.8683</b>	<b>4.9700e-003</b>	<b>0.6592</b>	<b>0.2237</b>	<b>0.8829</b>	<b>0.2733</b>	<b>0.2058</b>	<b>0.4791</b>	<b>0.0000</b>	<b>453.9426</b>	<b>453.9426</b>	<b>0.1413</b>	<b>0.0000</b>	<b>457.4755</b>

**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	9.4900e-003	7.1700e-003	0.0740	1.9000e-004	0.0192	1.2000e-004	0.0193	5.1000e-003	1.1000e-004	5.2100e-003	0.0000	17.1223	17.1223	5.1000e-004	0.0000	17.1350
<b>Total</b>	<b>9.4900e-003</b>	<b>7.1700e-003</b>	<b>0.0740</b>	<b>1.9000e-004</b>	<b>0.0192</b>	<b>1.2000e-004</b>	<b>0.0193</b>	<b>5.1000e-003</b>	<b>1.1000e-004</b>	<b>5.2100e-003</b>	<b>0.0000</b>	<b>17.1223</b>	<b>17.1223</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>17.1350</b>

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**3.2 Grading - 2018**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2966	0.0000	0.2966	0.1230	0.0000	0.1230	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4213	4.8329	2.8683	4.9700e-003		0.2237	0.2237		0.2058	0.2058	0.0000	453.9420	453.9420	0.1413	0.0000	457.4750
<b>Total</b>	<b>0.4213</b>	<b>4.8329</b>	<b>2.8683</b>	<b>4.9700e-003</b>	<b>0.2966</b>	<b>0.2237</b>	<b>0.5203</b>	<b>0.1230</b>	<b>0.2058</b>	<b>0.3288</b>	<b>0.0000</b>	<b>453.9420</b>	<b>453.9420</b>	<b>0.1413</b>	<b>0.0000</b>	<b>457.4750</b>

**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	9.4900e-003	7.1700e-003	0.0740	1.9000e-004	0.0192	1.2000e-004	0.0193	5.1000e-003	1.1000e-004	5.2100e-003	0.0000	17.1223	17.1223	5.1000e-004	0.0000	17.1350
<b>Total</b>	<b>9.4900e-003</b>	<b>7.1700e-003</b>	<b>0.0740</b>	<b>1.9000e-004</b>	<b>0.0192</b>	<b>1.2000e-004</b>	<b>0.0193</b>	<b>5.1000e-003</b>	<b>1.1000e-004</b>	<b>5.2100e-003</b>	<b>0.0000</b>	<b>17.1223</b>	<b>17.1223</b>	<b>5.1000e-004</b>	<b>0.0000</b>	<b>17.1350</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**





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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1758	2.6000e-004	0.0283	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0547	0.0547	1.5000e-004	0.0000	0.0584
Unmitigated	0.1758	2.6000e-004	0.0283	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0547	0.0547	1.5000e-004	0.0000	0.0584

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0306					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1424					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6600e-003	2.6000e-004	0.0283	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0547	0.0547	1.5000e-004	0.0000	0.0584
<b>Total</b>	<b>0.1757</b>	<b>2.6000e-004</b>	<b>0.0283</b>	<b>0.0000</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0547</b>	<b>0.0547</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0584</b>

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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	tons/yr										MT/yr					
Architectural Coating	0.0306					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1424					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.6600e-003	2.6000e-004	0.0283	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	0.0547	0.0547	1.5000e-004	0.0000	0.0584
<b>Total</b>	<b>0.1757</b>	<b>2.6000e-004</b>	<b>0.0283</b>	<b>0.0000</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>		<b>1.0000e-004</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0547</b>	<b>0.0547</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0584</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

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

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**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

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Annual

**10.0 Stationary Equipment**

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**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
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**Phase II- CVWD Replenishment Project**  
**Riverside-Mojave Desert SCAQMD County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	2,121.10	1000sqft	48.69	2,121,100.00	0
Other Non-Asphalt Surfaces	82.50	1000sqft	1.89	82,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use -

Construction Phase - based on PD

Off-road Equipment -

Grading -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Off-road Equipment - Trencher added

## Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	110.00	152.00
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblProjectCharacteristics	OperationalYear	2018	2020

## 2.0 Emissions Summary

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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>0.5146</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>0.5146</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	Grading	Grading	3/1/2018	9/28/2018	5	152	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 380

Acres of Paving: 50.58

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

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	1	8.00	78	0.50

#### Trips and VMT

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

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
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Grading - 2018**

**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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.5428	63.5906	37.7409	0.0654		2.9432	2.9432		2.7078	2.7078		6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>5.5428</b>	<b>63.5906</b>	<b>37.7409</b>	<b>0.0654</b>	<b>8.6733</b>	<b>2.9432</b>	<b>11.6166</b>	<b>3.5965</b>	<b>2.7078</b>	<b>6.3043</b>		<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

**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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	5.5428	63.5906	37.7409	0.0654		2.9432	2.9432		2.7078	2.7078	0.0000	6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>5.5428</b>	<b>63.5906</b>	<b>37.7409</b>	<b>0.0654</b>	<b>3.9030</b>	<b>2.9432</b>	<b>6.8462</b>	<b>1.6184</b>	<b>2.7078</b>	<b>4.3262</b>	<b>0.0000</b>	<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
Unmitigated	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0213	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>		<b>0.5146</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0213	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>		<b>0.5146</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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Fire Pumps and Emergency Generators

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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**

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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**Phase II- CVWD Replenishment Project**  
**Riverside-Mojave Desert SCAQMD County,**  
**Winter with Tier 3 Mitigation**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	2,121.10	1000sqft	48.69	2,121,100.00	0
Other Non-Asphalt Surfaces	82.50	1000sqft	1.89	82,500.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -  
 Land Use -  
 Construction Phase - based on PD  
 Off-road Equipment -  
 Off-road Equipment - Trencher added  
 Grading -  
 Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and Tier 3 engines

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	110.00	152.00
tblProjectCharacteristics	OperationalYear	2018	2020

**2.0 Emissions Summary**

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Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>0.5146</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>	<b>0.0000</b>	<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>0.5146</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	Grading	Grading	3/1/2018	9/28/2018	5	152	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 380

Acres of Paving: 50.58

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

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Trenchers	1	8.00	78	0.50

#### Trips and VMT

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

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
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Clean Paved Roads

**3.2 Grading - 2018**

**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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	5.5428	63.5906	37.7409	0.0654		2.9432	2.9432		2.7078	2.7078		6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>5.5428</b>	<b>63.5906</b>	<b>37.7409</b>	<b>0.0654</b>	<b>8.6733</b>	<b>2.9432</b>	<b>11.6166</b>	<b>3.5965</b>	<b>2.7078</b>	<b>6.3043</b>		<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

**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					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	1.6056	31.8629	39.2676	0.0654		1.4315	1.4315		1.4315	1.4315	0.0000	6,584.0265	6,584.0265	2.0497		6,635.2689
<b>Total</b>	<b>1.6056</b>	<b>31.8629</b>	<b>39.2676</b>	<b>0.0654</b>	<b>3.9030</b>	<b>1.4315</b>	<b>5.3345</b>	<b>1.6184</b>	<b>1.4315</b>	<b>3.0499</b>	<b>0.0000</b>	<b>6,584.0265</b>	<b>6,584.0265</b>	<b>2.0497</b>		<b>6,635.2689</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**3.2 Grading - 2018**

**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	0.1351	0.0913	0.9246	2.4300e-003	0.2571	1.6100e-003	0.2587	0.0682	1.4800e-003	0.0697		242.1252	242.1252	7.1600e-003		242.3043
<b>Total</b>	<b>0.1351</b>	<b>0.0913</b>	<b>0.9246</b>	<b>2.4300e-003</b>	<b>0.2571</b>	<b>1.6100e-003</b>	<b>0.2587</b>	<b>0.0682</b>	<b>1.4800e-003</b>	<b>0.0697</b>		<b>242.1252</b>	<b>242.1252</b>	<b>7.1600e-003</b>		<b>242.3043</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
Unmitigated	0.9697	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0213	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>		<b>0.5146</b>

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD County, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.7805					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0213	2.0900e-003	0.2264	2.0000e-005		8.1000e-004	8.1000e-004		8.1000e-004	8.1000e-004		0.4823	0.4823	1.2900e-003		0.5146
<b>Total</b>	<b>0.9697</b>	<b>2.0900e-003</b>	<b>0.2264</b>	<b>2.0000e-005</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>8.1000e-004</b>	<b>8.1000e-004</b>		<b>0.4823</b>	<b>0.4823</b>	<b>1.2900e-003</b>		<b>0.5146</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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Fire Pumps and Emergency Generators

Phase II- CVWD Replenishment Project - Riverside-Mojave Desert SCAQMD 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**

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CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**CVWD Replenishment Project - Berm Reconstruction only**  
**San Bernardino-Mojave Desert County, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,060.55	1000sqft	24.35	1,060,550.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2025
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Berm construction assumed to be half of Whitewater River Stormwater Channel construction area in phase II

Construction Phase - Assume berm construction of 1 month

Off-road Equipment - Assume excavator for 8 hours per day

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

## CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	35.00	22.00
tblConstructionPhase	PhaseEndDate	12/30/2022	1/31/2023
tblConstructionPhase	PhaseStartDate	12/31/2022	1/1/2023
tblGrading	AcresOfGrading	55.00	87.50
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblProjectCharacteristics	OperationalYear	2018	2025

## 2.0 Emissions Summary

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CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.4201	0.4201
		Highest	0.4201	0.4201

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1063	9.0000e-005	9.7200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0202
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1063</b>	<b>9.0000e-005</b>	<b>9.7200e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0190</b>	<b>0.0190</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.0202</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1063	9.0000e-005	9.7200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0202
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1063</b>	<b>9.0000e-005</b>	<b>9.7200e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0190</b>	<b>0.0190</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.0202</b>

	ROG	NOx	CO	SO2	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	Grading	Grading	1/1/2023	1/31/2023	5	22	

**Acres of Grading (Site Preparation Phase): 0**

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**Acres of Grading (Grading Phase): 87.5**

**Acres of Paving: 24.35**

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Excavators	1	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	2	8.00	367	0.48

**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
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

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**3.2 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1126	0.0000	0.1126	0.0414	0.0000	0.0414	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0365	0.3797	0.3086	6.8000e-004		0.0157	0.0157		0.0144	0.0144	0.0000	59.9887	59.9887	0.0194	0.0000	60.4738
<b>Total</b>	<b>0.0365</b>	<b>0.3797</b>	<b>0.3086</b>	<b>6.8000e-004</b>	<b>0.1126</b>	<b>0.0157</b>	<b>0.1283</b>	<b>0.0414</b>	<b>0.0144</b>	<b>0.0558</b>	<b>0.0000</b>	<b>59.9887</b>	<b>59.9887</b>	<b>0.0194</b>	<b>0.0000</b>	<b>60.4738</b>

**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	7.1000e-004	4.7000e-004	5.0700e-003	2.0000e-005	1.7700e-003	1.0000e-005	1.7800e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3752	1.3752	3.0000e-005	0.0000	1.3761
<b>Total</b>	<b>7.1000e-004</b>	<b>4.7000e-004</b>	<b>5.0700e-003</b>	<b>2.0000e-005</b>	<b>1.7700e-003</b>	<b>1.0000e-005</b>	<b>1.7800e-003</b>	<b>4.7000e-004</b>	<b>1.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>1.3752</b>	<b>1.3752</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.3761</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**3.2 Grading - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0507	0.0000	0.0507	0.0186	0.0000	0.0186	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0365	0.3797	0.3086	6.8000e-004		0.0157	0.0157		0.0144	0.0144	0.0000	59.9887	59.9887	0.0194	0.0000	60.4737
<b>Total</b>	<b>0.0365</b>	<b>0.3797</b>	<b>0.3086</b>	<b>6.8000e-004</b>	<b>0.0507</b>	<b>0.0157</b>	<b>0.0664</b>	<b>0.0186</b>	<b>0.0144</b>	<b>0.0331</b>	<b>0.0000</b>	<b>59.9887</b>	<b>59.9887</b>	<b>0.0194</b>	<b>0.0000</b>	<b>60.4737</b>

**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	7.1000e-004	4.7000e-004	5.0700e-003	2.0000e-005	1.7700e-003	1.0000e-005	1.7800e-003	4.7000e-004	1.0000e-005	4.8000e-004	0.0000	1.3752	1.3752	3.0000e-005	0.0000	1.3761
<b>Total</b>	<b>7.1000e-004</b>	<b>4.7000e-004</b>	<b>5.0700e-003</b>	<b>2.0000e-005</b>	<b>1.7700e-003</b>	<b>1.0000e-005</b>	<b>1.7800e-003</b>	<b>4.7000e-004</b>	<b>1.0000e-005</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>1.3752</b>	<b>1.3752</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.3761</b>

**4.0 Operational Detail - Mobile**

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CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

**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
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.561207	0.034889	0.182561	0.109119	0.013494	0.004661	0.018668	0.065354	0.001366	0.001451	0.005650	0.000795	0.000784





CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1063	9.0000e-005	9.7200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0202
Unmitigated	0.1063	9.0000e-005	9.7200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0202

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0686					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.9000e-004	9.0000e-005	9.7200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0202
<b>Total</b>	<b>0.1063</b>	<b>9.0000e-005</b>	<b>9.7200e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0190</b>	<b>0.0190</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.0202</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**6.2 Area by SubCategory**

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0686					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.9000e-004	9.0000e-005	9.7200e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0190	0.0190	5.0000e-005	0.0000	0.0202
<b>Total</b>	<b>0.1063</b>	<b>9.0000e-005</b>	<b>9.7200e-003</b>	<b>0.0000</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>		<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.0190</b>	<b>0.0190</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.0202</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

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

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**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

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Annual

**10.0 Stationary Equipment**

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**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
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Winter

**CVWD Replenishment Project - Berm Reconstruction only**  
**San Bernardino-Mojave Desert County, Winter**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1,060.55	1000sqft	24.35	1,060,550.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.6	<b>Precipitation Freq (Days)</b>	32
<b>Climate Zone</b>	10			<b>Operational Year</b>	2025
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Berm construction assumed to be half of Whitewater River Stormwater Channel construction area in phase II

Construction Phase - Assume berm construction of 1 month

Off-road Equipment - Assume excavator for 8 hours per day

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

## CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	35.00	22.00
tblConstructionPhase	PhaseEndDate	12/30/2022	1/31/2023
tblConstructionPhase	PhaseStartDate	12/31/2022	1/1/2023
tblGrading	AcresOfGrading	55.00	87.50
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblProjectCharacteristics	OperationalYear	2018	2025

## 2.0 Emissions Summary

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CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert 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	0.5876	9.8000e-004	0.1080	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2321	0.2321	6.0000e-004		0.2472
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.5876</b>	<b>9.8000e-004</b>	<b>0.1080</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>3.8000e-004</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>0.2321</b>	<b>0.2321</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>0.2472</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5876	9.8000e-004	0.1080	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2321	0.2321	6.0000e-004		0.2472
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.5876</b>	<b>9.8000e-004</b>	<b>0.1080</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>3.8000e-004</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>0.2321</b>	<b>0.2321</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>0.2472</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert 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	Grading	Grading	1/1/2023	1/31/2023	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 24.35

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

#### OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Excavators	1	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Scrapers	2	8.00	367	0.48

#### Trips and VMT

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Winter

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
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.2400	0.0000	10.2400	3.7657	0.0000	3.7657			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
<b>Total</b>	<b>3.3217</b>	<b>34.5156</b>	<b>28.0512</b>	<b>0.0621</b>	<b>10.2400</b>	<b>1.4245</b>	<b>11.6645</b>	<b>3.7657</b>	<b>1.3105</b>	<b>5.0762</b>		<b>6,011.4777</b>	<b>6,011.4777</b>	<b>1.9442</b>		<b>6,060.0836</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Winter

**3.2 Grading - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0708	0.0407	0.4403	1.3500e-003	0.1643	1.0300e-003	0.1653	0.0436	9.4000e-004	0.0445		134.8767	134.8767	3.3300e-003		134.9600
<b>Total</b>	<b>0.0708</b>	<b>0.0407</b>	<b>0.4403</b>	<b>1.3500e-003</b>	<b>0.1643</b>	<b>1.0300e-003</b>	<b>0.1653</b>	<b>0.0436</b>	<b>9.4000e-004</b>	<b>0.0445</b>		<b>134.8767</b>	<b>134.8767</b>	<b>3.3300e-003</b>		<b>134.9600</b>

**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					4.6080	0.0000	4.6080	1.6946	0.0000	1.6946			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
<b>Total</b>	<b>3.3217</b>	<b>34.5156</b>	<b>28.0512</b>	<b>0.0621</b>	<b>4.6080</b>	<b>1.4245</b>	<b>6.0325</b>	<b>1.6946</b>	<b>1.3105</b>	<b>3.0051</b>	<b>0.0000</b>	<b>6,011.4777</b>	<b>6,011.4777</b>	<b>1.9442</b>		<b>6,060.0836</b>

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert County, Winter

**3.2 Grading - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0708	0.0407	0.4403	1.3500e-003	0.1643	1.0300e-003	0.1653	0.0436	9.4000e-004	0.0445		134.8767	134.8767	3.3300e-003		134.9600
<b>Total</b>	<b>0.0708</b>	<b>0.0407</b>	<b>0.4403</b>	<b>1.3500e-003</b>	<b>0.1643</b>	<b>1.0300e-003</b>	<b>0.1653</b>	<b>0.0436</b>	<b>9.4000e-004</b>	<b>0.0445</b>		<b>134.8767</b>	<b>134.8767</b>	<b>3.3300e-003</b>		<b>134.9600</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

CVWD Replenishment Project - Berm Reconstruction only - San Bernardino-Mojave Desert 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.561207	0.034889	0.182561	0.109119	0.013494	0.004661	0.018668	0.065354	0.001366	0.001451	0.005650	0.000795	0.000784

5.0 Energy Detail

Historical Energy Use: N

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**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	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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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	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5876	9.8000e-004	0.1080	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2321	0.2321	6.0000e-004		0.2472
Unmitigated	0.5876	9.8000e-004	0.1080	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2321	0.2321	6.0000e-004		0.2472

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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	lb/day										lb/day					
Architectural Coating	0.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.9400e-003	9.8000e-004	0.1080	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2321	0.2321	6.0000e-004		0.2472
<b>Total</b>	<b>0.5876</b>	<b>9.8000e-004</b>	<b>0.1080</b>	<b>1.0000e-005</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>0.2321</b>	<b>0.2321</b>	<b>6.0000e-004</b>		<b>0.2472</b>

**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3757					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.9400e-003	9.8000e-004	0.1080	1.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004		0.2321	0.2321	6.0000e-004		0.2472
<b>Total</b>	<b>0.5876</b>	<b>9.8000e-004</b>	<b>0.1080</b>	<b>1.0000e-005</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>3.8000e-004</b>	<b>3.8000e-004</b>		<b>0.2321</b>	<b>0.2321</b>	<b>6.0000e-004</b>		<b>0.2472</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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**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
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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