APPENDIX B

AIR QUALITY AND GREENHOUSE GAS EMISSIONS TECHNICAL STUDY

AIR QUALITY & GREENHOUSE GAS IMPACT ANALYSIS

FOR

SOUTH VALLEY WATER BANK PROJECT

TULARE COUNTY, CA

NOVEMBER 2014

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LIST OF COMMON TERMS & ACRONYMS

AAM	Annual Arithmetic Mean
AQAP	Air Quality Attainment Plan
CAAQS	California Ambient Air Quality Standards
ARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DPM	Diesel-Exhaust Particulate Matter or Diesel-Exhaust PM
DRRP	Diesel Risk Reduction Plan
FCAA	Federal Clean Air Act
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutant
IPCC	Intergovernmental Panel on Climate Change
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards or National AAQS
NESHAPs	National Emission Standards for HAPs
NO_x	Oxides of Nitrogen
OAP	Ozone Attainment Plan
O_3	Ozone
Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate Matter (less than 10 µm)
$PM_{2.5}$	Particulate Matter (less than 2.5 µm)
ppb	Parts per Billion
ppm	Parts per Million
ROG	Reactive Organic Gases
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	Sulfur Dioxide
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminant
TSCA	Toxic Substances Control Act
$\mu g/m^3$	Micrograms per cubic meter
U.S. EPA	United State Environmental Protection Agency

INTRODUCTION

This report provides a description of the existing environment in the project area and identifies potential impacts associated with the proposed project in relation to regional and local air quality; as well as, increased emissions of greenhouse gases (GHGs). Project impacts are evaluated relative to the applicable California Environmental Quality Act (CEQA) Guidelines, Appendix G, Environmental Checklist questions. Mitigation measures have been identified for significant and potentially significant impacts.

PROPOSED PROJECT SUMMARY

The proposed water bank is a 30,000 acre-feet per year dry year return water bank. The project includes a 560 acre dedicated recharge basins with a well field of eleven recovery wells located within the facility boundaries. The project also includes 2,200 acres of in-lieu banking area with five groundwater recovery wells. The proposed project area is depicted in **Figure 1**.

AIR QUALITY

EXISTING SETTING

The project is located within the County of Tulare, within the San Joaquin Valley Air Basin (SJVAB). The SJVAB is within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). Air quality in the SJVAB is influenced by a variety of factors, including topography, local and regional meteorology. Factors affecting regional and local air quality are discussed below.

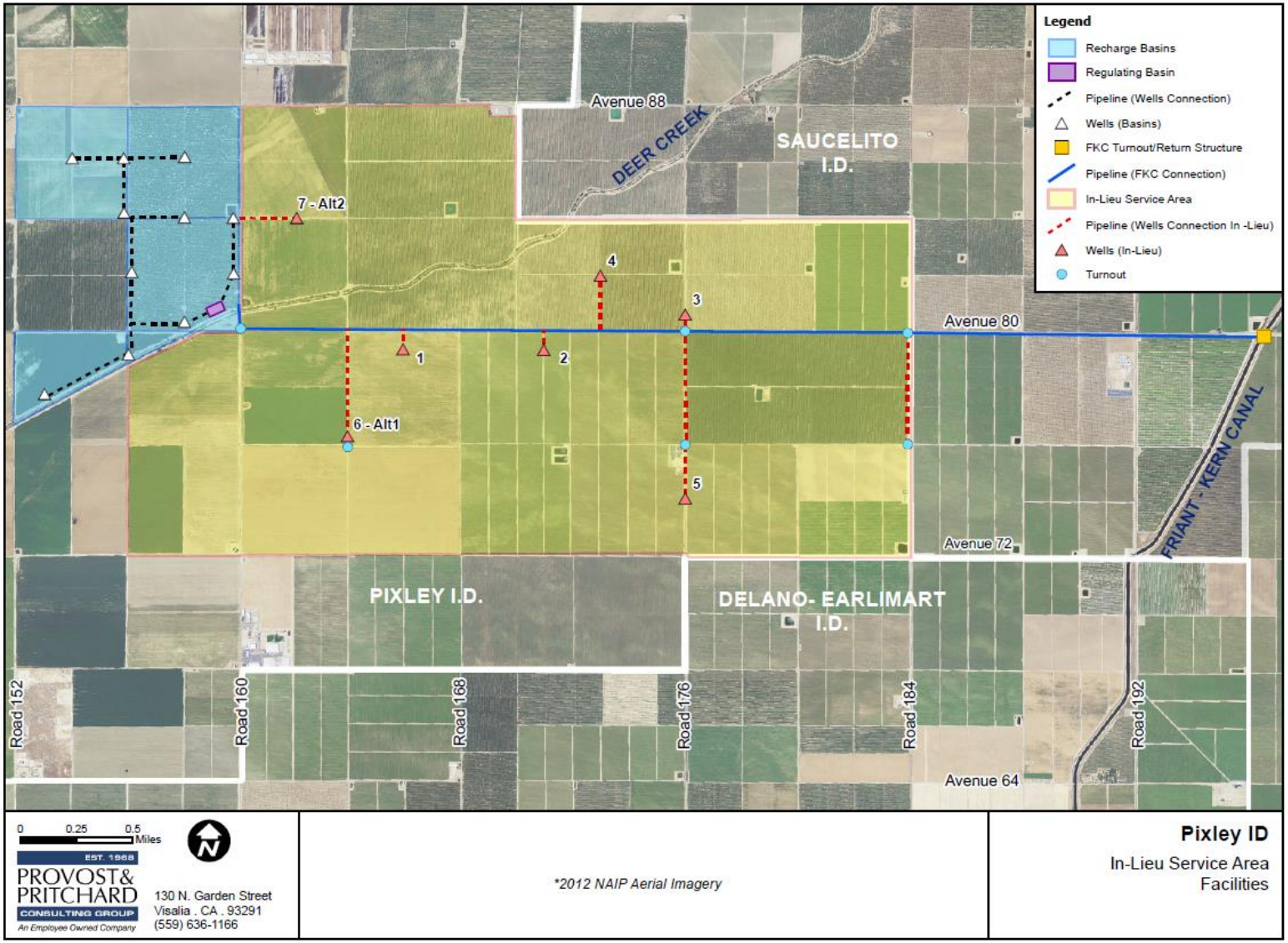
TOPOGRAPHY, METEOROLOGY, AND POLLUTANT DISPERSION

The dispersion of air pollution in an area is determined by such natural factors as topography, meteorology, and climate, coupled with atmospheric stability conditions and the presence of inversions. The factors affecting the dispersion of air pollution with respect to the SJVAB are discussed below.

Topography

The SJVAB occupies the southern half of the Central Valley. The SJVAB is open to the north, and is surrounded by mountain ranges on all other sides. The Coast Ranges, which have an average elevation of 3,000 feet, are along on the western boundary of the SJVAB, while the Sierra Nevada Mountains (8,000 to 14,000 feet in elevation) are along the eastern border. The San Emigdio Mountains, which are part of the Coast Ranges, and the Tehachapi Mountains, which are part of the Sierra Nevada, form the southern boundary, and have an elevation of 6,000 to 8,000 feet. The SJVAB is mostly flat with a downward gradient in terrain to the northwest.

Figure 1
Proposed Project Location and Facilities



Meteorology and Climate

The SJVAB has an inland Mediterranean climate that is strongly influenced by the presence of mountain ranges. The mountain ranges to the west and south induce winter storms from the Pacific Ocean to release precipitation on the western slopes producing a partial rain shadow over the valley. In addition, the mountain ranges block the free circulation of air to the east, trapping stable air in the valley for extended periods during the cooler half of the year.

Winter in the SJVAB is characterized as mild and fairly humid, while the summer is typically hot, dry, and cloudless. The climate is a result of the topography and the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer months, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface as a result of the northwesterly flow produces a band of cold water off the California coast. In winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms.

The annual temperature, humidity, precipitation, and wind patterns reflect the topography of the SJVAB and the strength and location of the semi-permanent, subtropical high-pressure cell. Summer temperatures that often exceed 100 degrees Fahrenheit (°F) and clear sky conditions are favorable to ozone formation. Most of the precipitation in the valley occurs as rainfall during winter storms. The winds and unstable atmospheric conditions associated with the passage of winter storms result in periods of low air pollution and excellent visibility. However, between winter storms, high pressure and light winds lead to the creation of low-level temperature inversions and stable atmospheric conditions, which can result in higher pollutant concentrations. The orientation of the wind flow pattern in the SJVAB is parallel to the valley and mountain ranges. Summer wind conditions promote the transport of ozone and precursors from the San Francisco Bay Area through the Carquinez Strait, a gap in the Coast Ranges, and low mountain passes such as Altamont Pass and Pacheco Pass. During the summer, predominant wind direction is from the northwest. During the winter, the predominant wind direction is from the southeast. Calm conditions are also predominant during the winter (ARB 1992).

The climate is semi-arid, with an annual normal precipitation of approximately 12 inches. Temperatures in the project area range from a normal minimum of 46°F, in January, to a normal maximum of 82°F, in July (NOAA 1992).

Atmospheric Stability and Inversions

Stability describes the resistance of the atmosphere to vertical motion. The stability of the atmosphere is dependent on the vertical distribution of temperature with height. Stability categories range from "Extremely Unstable" (Class A), through Neutral (Class D), to "Stable" (Class F). Unstable conditions often occur during daytime hours when solar heating warms the lower atmospheric layers sufficiently. Under Class A stability conditions, large fluctuations in horizontal wind direction occur coupled with large vertical mixing depths. Under Class B stability conditions, wind direction fluctuations and the vertical mixing depth are less pronounced because of a decrease in the amount of solar heating. Under Class C stability conditions, solar heating is weak along with horizontal and vertical fluctuations because of a combination of thermal and mechanical turbulence. Under Class D stability conditions, vertical motions are primarily generated by mechanical turbulence. Under Class E and Class F stability conditions, air pollution emitted into the atmosphere travels downwind with poor dispersion. The dispersive power of the atmosphere decreases with progression through the categories from A to F.

With respect to the SJVAB, Classes D through F are predominant during the late fall and winter because of cool temperatures and entrapment of cold air near the surface. March and August are transition months with equally occurring percentages of Class F and Class A. During the spring months of April and May and the summer months of June and July, Class A is predominant. The fall months of September, October, and November have comparable percentages of Class A and Class F.

An inversion is a layer of warmer air over a layer of cooler air. Inversions influence the mixing depth of the atmosphere, which is the vertical depth available for diluting air pollution near the ground, thus significantly affecting air quality conditions. The SJVAB experiences both surface-based and elevated inversions. The shallow surface-based inversions are present in the morning but are often broken by daytime heating of the air layers near the ground. The deep elevated inversions occur less frequently than the surface-based inversions but generally result in more severe stagnation. The surface-based inversions occur more frequently in the fall, and the stronger elevated inversions usually occur during December and January.

CRITERIA AIR POLLUTANTS

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air without harm to the public's health. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. The FCAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

Human Health & Welfare Effects

Common air pollutants and associated adverse health and welfare effects are summarized in **Table 1**. Within the SJVAB, the air pollutants of primary concern, with regard to human health, include ozone, particulate matter (PM) and carbon monoxide (CO). As depicted in **Table 1**, exposure to increased pollutant concentrations of ozone, PM and CO can result in various heart and lung ailments, cardiovascular and nervous system impairment, and death.

ODORS

Typically odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food

Table 1
Common Pollutants & Adverse Effects

Pollutant	Human Health & Welfare Effects
Particulate Matter (PM_{10} & $PM_{2.5}$)	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Ozone (O_3)	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles and dyes.
Sulfur Dioxide (SO_2)	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2010

restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The SJVAPCD does not have an individual rule or regulation that specifically addresses odors; however, odors would be applicable to SJVAPCD's *Rule 4102, Nuisance*. Any actions related to odors would be based on citizen complaints to local governments and the SJVAPCD. The SJVAPCD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine if the Project results in excessive nuisance odors, as defined under the California Code of Regulations, Health & Safety Code Section 41700, air quality public nuisance.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA), and are thus not subject to National or California ambient air quality standards (NAAQS and CAAQS, respectively). TACs are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of NAAQS or CAAQS. Instead, the U.S. EPA and the California Air Resources Board (ARB) regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the ARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, Diesel-exhaust particulate matter (DPM) was added to the ARB list of TACs. DPM is the primary TACs of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The ARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (ARB 2005).

At the local level, air districts have the authority over stationary or industrial sources. All projects that require air quality permits from the SJVAPCD are evaluated for TAC emissions. The SJVAPCD limits emissions and public exposure to TACs through a number of programs. The SJVAPCD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SJVAPCD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588. No major existing sources of TACs have been identified in the project area.

ASBESTOS

The term "asbestos" describes naturally occurring fibrous minerals found in certain types of rock formations. It is a mineral compound of silicon, oxygen, hydrogen, and various metal cations. When mined and processed, asbestos is typically separated into very thin fibers. When these fibers are present in the air, they are normally invisible to the naked eye. Once airborne, asbestos fibers can cause serious health problems. If inhaled, asbestos fibers can impair normal lung functions, and increase the risk of developing lung cancer, mesothelioma, or asbestosis.

Naturally-occurring asbestos, which was identified as a TAC in 1986 by ARB, is located in many parts of California and is commonly associated with ultramafic rock. The project site is not located in an area of known or suspected naturally-occurring asbestos. Refer to **Appendix A**.

AMBIENT AIR QUALITY

Air pollutant concentrations are measured at several monitoring stations in Tulare County. The Porterville-1839 Newcomb Street Monitoring Station is the closest representative monitoring site to the proposed project site with sufficient data to meet U.S. EPA and/or ARB criteria for quality assurance. This monitoring station monitors ambient concentrations of ozone. Measured concentrations of nitrogen dioxide and airborne particulates are monitored at the Visalia-N. Church Street Monitoring Station. Ambient monitoring data were obtained for the last three years of available measurement data (i.e., 2011 through 2013) and are summarized in **Table 2**. As depicted, the state (1-hour) and federal ozone, $PM_{2.5}$, and PM_{10} standards were exceeded on numerous occasions during the past 3 years.

SENSITIVE RECEPTORS

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refer to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

Sensitive land uses located in the project area consist predominantly of rural residential land uses located at varying distances from the project area.

Table 2
Summary of Ambient Air Quality Monitoring Data

Pollutant	Monitoring Year		
	2011	2012	2013
Ozone(1)			
Maximum concentration (1-hour/8-hour average)	0.104/0.095	0.102/0.092	0.112/0.103
Number of days state/national 1-hour standard exceeded	15/0	10/0	5/0
Number of days state/national 8-hour standard exceeded	47/82	44/80	23/52
Nitrogen Dioxide (NO_2)(2)			
Maximum concentration (1-hour average)	58	61	62
Annual average	12	12	12
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter ($PM_{2.5}$)(2)			
Maximum concentration (state/national)	66.5/68.1	91.3/86.1	114.3/114.0
Annual Average (national/state)	16.0/16.1	14.7/14.8	18.9/18.7
Number of days national standard exceeded (measured/calculated)(3)	9/27.9	7/22.0	14/46.5
Suspended Particulate Matter (PM_{10})(2)			
Maximum concentration (state/national)	76.6/78.1	76.2/75.7	160.0/155.0
Number of days state standard exceeded (measured/calculated)(3)	11/68.8	15/89.3	16/94.0
Number of days national standard exceeded (measured/calculated)(3)	0/0	0/0	1/3.3

ppm = parts per million by volume, $\mu g/m^3$ = micrograms per cubic meter, NA=Not Available
1 Based on ambient concentrations obtained from the Porterville-1839 Newcomb St.Monitoring Station.
2 Based on ambient concentrations obtained from the Visalia-N.Church St.Monitoring Station
3. Measured days are those days that an actual measurement was greater than the standard. Calculated days are estimated days that a measurement would have exceeded the standard had measurements been collected every day.
Source: ARB 2014

REGULATORY FRAMEWORK

Air quality within the SJVAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the SJVAPCD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL

U.S. Environmental Protection Agency

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the U.S. EPA to establish National Ambient Air Quality Standards (NAAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in **Table 3**.

Table 3
Summary of Ambient Air Quality Standards & Attainment Designations

Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Non-Attainment	–	Non-Attainment (Extreme)**
	8-hour	0.070 ppm		0.075 ppm	
Particulate Matter (PM_{10})	AAM	20 µg/m3	Non-Attainment	–	Attainment
	24-hour	50 µg/m3		150 µg/m3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m3	Non-Attainment	15 µg/m3	Non-Attainment
	24-hour	No Standard		35 µg/m3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Maintenance
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	0.053 ppm	Attainment/ Unclassified
	1-hour	0.18 ppm		0.100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	0.03 ppm	Attainment/ Unclassified
	24-hour	0.04 ppm		0.14 ppm	
	3-hour	–		--	
	1-hour	0.25 ppm		75 ppb	
Lead	30-day Average	1.5 µg/m3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		1.5 µg/m3	
	Rolling 3-Month Average	–		0.15 µg/m3	
Sulfates	24-hour	25 µg/m3	Attainment	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m3)	Unclassified		
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.	Unclassified		

** For more information on standards visit :http//ww.arb.ca.gov.research/aaqs/aaqs2.pdf*
*** No federal 1-hour standard. Reclassified extreme nonattainment for the federal 8-hour standard May 5, 2010.*
****Secondary Standard*
Source: ARB 2013; SJVAPCD 2013

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance with the mandates of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) first authorized the U.S. EPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies (LEAs) to inspect their schools for ACBM and prepare management plans to reduce the asbestos hazard. The Act also established a program for the training and accreditation of individuals performing certain types of asbestos work.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP). These are technology-based source-specific regulations that limit allowable emissions of HAPs.

STATE

California Air Resources Board

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in **Table 3**. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

California Assembly Bill 170

Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003 creating Government Code Section 65302.1 which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies and feasible implementation strategies designed to improve air quality.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the SJVAB, within which the proposed project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

The SJVAPCD Rules and Regulations that are applicable to the proposed project include, but are not limited to, the following:

- *Regulation VIII (Fugitive Dust Prohibitions). Regulation VIII (Rules 8011-8081).* This regulation is a series of rules designed to reduce particulate emissions generated by human activity, including construction and demolition activities, carryout and trackout, paved and unpaved roads, bulk material handling and storage, unpaved vehicle/traffic areas, open space areas, etc. If a non-residential area is 5.0 or more acres in area, a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021. Additional requirements may apply, depending on total area of disturbance.

REGULATORY ATTAINMENT DESIGNATIONS

Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified"

designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The state and national attainment status designations pertaining to the SJVAB are summarized in **Table 3**. The SJVAB is currently designated as a nonattainment area with respect to the state PM_{10} standard, ozone, and $PM_{2.5}$ standards. The SJVAB is designated nonattainment for the national 8-hour ozone and $PM_{2.5}$ standards. On September 25, 2008, the U.S. EPA redesignated the San Joaquin Valley to attainment for the PM_{10} NAAQS and approved the PM_{10} Maintenance Plan (SJVAPCD 2011(a)).

IMPACTS & MITIGATION MEASURES

METHODOLOGY

Short-term Construction-Generated Emissions

Short-term construction emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), version 2013.2.2. Emissions modeling includes emissions generated during site preparation/grading, as well as, the installation of basin and in-lieu bank infrastructure and pipelines. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the project applicant. All remaining assumptions were based on the default parameters contained in the model. Localized air quality impacts associated with the proposed project would be minor and were qualitatively assessed. Modeling assumptions and output files are included in **Appendix B** of this report.

Long-term Operational Emissions

Long-term operational emissions associated with the proposed project were calculated using the CalEEMod, version 2013.2.2. Emissions modeling included the use of off-road equipment and maintenance worker vehicle trips associated with routine maintenance activities. No stationary sources of emissions are proposed. Modeling assumptions and output files are included in **Appendix B** of this report.

Net Changes in Emissions

Net changes in annual emissions were quantified based on a comparison of project-generated emissions to emissions generated by existing agricultural activities. Existing emissions associated with agricultural activities were quantified using CalEEMod, version 2013.2.2, based on operational data provided by the project applicant. Existing operational emissions are summarized in **Table 4**.

Table 4
Existing Agricultural Land Use Emissions of Criteria Air Pollutants

Source	Annual Emissions (tons/year)[1]				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Agricultural Pumps (Natural Gas Fueled)	0.09	0.85	0.55	0.03	0.03
Off-road Equipment-Orchard	0.01	0.07	0.05	0.01	0.01
Off-road Equipment-Field Crop	0.01	0.07	0.04	0.00	0.00
Worker Vehicle Trips-Orchard	0.00	0.00	0.01	0.00	0.00
Worker Vehicle Trips-Field Crop	0.00	0.00	0.01	0.00	0.00
Total:	0.10	1.00	0.65	0.04	0.04

Emissions were quantified using CalEEMod, version 2013.2.2. Refer to ***Appendix B*** *for modeling results and assumptions. Totals may not sum due to rounding.*

THRESHOLDS OF SIGNIFICANCE

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2002). This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

- Short-term Emissions of Particulate Matter (PM_{10})—Construction impacts associated with the proposed project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 15 tons per year (TPY).
- Short-term Emissions of Ozone Precursors (ROG and NO_x)—Construction impacts associated with the proposed project would be considered significant if the project generates emissions of ROG or NO_X that exceeds 10 TPY.
- Long-term Emissions of Particulate Matter (PM_{10})—Operational impacts associated with the proposed project would be considered significant if the project generates emissions of PM_{10} that exceed 15 TPY.
- Long-term Emissions of Ozone Precursors (ROG and NO_x)—Operational impacts associated with the proposed project would be considered significant if the project generates emissions of ROG or NO_X that exceeds 10 TPY.
- Conflict with or Obstruct Implementation of Applicable Air Quality Plan—Due to the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} would exceed the SJVAPCD's significance thresholds, then the project would be considered to conflict with the attainment plans. In addition, if the project would

result in a change in land use and corresponding increases in vehicle miles traveled, the project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

- Local Mobile-Source CO Concentrations—Local mobile source impacts associated with the proposed project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e., 9.0 ppm for 8 hours or 20 ppm for 1 hour).
- Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.
- Odor impacts associated with the proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors. For projects locating near a source of odors where there is no nearby development that may have filed complaints, and for odor sources locating near existing sensitive receptors, the SJVAPCD requires the determination of potential conflict to be based on the distance and frequency at which odor complaints from the public have occurred in the vicinity of a similar facility. For existing odor sources, a significant impact to nearby receptors would occur if the existing facility has: (1) more than one confirmed complaint per year averaged over a three-year period; or (2) three unconfirmed complaints averaged over a three-year period.

PROJECT IMPACTS

Impact AQ-1: *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

As noted in Impact AQ-2, implementation of the proposed project would not result in short-term or long-term increases in emissions that would exceed applicable thresholds of significance. Proposed projects that would not exceed the recommended thresholds would not be considered to conflict with or obstruct the implementation of applicable air quality plans. This impact would be considered **less than significant**.

Impact AQ-2: *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? and,*

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Short-term Construction-Generated Emissions

Short-term increases in emissions would occur during the construction process. Construction-generated emissions are of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact. The construction of

the proposed project would result in the temporary generation of emissions associated with site grading and excavation, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces.

Estimated construction-generated emissions are summarized in **Table 5**. As indicated, construction of the proposed project would generate maximum uncontrolled annual emissions of approximately 0.8 tons/year of ROG, 9.26 tons/year of NO_x, 5.36 tons/year of CO, 1.77 tons/year of PM_{10}, and 0.58 tons/year of $PM_{2.5}$. Estimated construction-generated emissions would not exceed the SJVAPCD's significance thresholds of 10 tons/year of ROG, 10 tons/year of NO_x, or 15 tons/year PM_{10}.

It is important to note that the proposed project would be required to comply with SJVPACD Regulation VIII (Fugitive PM_{10} Prohibitions). Mandatory compliance with SJVAPCD Regulation VIII would further reduce emissions of fugitive dust from the project site, and adequately minimize the project's potential to adversely affect nearby sensitive receptors to localized PM impacts. With compliance with SJVAPCD Regulation VIII, maximum annual emissions of PM would be reduced to less than one tons/year.

Given that the proposed project would be required to comply with SJVAPCD Regulation VIII and that project generated emissions would not exceed applicable SJVAPCD significance thresholds, construction-generated emissions of ozone-precursor pollutants (i.e., ROG and NO_X) and PM would be considered ***less than significant***.

Table 5
Short-term Construction-Generated Emissions of Criteria Air Pollutants

Construction Activity	Construction Year	Annual Emissions (Tons/Year)[1]				
		ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Recharge Basin Site Preparation	2015	0.03	0.32	0.25	0.11	0.07
Recharge Basin Grading	2015	0.77	8.95	5.12	1.67	0.51
Recharge Basin Infrastructure	2016	0.06	0.70	0.41	0.03	0.03
In-Lieu Banking Construction	2016	0.04	0.42	0.25	0.02	0.02
Lift Station Construction	2016	0.05	0.51	0.30	0.04	0.02
Pipeline Construction	2016-2017	0.17	1.85	1.15	0.09	0.08
Total Annual Emissions by Construction Year						
	2015	*0.80*	*9.26*	*5.36*	*1.77*	*0.58*
	2016	*0.32*	*3.49*	*2.20*	*0.19*	*0.16*
	2017	*0.08*	*0.83*	*0.58*	*0.04*	*0.04*
SJVAPCD Significance Thresholds:		*10*	*10*	*None*	*15*	*None*
Exceed SJVAPCD Thresholds?		*No*	*NA*	*No*	*No*	*NA*

*1. Emissions were quantified using CalEEMod, version 2013.2.2. Refer to **Appendix B** for modeling results and assumptions. Totals may not sum due to rounding.*

Long-term Operational Emissions

Long-term operation of the proposed project would result in emissions generated by routine maintenance activities, including the occasional use of off-road equipment and worker vehicle trips. Estimated operational emissions are summarized in **Table 6**. As indicated, operation of the proposed project would generate maximum uncontrolled annual emissions of approximately 0.4 tons/year of NO_X, and 0.03 tons/year of CO. Emissions of ROG, and PM would be negligible. Estimated operational emissions would not exceed the SJVAPCD's significance thresholds of 10 tons/year of ROG, 10 tons/year of NO_x, or 15 tons/year PM_{10}. In comparison to emissions generated by existing agricultural uses, the proposed project would result in an overall net reduction in annual emissions. This impact would be considered ***less than significant***.

Table 6
Long-term Operational Emissions of Criteria Air Pollutants

Source	Annual Emissions (tons/year)(1)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Off-Road Maintenance Equipment	0.00	0.04	0.03	0.00	0.00
Maintenance Worker Vehicle Trips	0.00	0.00	0.00	0.00	0.00
Total Proposed Project Emissions:	0.00	0.04	0.03	0.00	0.00
Net Change Compared to Existing Conditions:	*-0.1*	*-0.09*	*-0.63*	*-0.04*	*-0.04*
SJVAPCD Significance Thresholds:	*10*	*10*	*None*	*15*	*None*
Exceed SJVAPCD Thresholds?	*No*	*NA*	*No*	*No*	*NA*

*Emissions were quantified using CalEEMod, version 2013.2.2. Refer to **Appendix B** for modeling results and assumptions. Totals may not sum due to rounding. Existing emissions are summarized in **Table 4**.*

Impact AQ-3: *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Toxic Air Contaminants

Implementation of the proposed project would not result in the long-term operation of any major onsite stationary sources of TACs, nor would project implementation result in an increase in vehicle trips along area roadways, in comparison to existing conditions. However, construction of the proposed project may result in temporary increases in emissions of diesel-exhaust particulate matter (DPM) associated with the use of off-road diesel equipment. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure of to TACs are typically calculated based on a long-term (e.g., 70-year) period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively large area. Construction activities would occur over an approximate three-year construction period, which would constitute approximately 4 percent of the typical 70-year exposure period. As a result, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e., incremental increase in cancer risk of 10 in one million).

Although construction emissions would not be anticipated to result in long-term health impacts that would exceed applicable thresholds, short-term exposure to DPM could still result in potential health effects. The type and severity of health effects depends upon several factors including the dose of the pollutant the individual is exposed to and the duration of exposure. Short-term exposure to DPM may cause irritation to the eyes, nose, throat and lungs, as well as, some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. These potential health effects are of particular concern among the more sensitive members of the population, such as children, the elderly, and individuals suffering from lung ailments (e.g., asthma). Given that some construction activities could potentially occur near existing rural residential dwellings, this impact would be considered ***potentially significant***.

Naturally Occurring Asbestos

Naturally-occurring asbestos, which was identified by ARB as a TAC in 1986, is located in many parts of California and is commonly associated with ultramafic rock. The project site is not located near any areas that are likely to contain ultramafic rock (DOC 2000). As a result, risk of exposure to asbestos during the construction process would be considered ***less than significant***.

Fugitive Dust

Construction of the proposed project would include ground-disturbing activities which would be anticipated to result in increased emissions of airborne particulate matter. The proposed project would be required to comply with SJVPACD Regulation VIII (Fugitive PM_{10} Prohibitions). Mandatory compliance with SJVAPCD Regulation VIII would reduce emissions of fugitive dust from the project site, and adequately minimize the project's potential to adversely affect nearby sensitive receptors to localized PM impacts. As a result, localized emissions of airborne particulate matter emitted during construction would be considered ***less than significant***.

Mitigation Measures

MM AQ-1: The following measures shall be implemented to reduce mobile-source emissions associated with the use of off-road construction equipment:

a. When not in use, construction equipment shall be turned off and shall not be allowed to idle.

b. Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

c. Low-emission off-road construction equipment shall be used. At a minimum, construction equipment, 50 hp and greater, shall meet U.S. EPA Tier II emission standards.

Significance After Mitigation

Implementation of the above mitigation measures would limit unnecessary idling of diesel-fueled construction equipment and would require the use of newer, cleaner-burning equipment. With mitigation and given that construction activities would be short-term; this impact would be considered ***less than significant***.

Impact AQ-4: *Would the project create objectionable odors affecting a substantial number of people?*

Implementation of the proposed project would not result in long-term emissions of odors. However, construction of the proposed project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition pavement coatings used during project construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, potential short-term exposure of sensitive receptors to odorous emissions would be considered ***less than significant***.

GREENHOUSE GASES AND CLIMATE CHANGE

This section describes the existing setting related to climate change, including a summary of the regulatory framework. Potential GHG impacts associated with the proposed project are evaluated. Emissions modeling assumptions and output files are included in **Appendix B**.

EXISTING SETTING

The earth's climate has been warming for the past century. It is believed that this warming trend is related to the release of certain gases into the atmosphere. Greenhouse gases (GHG) absorb infrared energy that would otherwise escape from the earth. As the infrared energy is absorbed, the air surrounding the earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past two decades. The 10 warmest years of the last century all occurred within the last 15 years. It appears that the decade of the 1990s was the warmest in human history [NOAA 2010]. Human activities have been attributed to an increase in the atmospheric abundance of greenhouse gases. The following is a brief description of the most commonly recognized GHGs.

GREENHOUSE GASES

Commonly identified GHG emissions and sources include the following:

- *Carbon dioxide (CO_2)* is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
- *Methane (CH_4)* is a flammable greenhouse gas. A natural source of methane is from the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.
- *Nitrous oxide (N_20)*, also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.
- *Water vapor* is the most abundant, important, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.
- *Ozone* is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.
- *Aerosols* are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

- *Hydrofluorocarbons (HFCs)* are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. The global warming potential is the potential of a gas to contribute to global warming; it is based on a reference scale with carbon dioxide at one. HFCs are human-made for applications such as air conditioners and refrigerants.
- *Chlorofluorocarbons (CFCs)* are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987. The project would not emit CFCs.
- *Perfluorocarbons (PFCs)* have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. The project would not emit PFCs.
- *Sulfur hexafluoride (SF6)* is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. The project would not emit SF6.

EFFECTS OF CLIMATE CHANGE

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth, and what the effects of clouds will be in determining the rate at which the mean temperature will increase. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, air pollution episodes, and the consequence of these effects on the economy.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with industrial/manufacturing, utility, transportation, residential, and agricultural sectors. About three-quarters of human emissions of CO_2 to the global atmosphere during the past 20 years are due to fossil fuel burning. Atmospheric concentrations of CO_2, CH_4, and N_2O have increased 31 percent, 151 percent, and 17 percent respectively since the year 1750 (CEC 2008). GHG emissions are typically expressed in carbon dioxide-equivalents (CO_2e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 21 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2.

REGULATORY FRAMEWORK

FEDERAL

Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the U.S. EPA nor the Federal Highway Administration (FHWA) has promulgated explicit guidance or methodology to conduct project-level GHG analysis. However, the FHWA recommends that climate change impacts and strategies to reduce GHG emissions should considered and integrated throughout the transportation decision-making process. Such strategies include implementation of improved transportation system efficiency, use of cleaner fuels and cleaner vehicles, and a reduction in the growth of vehicle hours travelled. Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - Federal Leadership in Environmental, Energy and Economic Performance (Caltrans 2013).

Executive Order 13514

Executive Order 13514 is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change (Caltrans 2013).

On April 2, 2007, in Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision (Caltrans 2013).

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act (Caltrans 2013):

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps

include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles (Caltrans 2013).

STATE

Assembly Bill 1493

Assembly Bill (AB) 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the California Air Resources Board (ARB) to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the Clean Air Act, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the USEPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the USEPA related to this denial.

In January 2009, President Obama instructed the USEPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the USEPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order No. S-3-05

Executive Order No. S-3-05 was signed on June 1, 2005, by former Governor Arnold Schwarzenegger. The goal of this EO is to reduce California's GHG emissions to: 1) year 2000 levels by 2010, 2) year 1990 levels by the 2020, and 3) 80 percent below the year 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Executive Order S-6-06

Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, ARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of CO_2e, or approximately 30 percent from the state's projected 2020 emissions level of 596 $MMTCO_2e$ under a business-as-usual scenario (this is a reduction of 42 $MMTCO_2e$, or almost 10 percent, from 2002–2004 average emissions). The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 $MMTCO_2e$), implementation of the Low Carbon Fuel Standard (15.0 $MMTCO_2e$) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 $MMTCO_2e$), and a renewable portfolio standard for electricity production (21.3 $MMTCO_2e$). The Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008.

A key component of the Scoping Plan is the Renewable Portfolio Standard, which is intended to increase the percentage of renewables in California's electricity mix to 33 percent by year 2020, resulting in a reduction of 21.3 $MMTCO_2e$. Sources of renewable energy include, but are not limited to, biomass, wind, solar, geothermal, hydroelectric, and anaerobic digestion. Increasing the use of renewables will decrease California's reliance on fossil fuels, thus reducing GHG emissions.

The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, ARB is also developing an additional protocol for community emissions.) ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects approximately 5.0 $MMTCO_2e$ will be achieved associated with implementation of Senate Bill 375, which is discussed further below. The Climate Change Proposed Scoping Plan was approved by ARB on December 11, 2008.

The First Update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals. ARB's Key Action for the Waste Sector focused on eliminating organics from the landfill starting in 2016 and financing the in-state infrastructure development of composting and anaerobic digestion facilities. ARB's Key Action for Short-lived Climate Pollutants such as methane is to develop a comprehensive strategy by 2015 which will focus on methane generated at landfills from the disposal of organic wastes.

Senate Bill 97 - CEQA: Greenhouse Gas Emissions

Senate Bill 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009. The Resources Agency is required to certify or adopt those guidelines by January 1, 2010. Amendments to the CEQA guidelines took effect March 18, 2010. The revisions include a new section (Sec. 15064.4) that specifically addresses the potential significance of GHG emissions. Section 15064.4 calls for a "good-faith effort" to "describe, calculate or estimate" GHG emissions; Section 15064.4 further states that the analysis of the significance of any GHG impacts should include consideration of the extent to which the project would increase or reduce GHG emissions; exceed a locally applicable threshold of significance; and comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions." The guidelines also state that a project may be found to have a less-than-significant impact on GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (Sec. 15064(h)(3)). However, the guidelines do not require or recommend a specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions.

This bill also protected projects until January 1, 2010 that were funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness

and Flood Protection Bond Act of 2006 (Proposition 1B or 1E) from claims of inadequate analysis of GHG as a legitimate cause of action. Thus, this "protection" is highly limited to a handful of projects and for a short time period (CAPCOA 2008).

Senate Bill 1368

Senate Bill (SB) 1368 (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a greenhouse gas emissions performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and the CEC.

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standards)

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. The proposed project area would receive energy service from the investor-owned Pacific Gas and Electric Company.

Prior to the Executive Order, the CPUC and the CEC were responsible for implementing and overseeing the Renewables Portfolio Standard. The Executive Order shifted that responsibility to ARB, requiring it to adopt regulations by July 31, 2010. ARB is required by current law, AB 32 of 2006, to regulate sources of greenhouse gases to meet a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The CEC and CPUC are expected to serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. Additionally, the CEC and CPUC will continue their implementation and administration of the 20 percent requirement. The Executive Order also stipulates that ARB may delegate to the CPUC and CEC any policy development or program implementation responsibilities that would reduce duplication and improve consistency with other energy programs. ARB is also authorized to increase the target and accelerate and expand the time frame.

The general definition under the State Renewables Portfolio Standard for biomass is any organic material not derived from fossil fuels, including agricultural crops, agricultural wastes and residues, waste pallets, crates, dunnage, manufacturing, and construction wood wastes, landscape and right-of-way tree trimmings, mill residues that result from milling lumber, rangeland maintenance residues, sludge derived from organic matter, and wood and wood waste from timbering operations. Biomass feedstock from state and national forests is allowable under the definition.

Executive Order S-13-08: The Climate Adaptation and Sea Level Rise Planning Directive

On November 14, 2008, Governor Schwarzenegger issued Executive Order S-13-08 in order to reduce and assess California's vulnerability to climate change and sea level rise. The Executive Order initiated four major actions:

- Initiate California's first statewide climate change adaptation strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable, and recommend climate adaptation policies by early 2009.

- Request the National Academy of Sciences establish an expert panel to report on sea level rise impacts in California to inform state planning and development efforts.

- Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects.

- Initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise. This report was released in 2009 as the California Adaptation Strategy (CNRA 2009).

Mandatory Reporting of Greenhouse Gas Emissions

Reporting of greenhouse gases by major sources is required by the California Global Warming Solutions Act (AB 32, 2006). Revisions to the existing ARB mandatory GHG reporting regulation were considered at the board hearing on December 16, 2010. The revised regulation was approved by the California Office of Administrative Law and became effective on January 1, 2012. The revised regulation affects industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013 and apply to large electric power plants and large industrial plants. In 2015, they will extend to fuel distributors (including distributors of heating and transportation fuels). At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total greenhouse gas emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions, and are free to buy and sell allowances on the open market. California held its first auction of greenhouse gas allowances on November 14, 2012. California's GHG cap-and-trade system will reduce GHG emissions from regulated entities by approximately 16 percent, or more, by 2020.

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

SJVAPCD Climate Change Action Plan

On August 21, 2008, the SJVAPCD Governing Board approved the District's Climate Change Action Plan with the following goals and actions:

Goals:

- Assist local land-use agencies with California Environmental Quality Act (CEQA) issues relative to projects with GHG emissions increases.
- Assist Valley businesses in complying with mandates of AB 32.
- Ensure that climate protection measures do not cause increase in toxic or criteria pollutants that adversely impact public health or environmental justice communities.

Actions:

- Authorize the Air Pollution Control Officer to develop GHG significance threshold(s) or other mechanisms to address CEQA projects with GHG emissions increases. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in the spring of 2009.
- Authorize the Air Pollution Control Officer to develop necessary regulations and instruments for establishment and administration of the San Joaquin Valley Carbon Exchange Bank for voluntary GHG reductions created in the Valley. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in spring 2009.
- Authorize the Air Pollution Control Officer to enhance the District's existing criteria pollutant emissions inventory reporting system to allow businesses subject to AB32 emission reporting requirements to submit simultaneous streamlined reports to the District and the state of California with minimal duplication.
- Authorize the Air Pollution Control Officer to develop and administer voluntary GHG emission reduction agreements to mitigate proposed GHG increases from new projects.
- Direct the Air Pollution Control Officer to support climate protection measures that reduce GHG emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted area.

SJVAPCD CEQA Greenhouse Gas Guidance.

On December 17, 2009, the SJVAPCD Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA" and the policy, "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project specific greenhouse gas emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, that their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their greenhouse gas emissions, whether through project design elements or mitigation.

The SJVAPCD's approach is intended to streamline the process of determining if project-specific greenhouse gas emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified final CEQA document.

Best performance standards (BPS) to address operational emissions of a project would be established according to performance-based determinations. Projects complying with BPS would not require specific quantification of GHG emissions and would be determined to have a less than significant cumulative impact for GHG emissions. Projects not complying with BPS would require quantification of GHG emissions and demonstration that operational greenhouse gas emissions have been reduced or mitigated by 29 percent, as targeted by ARB's AB 32 Scoping Plan. Furthermore, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an Environmental Impact Report is required, regardless of whether the project incorporates BPS.

APR 2025 – CEQA Determinations of Significance for Projects Subject to ARB's Cap-and-Trade Regulation

The purpose of this policy is to provide guidance for the determination of significance for increases of GHG emissions associated with projects that are subject to ARB's cap-and-trade regulation. The SJVAPCD recognizes that the ARB's Cap-and-Trade Regulation is an adopted state-wide plan for reducing or mitigating GHG emissions from targeted industries. GHG emissions addressed by the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. As such, any growth in emissions must be accounted for under that cap, such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions. Therefore, the SJVAPCD concluded that GHG emissions increases subject to ARB's Cap-and-Trade regulation would have a less than significant individual and cumulative impact on global climate change.

IMPACTS & MITIGATION MEASURES

METHODOLOGY

Short-term Construction-Generated Emissions

Short-term construction emissions associated with the proposed project were calculated using CalEEMod, version 2013.2.2. Emissions modeling includes emissions generated during site preparation/grading, as well as, the installation of basin and in-lieu bank infrastructure and pipelines. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the project applicant. All remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in **Appendix B** of this report.

Long-term Operational Emissions

Long-term operational emissions associated with the proposed project were calculated using CalEEMod, version 2013.2.2. Emissions modeling included the use of off-road equipment and maintenance worker vehicle trips associated with routine maintenance activities, as well as, emissions associated with the operation of the proposed electrical pumps. No stationary sources of emissions are proposed. Modeling assumptions and output files are included in **Appendix B** of this report.

Net Changes in Emissions

Net changes in annual emissions were quantified based on a comparison of project-generated emissions to existing agricultural emissions. Existing emissions associated with agricultural activities were quantified using CalEEMod, version 2013.2.2, based on operational data provided by the project applicant and are summarized in **Table 7**. Emissions associated with existing agricultural activities total approximately 281 $MTCO_2e$/year. Emissions were also quantified for business-as-usual year 2004 conditions, which total approximately 331 $MTCO_2e$/year.

Table 7
Existing Agricultural Land Use GHG Emissions

Source	Annual Emissions (MT CO_2e)
Existing (Year 2014)	
Agricultural Pumps (Natural Gas Fueled)	157.6
Agricultural Pumps (Electric)	108.3
Off-road Equipment-Orchard	6.2
Off-road Equipment-Field Crop	6.7
Worker Vehicle Trips-Orchard	1.0
Worker Vehicle Trips-Field Crop	1.5
Total:	281.2
Business-as-Usual (Year 2004)	
Agricultural Pumps (Natural Gas Fueled)	157.6
Agricultural Pumps (Electric)	155.7
Off-road Equipment-Orchard	6.9
Off-road Equipment-Field Crop	7.5
Worker Vehicle Trips-Orchard	1.2
Worker Vehicle Trips-Field Crop	1.8
Total:	330.56
*Emissions were quantified using CalEEMod, version 2013.2.2. Refer to **Appendix B** for modeling results and assumptions. Totals may not sum due to rounding.*	

THRESHOLDS OF SIGNIFICANCE

CEQA Guidelines Amendments became effective March 18, 2010. Included in the Amendments are revisions to the Appendix G Initial Study Checklist. In accordance with these Amendments, a project would be considered to have a significant impact to climate change if it would:

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

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

In accordance with SJVAPCD's CEQA Greenhouse Gas Guidance, proposed projects complying with BPS be determined to have a less-than-significant impact. Projects not complying with BPS would be considered less than significant if operational GHG emissions would be reduced or mitigated by a minimum of 29 percent, in comparison to business-as-usual (year 2004) conditions. In addition, proposed projects complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

PROJECT IMPACTS

Impact GHG-1: *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? and*

Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Short-term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 8**. As indicated, construction of the proposed project would generate maximum annual emissions of approximately 787 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year. In total, project construction would generate approximately 1,288 $MTCO_2e$. When amortized over the approximate 30-year project life, amortized annual emissions would be approximately 43 $MTCO_2e$.

Long-term Operational Emissions

Long-term operation of the proposed project would result in emissions predominantly associated with electricity consumption associated with the powering of the proposed onsite pumps. To a lesser extent, emissions would also be associated with the occasional use of off-road maintenance equipment and maintenance worker vehicle trips. Estimated operational emissions are summarized in **Table 9**.

Table 8
Short-term Construction-Generated GHG Emissions

Construction Activity	Construction Year	Emissions (MT CO_2e)[1]
Recharge Basin Site Preparation	2015	23.09
Recharge Basin Grading	2015	764.01
Recharge Basin Infrastructure	2016	76.99
In-Lieu Banking Construction	2016	47.94
Lift Station Construction	2016	58.84
Pipeline Construction	2016-2017	213.66
Total Annual Emissions by Construction Year		
2015		*787.10*
2016		*397.42*
2017		*103.04*
Total:		*1,287.56*
Amortized[2]:		*42.92*

1. *Emissions were quantified using CalEEMod, version 2013.2.2. Refer to **Appendix B** for modeling results and assumptions. Totals may not sum due to rounding.*
2. *Amortized emissions were quantified based on an approximate 30-year project life.*

As a result, project-specific GHG emissions, which are the result of electricity/fuel use, would be mitigated through compliance with the ARB's Cap & Trade. As indicated in **Table 9,** the proposed project would generate a total of approximately 7,683.6 $MTCO_2e$/year, including amortized emissions associated with project construction and the loss of carbon sequestration associated with the removal of agricultural land. A majority of the emissions generated by the proposed project (i.e., 7,587.2 $MTCO_2e$/year) would be associated with electricity use. With the exclusion of electricity use, which would be displaced through implementation of ARB's Cap and Trade regulation, the project would generate a total of approximately 96.4 $MTCO_2e$/year. In comparison to business-as-usual year 2004 emissions and after taking into account reductions due to implementation of ARB's Cap and Trade regulation, the proposed project would result in overall reductions in GHG emissions of approximately 71percent.

The SJVAPCD considers projects that comply with an adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions to have a less-than-significant impact. Emissions generated by the proposed project would be largely attributable to the consumption of fuels, including fuels required for the production of electricity, which are subject to ARB's Cap-and-Trade regulation ARB's Cap & Trade regulation is an adopted statewide plan for reducing or mitigating GHG emissions from targeted industries, including electricity generation. Under the Cap & Trade regulation, electricity companies that import or supply electricity from non-renewable sources must purchase allowances from the State for the carbon pollution that comes from burning coal or natural gas to make this electricity.

Table 9
Long-Term Operational GHG Emissions

Source	Annual Emissions (MT CO_2e)[1]		
	Proposed Project	Existing Agricultural Land Use	
		Year 2014	BAU-Year 2004
Off-Road Equipment	3.7	12.9	14.3
Worker Vehicle Trips	0.2	2.4	3.0
Electricity Use[2]	7,587.2	108.3	155.7
Natural Gas Use	N/A	157.6	157.6
Loss of Carbon Sequestration (Amortized)[3]	49.6	N/A	N/A
Construction Emissions (Amortized)[4]	42.9	N/A	N/A
Total:	7,683.6	281.2	330.6
Emissions Displaced by Cap-and-Trade:	-7,587.2	-108.3	--
Total (with Cap-and-Trade)[5]:	96.4	172.9	330.6
Percent Reduction:	--	44%	71%

1. *Emissions were quantified using CalEEMod, version 2013.2.2.*
2. *Electricity emissions were quantified using intensity factors obtained from the U.S. EPA eGRID database and CalEEMod.*
3. *Loss of carbon sequestration calculated using CalEEMod, version 2013.2.2 for field row crop. The existing orchard is planned to be removed with or without project implementation and, therefore, is excluded from this calculation. Emissions were amortized assuming an average 30-year project life.*
4. *Construction-generated emissions were amortized assuming a 30-year project life.*
5. *Includes emissions associated with electricity use. ARB's Cap & Trade regulation came into effect on January 1, 2013. The Cap & Trade regulation is an adopted statewide plan for reducing/mitigating GHG emissions from targeted industries, including electricity generation. Fuel use will be subject to cap and trade beginning in 2015. To be conservative, emissions associated with fuel use were not included in the displaced emissions.*
   *Refer to **Appendix B** for modeling assumptions and results.*
6. *Based on a comparison of proposed project emissions and existing agricultural land use emissions. Includes emissions associated with implementation of Cap-and-Trade regulation (refer to footnote 5, above).*

Beginning in 2015, fuel distributors/suppliers will also be subject to ARB's Cap & Trade regulation. As a result, project-generated emissions would be largely mitigated via implementation of ARB's Cap & Trade regulation. Furthermore, excluding emissions generated by electricity consumption, implementation of the proposed project would result in net overall reductions in emissions generated by off-road equipment and on-road motor vehicle use. For these reasons, implementation of the proposed project would not be anticipated to conflict with any applicable plan, policy or regulation for reducing the emissions of GHGs, nor would the proposed project have a significant impact on the environment. This impact would be considered ***less than significant***.

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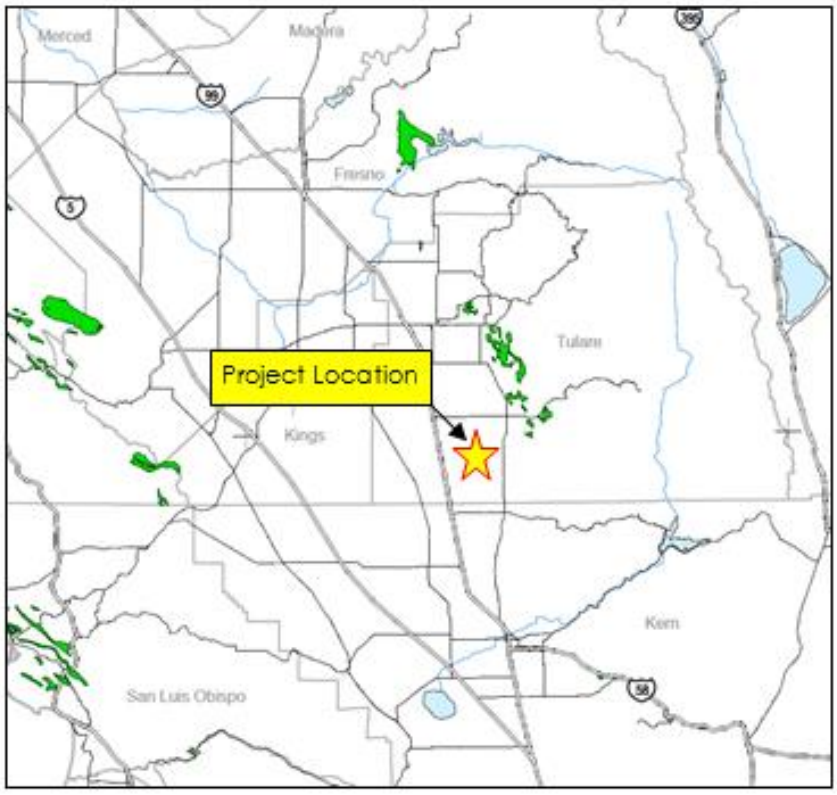
APPENDIX A

General Location of Areas More Likely to Contain Naturally Occurring Asbestos



EXPLANATION OF ULTRAMAFIC ROCK UNIT

Ultramafic rocks are dunite, peridotite, pyroxenite, and less common in California, hornblendite (IUGS classification of ultramafic rocks, in Philpotts, 1990*). These igneous rocks contain 90 percent or more of the dark colored iron-magnesium-silicate minerals olivine, augite, hypersthene, or less commonly hornblende. Ultramafic rocks form in high temperature environments well below the surface of the earth. By the time they are exposed at the surface by uplift and erosion, ultramafic rocks may be partially to completely altered to serpentinite, a type of metamorphic rock. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite actinolite asbestos in bodies of ultramafic rock or along their boundaries.
Note–occurrences of non-ultramafic rock types, such as gabbro or diabase, may be included within some of the ultramafic rock areas shown on this map. Asbestos is much less likely to be associated with these non-ultramafic rock types.

Source: State of California, Department of Conservation. August 2000. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos.* Compiled by Ronald K. Churchill and Robert L. Hill.

APPENDIX B

Emissions Modeling

EXISTING OPERATIONAL DATA

EXISTING PUMPS TO BE REMOVED

	# 1	# 2	# 3	# 4	# 5	# 6
POWER SOURCE	Natural Gas	Natural Gas	Electric	Electric	Electric	Electric
SIZE	200 hp	125 hp	200 hp	60 hp	75 hp	75 hp
ESTIMATED ANNUAL HOURS OF OPERATION	1152	1152	1152	1300	1200	1000
ANNUAL ELECTICAL USAGE (IF APPLICABLE)			171878 kwh	58,188 kwh	67,140	55,950

Based on data provided by the project applicant.

MODELING METHODOLOGY: CALEEMOD CALEEMOD

EXISTING AGRICULTURAL USES & EQUIPMENT USE

CROP TYPE	ACREAGE	EQUIPMENT USE	H.P	ANNUAL HOURS
Almonds	320	Tractor/ spray	90	130
		Tree shaker	90	80
		Blower	90	80
		Tractor/ Mulcher	90	10
		Tractor/Mower	90	40
Cotton	240	Tractor	130	140
		Cotton Picker	400	20
		Spray rig	90	20
		Module compactor	130	20
		Module hauler	250	10

Based on data provided by the project applicant.

EXISTING AGRICULTURAL VEHICLE TRIPS

CROP TYPE	LDT TRIPS/MO	LDT TRIPS ANNUAL	AVERAGE DISTANCE (MILES)
Almonds	10	120	20
Cotton	30	360	10

Based on data provided by the project applicant.

EXISTING ELECTRICAL PUMP EMISSIONS CALCULATION

EXISTING ELECTRICAL PUMP DATA:	# 3	# 4	# 5	# 6
POWER SOURCE	Electric	Electric	Electric	Electric
SIZE	200 hp	60 hp	75 hp	75 hp
ESTIMATED ANNUAL HOURS OF OPERATION	1152	1300	1200	1000
ANNUAL ENERGY USE (kWh)	171,878	58,188	67,140	55,950

Based on data provided by the project applicant.

TOTAL ENERGY USE (kWh) 353,156

TOTAL ENERGY USE (MWh) 353.156

BAU YEAR 2004

EMISSIONS CALCULATION	INTENSITY FACTORS (LB/MWH)	EMISSIONS (LBS/YR)	EMISSIONS (TONS/YR)	GWP	CO2e
CO2	879	310424.12	155.21	1	155.21
CH4	0.029	10.24	0.01	21	0.11
N2O	0.00617	2.18	0.00	310	0.34
				BUSINESS AS USUAL (YEAR 2004):	**155.66**

*CO2 intensity factors derived from US EPA's eGrid database for CAMX-WECC California. CH4 and N2O intensity factors derived from CalEEMod for PG&E.

EXISTING YEAR 2014

EMISSIONS CALCULATION	INTENSITY FACTORS (LB/MWH)	EMISSIONS (LBS/YR)	EMISSIONS (TONS/YR)	GWP	CO2e
CO2	610.82	215714.75	107.86	1	107.86
CH4	0.029	10.24	0.01	21	0.11
N2O	0.00617	2.18	0.00	310	0.34
				EXISTING (YEAR 2014):	**108.30**

*CO2 intensity factors derived from US EPA's eGrid database for CAMX-WECC California. CH4 and N2O intensity factors derived from CalEEMod for PG&E.

CO2 EMISSIONS RATES

Year 2004 eGRID Subregion Emissions

(Source: eGRID2006 Version 2.1, April 2007)

eGRID subregion acronym	eGRID subregion name	Carbon dioxide (CO_2)		Sulfur dioxide (SO_2)		Nitrogen oxides (NO_x)				Mercury (Hg)	
		Emissions (tons)	Output emission rate (lb/MWh)	Emissions (tons)	Output emission rate (lb/MWh)	Emissions (tons)	Output emission rate (lb/MWh)	Ozone season emissions (tons)	Ozone season output emission rate (lb/MWh)	Emissions (lbs)	Output emission rate (lb/GWh)
AKGD	ASCC Alaska Grid	3,307,005	1,257	3,497	1.329	7,872	2.993	3,265	3.138	9.08	0.0017
AKMS	ASCC Miscellaneous	303,844	480	428	0.677	4,134	6.532	1,958	7.210	N/A	N/A
AZNM	WECC Southwest	83,237,345	1,254	95,846	1.444	138,246	2.083	62,742	2.007	3,366.15	0.0254
CAMX	WECC California	93,924,761	879	59,781	0.559	81,099	0.759	35,468	0.722	494.76	0.0023
ERCT	ERCOT All	217,692,276	1,421	486,348	3.174	150,320	0.981	68,132	0.950	8,918.75	0.0291
FRCC	FRCC All	134,081,883	1,328	365,544	3.620	229,195	2.269	107,760	2.240	1,842.27	0.0091
HIMS	HICC Miscellaneous	2,242,390	1,456	9,228	5.992	10,770	6.994	4,778	7.232	N/A	N/A
HIOA	HICC Oahu	7,200,745	1,728	14,685	3.524	10,669	2.561	4,665	2.583	133.09	0.0160
MROE	MRO East	27,352,133	1,859	110,360	7.500	47,883	3.254	19,318	3.015	902.88	0.0307
MROW	MRO West	160,970,728	1,814	521,538	5.877	338,443	3.814	136,490	3.675	7,681.22	0.0433
NEWE	NPCC New England	60,225,835	909	156,241	2.358	64,801	0.978	23,887	0.858	1,129.37	0.0085
NWPP	WECC Northwest	115,244,347	921	158,302	1.265	203,398	1.626	81,811	1.564	2,427.60	0.0097
NYCW	NPCC NYC/Westchester	15,433,603	922	11,798	0.705	14,999	0.896	6,814	0.860	216.84	0.0065
NYLI	NPCC Long Island	10,112,144	1,412	38,451	5.370	13,113	1.831	5,167	1.569	81.19	0.0057
NYUP	NPCC Upstate NY	36,854,854	820	188,646	4.196	44,744	0.995	17,324	0.907	1,254.99	0.0140
RFCE	RFC East	150,046,502	1,096	1,100,532	8.035	233,832	1.707	74,381	1.237	11,323.74	0.0413
RFCM	RFC Michigan	78,608,383	1,641	326,828	6.824	117,421	2.452	42,871	2.136	3,155.04	0.0329
RFCW	RFC West	464,982,319	1,556	3,046,935	10.199	848,629	2.841	228,255	1.796	26,086.72	0.0437
RMPA	WECC Rockies	83,206,519	2,036	83,106	2.033	127,634	3.123	54,321	3.103	1,331.91	0.0163
SPNO	SPP North	65,563,407	1,971	201,581	6.061	132,464	3.983	55,351	3.807	1,815.17	0.0273
SPSO	SPP South	121,318,039	1,761	271,949	3.948	175,728	2.551	78,360	2.421	5,336.48	0.0387
SRMV	SERC Mississippi Valley	91,271,649	1,135	184,090	2.290	117,444	1.461	55,495	1.505	1,772.28	0.0110
SRMW	SERC Midwest	124,972,368	1,844	471,277	6.955	171,366	2.529	44,708	1.538	5,516.32	0.0407
SRSO	SERC South	187,745,174	1,490	1,064,642	8.451	273,243	2.169	101,321	1.750	8,781.34	0.0349
SRTV	SERC Tennessee Valley	172,431,724	1,495	833,388	7.225	298,834	2.591	78,728	1.585	5,843.69	0.0253
SRVC	SERC Virginia/Carolina	173,423,825	1,146	890,426	5.886	282,201	1.865	88,177	1.333	6,619.73	0.0219
U.S.		**2,681,753,803**	**1,363**	**10,695,446**	**5.436**	**4,138,481**	**2.103**	**1,481,550**	**1.704**	**106,040.62**	**0.0269**

eGRID 9th edition Version 1.0 Year 2010 GHG Annual Output Emission Rates

Annual total output emission rates for greenhouse gases (GHGs) can be used as default factors for estimating GHG emissions from electricity use when developing a carbon footprint or emission inventory. Annual non-baseload output emission rates should not be used for those purposes, but can be used to estimate GHG emissions reductions from reductions in electricity use.

eGRID subregion acronym	eGRID subregion name	Annual total output emission rates			Annual non-baseload output emission rates		
		Carbon dioxide (CO_2) (lb/MWh)	Methane (CH_4) (lb/GWh)	Nitrous oxide (N_2O) (lb/GWh)	Carbon dioxide (CO_2) (lb/MWh)	Methane (CH_4) (lb/GWh)	Nitrous oxide (N_2O) (lb/GWh)
AKGD	ASCC Alaska Grid	1,256.87	26.08	7.18	1,387.37	34.05	6.93
AKMS	ASCC Miscellaneous	448.57	18.74	3.68	1,427.76	59.97	11.80
AZNM	WECC Southwest	1,177.61	19.21	15.72	1,210.44	21.88	9.86
CAMX	WECC California	610.82	28.49	6.03	932.82	35.91	4.55
ERCT	ERCOT All	1,218.17	16.85	14.07	1,181.70	20.12	7.63
FRCC	FRCC All	1,196.71	38.91	13.75	1,277.42	38.73	10.83
HIMS	HICC Miscellaneous	1,330.16	73.98	13.88	1,690.72	104.05	19.12
HIOA	HICC Oahu	1,621.86	99.30	22.41	1,588.23	119.48	20.10
MROE	MRO East	1,610.80	24.29	27.52	1,755.66	31.53	27.99
MROW	MRO West	1,536.36	28.53	26.29	2,054.55	59.86	35.53
NEWE	NPCC New England	722.07	71.76	12.98	1,106.82	61.55	12.07
NWPP	WECC Northwest	842.58	16.05	13.07	1,340.34	41.38	17.84
NYCW	NPCC NYC/Westchester	622.42	23.81	2.80	1,131.63	23.58	2.44
NYLI	NPCC Long Island	1,336.11	81.49	10.28	1,445.94	34.03	3.91
NYUP	NPCC Upstate NY	545.79	16.30	7.24	1,253.77	36.83	13.67
RFCE	RFC East	1,001.72	27.07	15.33	1,562.72	35.93	20.02
RFCM	RFC Michigan	1,629.38	30.46	26.84	1,744.52	32.31	26.00
RFCW	RFC West	1,503.47	18.20	24.75	1,982.87	24.50	31.07
RMPA	WECC Rockies	1,896.74	22.66	29.21	1,808.03	24.56	22.89
SPNO	SPP North	1,799.45	20.81	28.62	1,951.83	25.15	26.90
SPSO	SPP South	1,580.60	23.20	20.85	1,436.29	27.94	12.10
SRMV	SERC Mississippi Valley	1,029.82	20.66	10.76	1,222.40	27.71	6.63
SRMW	SERC Midwest	1,810.83	20.48	29.57	1,964.98	23.93	29.65
SRSO	SERC South	1,354.09	22.82	20.89	1,574.37	26.52	21.49
SRTV	SERC Tennessee Valley	1,389.20	17.70	22.41	1,873.83	24.99	28.88
SRVC	SERC Virginia/Carolina	1,073.65	21.69	17.64	1,624.71	36.42	23.06
U.S.		**1,232.35**	**24.14**	**18.26**	**1,520.20**	**31.27**	**18.34**

ESTIMATED CONSTRUCTION ACTIVITY SCHEDULE

CONSTRUCTION OF THE RECHARGE BASIN

START DATE (MONTH/YEAR):	1/1/2016	
SITE PREPARATION/ORCHARD REMOVAL	2	MONTHS
GRADING	9	MONTHS
INFRASTRUCTURE	3	MONTHS
OVERALL DURATION	12	MONTHS

Based on data provided by the project applicant.

CONSTRUCTION OF THE IN-LIEU BANKING AREA

START DATE (MONTH/YEAR):	1/1/2016	
INFRASTRUCTURE	2	MONTHS
OVERALL DURATION	2	MONTHS

Based on data provided by the project applicant.

CONSTRUCTION OF THE PIPELINE

START DATE (MONTH/YEAR):	1/1/2016	
TRENCHING	9 months	MONTHS OR DAYS
LIFT STATIONS	3 months	MONTHS OR DAYS
OVERALL DURATION	12	MONTHS

Based on data provided by the project applicant.

OFFROAD CONSTRUCTION EQUIPMENT USE

PROJECT: SVWBA PIXLEY GROUNDWATER BANK

RECHARGE BASIN CONSTRUCTION

SITE PREPARATION/ORCHARD REMOVAL

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Dozer	1	30	8hrs
Wheel Loader	2	30	8hrs

GRADING

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Earthmover	2	225 days	8 hrs
Tractor with double lazer	1	225 days	8 hrs
Motor Grader	1	225 days	8 hrs
Water Trucks	2	225 days	8 hrs
Tractor with compacting wheel	1	225 days	8 hrs

WELL DRILLING (PER WELL SITE)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
DRILL RIG	1		
FE LOADER	1		

INFRASTRUCTURE

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Excavator	1	75 days	8 hrs
Backhoe	1	37 days	8 hrs
Water Truck	1	17 days	8 hrs

OTHER (SPECIFY)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

*Based on data provided by the project applicant.

OFFROAD CONSTRUCTION EQUIPMENT USE

PROJECT: SVWBA PIXLEY GROUNDWATER BANK

IN-LIEU BANKING AREA CONSTRUCTION

SITE PREPARATION/ORCHARD REMOVAL

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

GRADING

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

WELL DRILLING (PER WELL SITE)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
DRILL RIG	1		
FE LOADER	1		

INFRASTRUCTURE

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Excavator	1	30 days	8 hrs
Backhoe	1	10 days	8 hrs
Water Truck	1	5 days	8 hrs

OTHER (SPECIFY)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

*Based on data provided by the project applicant.

OFFROAD CONSTRUCTION EQUIPMENT USE

PROJECT: SVWBA PIXLEY GROUNDWATER BANK

PIPELINE CONSTRUCTION

SITE PREPARATION/ORCHARD REMOVAL

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

TRENCHING

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Excavator	1	180 days	8 hrs
Excavator	1	90 days	8 hrs
Water Truck	1	90 days	8 hrs
Backhoe	1	90 days	8 hrs

LIFT STATION CONSTRUCTION (PER STATION SITE)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Excavator	1	30 days	8 hrs
Backhoe	1	25 days	8 hrs
Wtaer Truck	1	5 days	8 hrs

OTHER (SPECIFY)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

OTHER (SPECIFY)

TYPE (DOZER, GRADER, DRILL RIG ETC.)	NUMBER OF EQUIP	AVG NUMBER OF USE DAYS/PIECE OF EQUP	AVG HOURS/ DAY/PIECE
Not Applicable			

*Based on data provided by the project applicant.

PROPOSED PROJECT CONSTRUCTION DATA

CONSTRUCTION OF THE RECHARGE BASIN

OVERALL CONSTRUCTION DURATION	12	MONTHS
SOIL IMPORT/EXPORT	e - Balanced On Site	
AREA OF DISTURBANCE	560	ACRES
NUMBER OF WELL PUMPS	11	
PUMP POWER SOURCE	ELECTRIC	

CONSTRUCTION OF THE IN-LIEU BANKING AREA

OVERALL CONSTRUCTION DURATION	2	MONTHS
AREA OF DISTURBANCE	0	ACRES
NUMBER OF WELL PUMPS	5	
PUMP POWER SOURCE	ELECTRIC	

CONSTRUCTION OF THE PIPELINE

OVERALL CONSTRUCTION DURATION	12	MONTHS
AREA OF DISTURBANCE	0	ACRES
	4.5	MILES

PROPOSED PROJECT MAINTENANCE EQUIPMENT & VEHICLE USE

	HP	Annual Hours
ROAD GRADER	400	40
SPRAY RIG	200	16
TRACTOR/DISC	120	60
ON-ROAD LD TRUCK	200	40

PROPOSED PROJECT ELECTRICAL PUMPS

CONSTRUCTION OF THE RECHARGE BASIN

OVERALL CONSTRUCTION DURATION	12	MONTHS
SOIL IMPORT/EXPORT	e - Balanced On Site	
AREA OF DISTURBANCE	560	ACRES
NUMBER OF BOOSTER LIFT STATIONS	1	
BOOSTER LIFT POWER SOURCE	ELECTRIC	
BOOSTER LIFT SIZE	960	HP
ANNUAL ELECTRICITY USE (**WORST CASE-8MO RETURN)**	4,123,423	KWhr/year
NUMBER OF WELL PUMPS	11	
PUMP POWER SOURCE	ELECTRIC	
PUMP SIZE	300	HP
ANNUAL ELECTRICITY USE (**WORST CASE-8MO RETURN)**	14,174,266	KWhr/year

Power for 8 month return period (worst case). Several years will have no pumping at all

CONSTRUCTION OF THE IN-LIEU BANKING AREA

OVERALL CONSTRUCTION DURATION	2	MONTHS
AREA OF DISTURBANCE	0	ACRES
NUMBER OF WELL PUMPS	5	
PUMP POWER SOURCE	ELECTRIC	
PUMP SIZE	300	HP
ANNUAL ELECTRICITY USE	6,442,848	KWhr/year

Power for 8 month return period (worst case). Several years will have no pumping at all

CONSTRUCTION OF THE PIPELINE

OVERALL CONSTRUCTION DURATION	12	MONTHS
AREA OF DISTURBANCE	0	ACRES
	4.5	MILES

**Based on data provided by the project applicant.*

TOTAL ANNUAL ENERGY USE (KWH):	24,740,536
TOTAL ANNUAL ENERGY USE (MWH):	24,740.54

EMISSIONS CALCULATION	INTENSITY FACTORS (LB/MWH)	EMISSIONS (LBS/YR)	EMISSIONS (TONS/YR)	GWP	CO2e
CO2	610.82	15112014.39	7556.01	1	7556.01
CH4	0.029	717.48	0.36	21	7.53
N2O	0.00617	152.65	0.08	310	23.66
					7587.20

*CO2 intensity factors derived from US EPA's eGrid database for CAMX-WECC California. CH4 and N2O intensity factors derived from CalEEMod for PG&E.

PIXLEY GROUNDWATER BANKING PROJECT

EMISSIONS SUMMARY

	ANNUAL EMISSIONS (TONS)											
					PM10			PM2.5				BAU2004
	ROG	NOX	CO	SO2	FUG	EXH	TOT	FUG	EXH	TOT	MTCO2e	MTCO2e
EXISTING EMISSION												
NATURAL GAS-FUELED PUMPS	0.0852	0.8497	0.5495	0.00183	0	0.0305	0.0305	0	0.0305	0.0305	157.6	157.6
OFFROAD EQUIPMENT												
Orchard (lbs/mo)	1.3104	11.8084	7.8809	0.00976	0	0.964	0.964	0	0.8868	0.8868	1032.6	1142.2
tons/yr	0.0078624	0.07085	0.047285	5.86E-05	0	0.005784	0.005784	0	0.005321	0.005321	6.2	6.9
Field Crop (lbs/mo)	0.9398	10.7411	6.6102	0.0106	0	0.5348	0.5348	0	0.492	0.492	1119.2	1244.0
tons/yr	0.0056388	0.064447	0.039661	6.36E-05	0	0.003209	0.003209	0	0.002952	0.002952	6.7	7.5
VEHICLE TRIPS												
Orchard (lbs/mo)	0.0715	0.0939	1.146	0.00186	0.152	0.00124	0.1533	0.0403	0.00113	0.0415	159.1	197.6
tons/yr	0.000429	0.000563	0.006876	1.12E-05	0.000912	7.44E-06	0.00092	0.00024	6.78E-06	0.000249	1.0	1.2
Field Crop (lbs/mo)	0.17	0.1495	1.8275	0.00284	0.2282	0.00201	0.2302	0.0605	0.00183	0.0624	242.3	300.9
tons/yr	0.00102	0.000897	0.010965	1.7E-05	0.001369	1.21E-05	0.001381	0.00036	1.1E-05	0.000374	1.5	1.8
ELECTRICAL PUMPS	0	0	0	0	0	0	0	0	0	0	108.3	155.7
TOTAL	0.1001502	0.986457	0.654288	0.00198	0.002281	0.039512	0.041794	0.0006	0.038791	0.039396	281.2121	330.5607
PROJECT CONSTRUCTION EMISSIONS - UNCONTROLLED												
RECHARGE BASIN SITE PREPARATION												
ONSITE	0.0299	0.3188	0.2374	0.0002	0.0903	0.0181	0.1085	0.0497	0.0167	0.0663	21.7570	
OFFSITE	0.0007	0.0010	0.0101	0.0000	0.0015	0.0010	0.0015	0.0004	0.0000	0.0004	1.3305	
TOTAL	0.0306	0.3198	0.2475	0.0003	0.0918	0.0191	0.1100	0.0501	0.0167	0.0667	23.0875	
RECHARGE BASIN GRADING												
ONSITE	0.7583	8.9245	4.9455	0.0077	1.2328	0.4031	1.6359	0.1331	0.3708	0.5039	741.5617	
OFFSITE	0.0116	0.0175	0.1705	0.0003	0.0251	0.0002	0.0253	0.0067	0.0002	0.0069	22.4522	
TOTAL	0.7699	8.9420	5.1160	0.0080	1.2579	0.4033	1.6612	0.1398	0.3710	0.5108	764.0139	
RECHARGE BASIN INFRASTRUCTURE												
ONSITE	0.0629	0.6975	0.4098	0.0008	0.0000	0.0330	0.0330	0.0000	0.0304	0.0304	76.9845	
OFFSITE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
TOTAL	0.0629	0.6975	0.4098	0.0008	0.0000	0.0330	0.0330	0.0000	0.0304	0.0304	76.9845	
IN-LIEU BANKING CONSTRUCTION												
ONSITE	0.0376	0.4171	0.2451	0.0005	0.0003	0.0198	0.0200	0.0000	0.0162	0.0162	46.0208	
OFFSITE	0.0009	0.0014	0.0132	0.0000	0.0022	0.0000	0.0023	0.0006	0.0000	0.0006	1.9200	
TOTAL	0.0385	0.4185	0.2583	0.0005	0.0025	0.0198	0.0223	0.0006	0.0162	0.0168	47.9408	
LIFT STATION CONSTRUCTION												
ONSITE	0.0461	0.5119	0.3008	0.0006	0.0109	0.0240	0.0350	0.0012	0.0223	0.0235	56.4800	
OFFSITE	0.0010	0.0017	0.0161	0.0000	0.0027	0.0002	0.0028	0.0007	0.0000	0.0007	2.3467	
TOTAL	0.0471	0.5136	0.3169	0.0006	0.0136	0.0242	0.0378	0.0019	0.0223	0.0242	58.8267	

	ANNUAL EMISSIONS (TONS)											
					PM10			PM2.5				BAU2004
	ROG	NOX	CO	SO2	FUG	EXH	TOT	FUG	EXH	TOT	MTCO2e	MTCO2e
PIPELINE CONSTRUCTION												
ONSITE	0.1657	1.8490	1.1530	0.0022		0.0882	0.0882		0.0812	0.0812	205.0661	
OFFSITE	0.0004	0.0061	0.0590	0.0001	0.0100	0.0001	0.0101	0.0027	0.0001	0.0027	8.5868	
TOTAL	0.1661	1.8551	1.2120	0.0023	0.0100	0.0883	0.0983	0.0027	0.0813	0.0839	213.6529	
	1.1151	12.7465	7.5605	0.0125	1.3758	0.5877	1.9625	0.1950	0.5379	0.7328	1184.5063	
PROJECT OPERATIONAL EMISSIONS												
OFFROAD EQUIPMENT (lbs/mo)	0.7226	7.3604	4.2151	0.00597	0	0.4416	0.4416	0	0.4063	0.4063	614.7	
tons/yr	0.0043	0.044162	0.025291	3.58E-05	0	0.00265	0.00265	0	0.002438	0.002438	3.7	
VEHICLE TRIPS (lbs/mo)	0.00913	0.017	0.1438	0.00032	0.0304	0.00022	0.0306	0.00806	0.0002	0.00826	25.7	
tons/yr	0.0001	0.000102	0.000863	1.92E-06	0.000182	1.32E-06	0.000184	4.8E-05	1.2E-06	4.96E-05	0.2	
ELECTRICAL PUMPS	0	0	0	0	0	0	0	0	0	0	7587.2	
TOTAL	0.004	0.044	0.026	0.000	0.000	0.003	0.003	0.000	0.002	0.002	7591.0	

Emissions quantified using the CalEEMod computer program.

Note: The SJVAPCD considers projects that comply with an adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions to have a less-than-significant impact. Emissions generated by the proposed project would be largely attributable to the consumption of fuels, including fuels required for the production of electricity, which are subject to ARB's Cap-and-Trade regulation ARB's Cap & Trade regulation is an adopted statewide plan for reducing or mitigating GHG emissions from targeted industries, including electricity generation and fuel distributors/suppliers. As a result, project-specific GHG emissions, which are the result of electricity/fuel use, would be mitigated through compliance wth the ARB's Cap & Trade. Therefore, additional project-specific mitigation would not be required.

LOSS OF CARBON SEQUESTRATION

*Represents a one-time (non-reoccurring) loss.

Field Crop	-1488
Amortized	-49.6
Total	-1537.6

Changes in carbon sequestration do not account for increased GHG emissions associated with agricultural practices, such as the application of soil fertilizers and amendments or indirect emissions associated with crop harvesting/production. Agriculture activities serve as both sources and sinks for greenhouse gases. The primary sources of GHGs in agriculture include nitrogen-based fertilizers; the combustion of fossil fuels (e.g., gasoline, diesel, etc.) and waste management. Based on information obtained from the U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012, overall GHG emissions associated with agricultural management activities currently out weigh the carbon sequestion potential of agricultural land, accounting for approximately 8 percent of the total GHG inventory within the U.S. Net changes in GHG emissions/carbon sequestration can vary widely depending on various factors. The existing orchard would be removed with or without project implementation.
Emissions quantified using the CalEEMod computer program and electricity intensity factors derived from US EPA eGrid database.

SVWBA PIXLEY GROUNDWATER BANK - Existing Ag Equipment & Vehicle Trips

Tulare County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling reflects existing equipment and vehicle trips based on data provided by the project applicant. EMISSIONS REFLECTED ARE IN LBS/MONTH.

Land Use - .

Construction Phase - Existing equipment use represent average monthly emissions (lbs/month) based on annual usage data provided by the project applicant. Operational emissions do not apply.

Off-road Equipment - Based on data provided by the project applicant.

Off-road Equipment - Based on data provided by the project applicant.

Grading - Dust from material movement not included.

Demolition - Demolition not included.

Trips and VMT - Represents monthly vehice trip emissions based on data provided by the project applicant and average emission fleet mix EFs for LDA, LDT1, AND LDT2.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	97.00	130.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	400.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	130.00
tblOffRoadEquipment	HorsePower	87.00	250.00
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	11.70
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	3.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3819	11.9023	9.0269	0.0134	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,354.2264	1,354.2264	0.3454	0.0000	1,361.4805
Total	**1.3819**	**11.9023**	**9.0269**	**0.0134**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,354.2264**	**1,354.2264**	**0.3454**	**0.0000**	**1,361.4805**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3819	11.9023	9.0269	0.0134	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,354.2264	1,354.2264	0.3454	0.0000	1,361.4805
Total	**1.3819**	**11.9023**	**9.0269**	**0.0134**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,354.2264**	**1,354.2264**	**0.3454**	**0.0000**	**1,361.4805**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Existing Orchard	Demolition	1/1/2015	1/1/2015	5	1	
2	Existing Row Crop	Site Preparation	1/2/2015	1/2/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Existing Orchard	Tractors/Loaders/Backhoes	1	0.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	3.30	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	10.80	90	0.37
Existing Row Crop	Other General Industrial Equipment	1	1.70	400	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	90	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	130	0.34
Existing Row Crop	Graders	0	8.00	174	0.41
Existing Row Crop	Other General Industrial Equipment	1	0.80	250	0.34
Existing Orchard	Concrete/Industrial Saws	0	8.00	81	0.73
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Rubber Tired Dozers	0	8.00	255	0.40
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Row Crop	Tractors/Loaders/Backhoes	1	11.70	130	0.37
Existing Row Crop	Rubber Tired Dozers	0	7.00	255	0.40

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
Existing Orchard	5	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Existing Row Crop	5	30.00	0.00	0.00	10.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868		1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**		**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0715	0.0939	1.1460	1.8600e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		158.9573	158.9573	8.4800e-003		159.1354
Total	**0.0715**	**0.0939**	**1.1460**	**1.8600e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**158.9573**	**158.9573**	**8.4800e-003**		**159.1354**

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868	0.0000	1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**	**0.0000**	**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0715	0.0939	1.1460	1.8600e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		158.9573	158.9573	8.4800e-003		159.1354
Total	**0.0715**	**0.0939**	**1.1460**	**1.8600e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**158.9573**	**158.9573**	**8.4800e-003**		**159.1354**

3.3 Existing Row Crop - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920		1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**		**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1700	0.1495	1.8275	2.8400e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		242.0365	242.0365	0.0134		242.3178
Total	**0.1700**	**0.1495**	**1.8275**	**2.8400e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**242.0365**	**242.0365**	**0.0134**		**242.3178**

3.3 Existing Row Crop - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920	0.0000	1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**	**0.0000**	**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1700	0.1495	1.8275	2.8400e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		242.0365	242.0365	0.0134		242.3178
Total	**0.1700**	**0.1495**	**1.8275**	**2.8400e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**242.0365**	**242.0365**	**0.0134**		**242.3178**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.408999	0.071178	0.163258	0.196144	0.057919	0.008335	0.018354	0.062533	0.001936	0.001543	0.006293	0.001241	0.002268

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Existing Ag Equipment & Vehicle Trips

Tulare County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling reflects existing equipment and vehicle trips based on data provided by the project applicant. EMISSIONS REFLECTED ARE IN LBS/MONTH.

Land Use - .

Construction Phase - Existing equipment use represent average monthly emissions (lbs/month) based on annual usage data provided by the project applicant. Operational emissions do not apply.

Off-road Equipment - Based on data provided by the project applicant.

Off-road Equipment - Based on data provided by the project applicant.

Grading - Dust from material movement not included.

Demolition - Demolition not included.

Trips and VMT - Represents monthly vehice trip emissions based on data provided by the project applicant and average emission fleet mix EFs for LDA, LDT1, AND LDT2.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	97.00	130.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	400.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	130.00
tblOffRoadEquipment	HorsePower	87.00	250.00
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	11.70
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	3.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3734	11.9198	8.8533	0.0131	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,324.3241	1,324.3241	0.3454	0.0000	1,331.5782
Total	**1.3734**	**11.9198**	**8.8533**	**0.0131**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,324.3241**	**1,324.3241**	**0.3454**	**0.0000**	**1,331.5782**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3734	11.9198	8.8533	0.0131	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,324.3241	1,324.3241	0.3454	0.0000	1,331.5782
Total	**1.3734**	**11.9198**	**8.8533**	**0.0131**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,324.3241**	**1,324.3241**	**0.3454**	**0.0000**	**1,331.5782**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Existing Orchard	Demolition	1/1/2015	1/1/2015	5	1	
2	Existing Row Crop	Site Preparation	1/2/2015	1/2/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Existing Orchard	Tractors/Loaders/Backhoes	1	0.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	3.30	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	10.80	90	0.37
Existing Row Crop	Other General Industrial Equipment	1	1.70	400	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	90	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	130	0.34
Existing Row Crop	Graders	0	8.00	174	0.41
Existing Row Crop	Other General Industrial Equipment	1	0.80	250	0.34
Existing Orchard	Concrete/Industrial Saws	0	8.00	81	0.73
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Rubber Tired Dozers	0	8.00	255	0.40
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Row Crop	Tractors/Loaders/Backhoes	1	11.70	130	0.37
Existing Row Crop	Rubber Tired Dozers	0	7.00	255	0.40

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
Existing Orchard	5	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Existing Row Crop	5	30.00	0.00	0.00	10.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868		1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**		**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0630	0.1114	0.9724	1.6300e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		139.1212	139.1212	8.4800e-003		139.2993
Total	**0.0630**	**0.1114**	**0.9724**	**1.6300e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**139.1212**	**139.1212**	**8.4800e-003**		**139.2993**

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868	0.0000	1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**	**0.0000**	**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0630	0.1114	0.9724	1.6300e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		139.1212	139.1212	8.4800e-003		139.2993
Total	**0.0630**	**0.1114**	**0.9724**	**1.6300e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**139.1212**	**139.1212**	**8.4800e-003**		**139.2993**

3.3 Existing Row Crop - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920		1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**		**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1475	0.1774	1.6327	2.4800e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		212.1341	212.1341	0.0134		212.4155
Total	**0.1475**	**0.1774**	**1.6327**	**2.4800e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**212.1341**	**212.1341**	**0.0134**		**212.4155**

3.3 Existing Row Crop - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920	0.0000	1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**	**0.0000**	**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1475	0.1774	1.6327	2.4800e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		212.1341	212.1341	0.0134		212.4155
Total	**0.1475**	**0.1774**	**1.6327**	**2.4800e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**212.1341**	**212.1341**	**0.0134**		**212.4155**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.408999	0.071178	0.163258	0.196144	0.057919	0.008335	0.018354	0.062533	0.001936	0.001543	0.006293	0.001241	0.002268

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Existing Ag Equipment & Vehicle Trips (BAU 2004)

Tulare County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling reflects existing equipment and vehicle trips based on data provided by the project applicant FOR BAU YR 2004 CONDITIONS. EMISSIONS REFLECTED ARE IN LBS/MONTH.

Land Use - .

Construction Phase - Existing equipment use represent average monthly emissions (lbs/month) FOR BAU2004 based on annual usage data provided by the project applicant. Operational emissions do not apply.

Off-road Equipment - Based on data provided by the project applicant.

Off-road Equipment - Based on data provided by the project applicant.

Trips and VMT - Represents monthly vehice trip emissions based on data provided by the project applicant and average emission fleet mix EFs for LDA, LDT1, AND LDT2.

Demolition - Demolition not included.

Grading - Dust from material movement not included.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	130.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	400.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	130.00
tblOffRoadEquipment	HorsePower	87.00	250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	3.30
tblOffRoadEquipment	UsageHours	8.00	11.70
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00

tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2004	3.9945	20.9534	19.1490	0.1252	0.2120	1.7720	1.9133	0.0624	1.7720	1.8136	0.0000	1,538.7774	1,538.7774	0.3648	0.0000	1,546.4377
Total	**3.9945**	**20.9534**	**19.1490**	**0.1252**	**0.2120**	**1.7720**	**1.9133**	**0.0624**	**1.7720**	**1.8136**	**0.0000**	**1,538.7774**	**1,538.7774**	**0.3648**	**0.0000**	**1,546.4377**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2004	3.9945	20.9534	19.1490	0.1252	0.2120	1.7720	1.9133	0.0624	1.7720	1.8136	0.0000	1,538.7774	1,538.7774	0.3648	0.0000	1,546.4377
Total	**3.9945**	**20.9534**	**19.1490**	**0.1252**	**0.2120**	**1.7720**	**1.9133**	**0.0624**	**1.7720**	**1.8136**	**0.0000**	**1,538.7774**	**1,538.7774**	**0.3648**	**0.0000**	**1,546.4377**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Existing Orchard	Demolition	1/1/2004	1/1/2004	5	1	
2	Existing Row Crop	Site Preparation	1/2/2004	1/2/2004	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Existing Orchard	Concrete/Industrial Saws	0	8.00	81	0.73
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Rubber Tired Dozers	0	8.00	255	0.40
Existing Orchard	Tractors/Loaders/Backhoes	1	10.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	0.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	3.30	90	0.37
Existing Row Crop	Graders	0	8.00	174	0.41
Existing Row Crop	Other General Industrial Equipment	1	1.70	400	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	90	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	130	0.34
Existing Row Crop	Other General Industrial Equipment	1	0.80	250	0.34
Existing Row Crop	Rubber Tired Dozers	0	7.00	255	0.40
Existing Row Crop	Tractors/Loaders/Backhoes	1	11.70	130	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Existing Orchard	5	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Existing Row Crop	5	30.00	0.00	0.00	10.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Existing Orchard - 2004

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	3.6033	20.3425	9.1441	0.1190		1.7655	1.7655		1.7655	1.7655		1,135.3768	1,135.3768	0.3234		1,142.1685
Total	**3.6033**	**20.3425**	**9.1441**	**0.1190**		**1.7655**	**1.7655**		**1.7655**	**1.7655**		**1,135.3768**	**1,135.3768**	**0.3234**		**1,142.1685**

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	0.3911	0.6109	6.6387	3.1400e-003	0.1413	6.4900e-003	0.1478	0.0415	6.4900e-003	0.0480		196.7259	196.7259	0.0414		197.5944
Total	**0.3911**	**0.6109**	**6.6387**	**3.1400e-003**	**0.1413**	**6.4900e-003**	**0.1478**	**0.0415**	**6.4900e-003**	**0.0480**		**196.7259**	**196.7259**	**0.0414**		**197.5944**

3.2 Existing Orchard - 2004

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	3.6033	20.3425	9.1441	0.1190		1.7655	1.7655		1.7655	1.7655	0.0000	1,135.3768	1,135.3768	0.3234		1,142.1685
Total	**3.6033**	**20.3425**	**9.1441**	**0.1190**		**1.7655**	**1.7655**		**1.7655**	**1.7655**	**0.0000**	**1,135.3768**	**1,135.3768**	**0.3234**		**1,142.1685**

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	0.3911	0.6109	6.6387	3.1400e-003	0.1413	6.4900e-003	0.1478	0.0415	6.4900e-003	0.0480		196.7259	196.7259	0.0414		197.5944
Total	**0.3911**	**0.6109**	**6.6387**	**3.1400e-003**	**0.1413**	**6.4900e-003**	**0.1478**	**0.0415**	**6.4900e-003**	**0.0480**		**196.7259**	**196.7259**	**0.0414**		**197.5944**

3.3 Existing Row Crop - 2004

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5321	19.9423	8.6658	0.1205		1.0680	1.0680		1.0680	1.0680		1,239.2660	1,239.2660	0.2277		1,244.0475
Total	**2.5321**	**19.9423**	**8.6658**	**0.1205**	**0.0000**	**1.0680**	**1.0680**	**0.0000**	**1.0680**	**1.0680**		**1,239.2660**	**1,239.2660**	**0.2277**		**1,244.0475**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.7878	0.9489	10.4832	4.7800e-003	0.2120	0.0101	0.2221	0.0624	0.0101	0.0725		299.5114	299.5114	0.0651		300.8783
Total	**0.7878**	**0.9489**	**10.4832**	**4.7800e-003**	**0.2120**	**0.0101**	**0.2221**	**0.0624**	**0.0101**	**0.0725**		**299.5114**	**299.5114**	**0.0651**		**300.8783**

3.3 Existing Row Crop - 2004

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5321	19.9423	8.6658	0.1205		1.0680	1.0680		1.0680	1.0680	0.0000	1,239.2660	1,239.2660	0.2277		1,244.0475
Total	**2.5321**	**19.9423**	**8.6658**	**0.1205**	**0.0000**	**1.0680**	**1.0680**	**0.0000**	**1.0680**	**1.0680**	**0.0000**	**1,239.2660**	**1,239.2660**	**0.2277**		**1,244.0475**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.7878	0.9489	10.4832	4.7800e-003	0.2120	0.0101	0.2221	0.0624	0.0101	0.0725		299.5114	299.5114	0.0651		300.8783
Total	**0.7878**	**0.9489**	**10.4832**	**4.7800e-003**	**0.2120**	**0.0101**	**0.2221**	**0.0624**	**0.0101**	**0.0725**		**299.5114**	**299.5114**	**0.0651**		**300.8783**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.408999	0.071178	0.163258	0.196144	0.057919	0.008335	0.018354	0.062533	0.001936	0.001543	0.006293	0.001241	0.002268

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Existing Ag Equipment & Vehicle Trips (BAU 2004)

Tulare County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling reflects existing equipment and vehicle trips based on data provided by the project applicant FOR BAU YR 2004 CONDITIONS. EMISSIONS REFLECTED ARE IN LBS/MONTH.

Land Use - .

Construction Phase - Existing equipment use represent average monthly emissions (lbs/month) FOR BAU2004 based on annual usage data provided by the project applicant. Operational emissions do not apply.

Off-road Equipment - Based on data provided by the project applicant.

Off-road Equipment - Based on data provided by the project applicant.

Trips and VMT - Represents monthly vehice trip emissions based on data provided by the project applicant and average emission fleet mix EFs for LDA, LDT1, AND LDT2.

Demolition - Demolition not included.

Grading - Dust from material movement not included.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	130.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	400.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	130.00
tblOffRoadEquipment	HorsePower	87.00	250.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	3.30
tblOffRoadEquipment	UsageHours	8.00	11.70
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00

tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2004	3.9691	21.0082	17.9342	0.1247	0.2120	1.7720	1.9133	0.0624	1.7720	1.8136	0.0000	1,500.6085	1,500.6085	0.3630	0.0000	1,508.2304
Total	**3.9691**	**21.0082**	**17.9342**	**0.1247**	**0.2120**	**1.7720**	**1.9133**	**0.0624**	**1.7720**	**1.8136**	**0.0000**	**1,500.6085**	**1,500.6085**	**0.3630**	**0.0000**	**1,508.2304**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2004	3.9691	21.0082	17.9342	0.1247	0.2120	1.7720	1.9133	0.0624	1.7720	1.8136	0.0000	1,500.6085	1,500.6085	0.3630	0.0000	1,508.2304
Total	**3.9691**	**21.0082**	**17.9342**	**0.1247**	**0.2120**	**1.7720**	**1.9133**	**0.0624**	**1.7720**	**1.8136**	**0.0000**	**1,500.6085**	**1,500.6085**	**0.3630**	**0.0000**	**1,508.2304**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Existing Orchard	Demolition	1/1/2004	1/1/2004	5	1	
2	Existing Row Crop	Site Preparation	1/2/2004	1/2/2004	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Existing Orchard	Concrete/Industrial Saws	0	8.00	81	0.73
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Rubber Tired Dozers	0	8.00	255	0.40
Existing Orchard	Tractors/Loaders/Backhoes	1	10.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	0.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	3.30	90	0.37
Existing Row Crop	Graders	0	8.00	174	0.41
Existing Row Crop	Other General Industrial Equipment	1	1.70	400	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	90	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	130	0.34
Existing Row Crop	Other General Industrial Equipment	1	0.80	250	0.34
Existing Row Crop	Rubber Tired Dozers	0	7.00	255	0.40
Existing Row Crop	Tractors/Loaders/Backhoes	1	11.70	130	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Existing Orchard	5	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Existing Row Crop	5	30.00	0.00	0.00	10.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Existing Orchard - 2004

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	3.6033	20.3425	9.1441	0.1190		1.7655	1.7655		1.7655	1.7655		1,135.3768	1,135.3768	0.3234		1,142.1685
Total	**3.6033**	**20.3425**	**9.1441**	**0.1190**		**1.7655**	**1.7655**		**1.7655**	**1.7655**		**1,135.3768**	**1,135.3768**	**0.3234**		**1,142.1685**

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	0.3657	0.6657	5.6668	2.7900e-003	0.1413	6.4900e-003	0.1478	0.0415	6.4900e-003	0.0480		171.4059	171.4059	0.0395		172.2360
Total	**0.3657**	**0.6657**	**5.6668**	**2.7900e-003**	**0.1413**	**6.4900e-003**	**0.1478**	**0.0415**	**6.4900e-003**	**0.0480**		**171.4059**	**171.4059**	**0.0395**		**172.2360**

3.2 Existing Orchard - 2004

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	3.6033	20.3425	9.1441	0.1190		1.7655	1.7655		1.7655	1.7655	0.0000	1,135.3768	1,135.3768	0.3234		1,142.1685
Total	**3.6033**	**20.3425**	**9.1441**	**0.1190**		**1.7655**	**1.7655**		**1.7655**	**1.7655**	**0.0000**	**1,135.3768**	**1,135.3768**	**0.3234**		**1,142.1685**

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	0.3657	0.6657	5.6668	2.7900e-003	0.1413	6.4900e-003	0.1478	0.0415	6.4900e-003	0.0480		171.4059	171.4059	0.0395		172.2360
Total	**0.3657**	**0.6657**	**5.6668**	**2.7900e-003**	**0.1413**	**6.4900e-003**	**0.1478**	**0.0415**	**6.4900e-003**	**0.0480**		**171.4059**	**171.4059**	**0.0395**		**172.2360**

3.3 Existing Row Crop - 2004

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5321	19.9423	8.6658	0.1205		1.0680	1.0680		1.0680	1.0680		1,239.2660	1,239.2660	0.2277		1,244.0475
Total	**2.5321**	**19.9423**	**8.6658**	**0.1205**	**0.0000**	**1.0680**	**1.0680**	**0.0000**	**1.0680**	**1.0680**		**1,239.2660**	**1,239.2660**	**0.2277**		**1,244.0475**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.7440	1.0362	9.2684	4.2600e-003	0.2120	0.0101	0.2221	0.0624	0.0101	0.0725		261.3425	261.3425	0.0635		262.6759
Total	**0.7440**	**1.0362**	**9.2684**	**4.2600e-003**	**0.2120**	**0.0101**	**0.2221**	**0.0624**	**0.0101**	**0.0725**		**261.3425**	**261.3425**	**0.0635**		**262.6759**

3.3 Existing Row Crop - 2004

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.5321	19.9423	8.6658	0.1205		1.0680	1.0680		1.0680	1.0680	0.0000	1,239.2660	1,239.2660	0.2277		1,244.0475
Total	**2.5321**	**19.9423**	**8.6658**	**0.1205**	**0.0000**	**1.0680**	**1.0680**	**0.0000**	**1.0680**	**1.0680**	**0.0000**	**1,239.2660**	**1,239.2660**	**0.2277**		**1,244.0475**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.7440	1.0362	9.2684	4.2600e-003	0.2120	0.0101	0.2221	0.0624	0.0101	0.0725		261.3425	261.3425	0.0635		262.6759
Total	**0.7440**	**1.0362**	**9.2684**	**4.2600e-003**	**0.2120**	**0.0101**	**0.2221**	**0.0624**	**0.0101**	**0.0725**		**261.3425**	**261.3425**	**0.0635**		**262.6759**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.408999	0.071178	0.163258	0.196144	0.057919	0.008335	0.018354	0.062533	0.001936	0.001543	0.006293	0.001241	0.002268

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Existing Pumps

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions associated with existing pumps (to be removed).

Land Use - .

Construction Phase - No construction included in this model run.

Off-road Equipment - OFFROAD EQUIPMENT USE EMISSIONS CALCULATED SEPARATELY. REFER TO SPREADSHEET.

Grading - .

Trips and VMT - .

On-road Fugitive Dust - .

Architectural Coating - .

Land Use Change - Loss of carbon sequestration included in Recharge Basin calculation.

Sequestration - No new carbon sequestration assumed.

Construction Off-road Equipment Mitigation - Mitigation does not apply.

Operational Off-Road Equipment - Operational off-road equipment emissions represent emissions to be removed. Includes (1) 200hp & (1) 125 hp CNG-powered pumps.

Off-road Equipment - .

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	84.00	200.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	125.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.43
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.43
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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
Offroad	0.0852	0.8497	0.5495	1.8300e-003		0.0305	0.0305		0.0305	0.0305	0.0000	157.4503	157.4503	6.7800e-003	0.0000	157.5926
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0852**	**0.8497**	**0.5495**	**1.8300e-003**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**157.4503**	**157.4503**	**6.7800e-003**	**0.0000**	**157.5927**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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
Offroad	0.0852	0.8497	0.5495	1.8300e-003		0.0305	0.0305		0.0305	0.0305	0.0000	157.4503	157.4503	6.7800e-003	0.0000	157.5926
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0852**	**0.8497**	**0.5495**	**1.8300e-003**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**157.4503**	**157.4503**	**6.7800e-003**	**0.0000**	**157.5927**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**100.00**	**100.00**	**100.00**	**100.00**	**0.00**	**100.00**	**100.00**	**0.00**	**100.00**	**100.00**	**0.00**	**100.00**	**100.00**	**100.00**	**0.00**	**100.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	None	Site Preparation	1/1/2015	1/1/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
None	Graders	0	8.00	174	0.41
None	Tractors/Loaders/Backhoes	0	8.00	97	0.37
None	Rubber Tired Dozers	0	7.00	255	0.40

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
None	0	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 None - 2015

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 None - 2015

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407411	0.071652	0.163259	0.194400	0.057030	0.008208	0.019805	0.065406	0.001858	0.001474	0.006105	0.001154	0.002237

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	0.0000	0.0000	0.0000	0.0000
Mitigated	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			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Pumps	1	4.43	260	200	0.74	CNG
Pumps	1	4.43	260	125	0.74	CNG

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Pumps	0.0852	0.8497	0.5495	1.8300e-003		0.0305	0.0305		0.0305	0.0305	0.0000	157.4503	157.4503	6.7800e-003	0.0000	157.5926
Total	**0.0852**	**0.8497**	**0.5495**	**1.8300e-003**		**0.0305**	**0.0305**		**0.0305**	**0.0305**	**0.0000**	**157.4503**	**157.4503**	**6.7800e-003**	**0.0000**	**157.5926**

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - In-Lieu Banking & Pipeline

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - TOTAL ACREAGE OF DISTURBANCE: 1 (Fugitive dust calculations included in Recharge Basin Construction calculation).

Construction Phase - IN-LIEU BANK CONST: 45 DAYS; PIPELINE CONST: 240 DAYS; LIFT STATION CONST: 55 DAYS.

Off-road Equipment - OFFROAD EQUIPMENT USE EMISSIONS CALCULATED SEPARATELY. REFER TO SPREADSHEET.

Grading - DUST EMISSIONS ASSOCIATED WITH MATERIAL MOVEMENT BASED ON MODEL DEFAULTS.

Trips and VMT - VEHICLE TRIPS BASED ON MODEL DEFAULTS.

On-road Fugitive Dust - ON-ROAD FUGITIVE DUST BASED ON MODEL DEFAULTS.

Architectural Coating - ARCHITECTURAL COATINGS APPLICATION & DEMOLITION DO NOT APPLY.

Land Use Change - Loss of carbon sequestration included in Recharge Basin calculation.

Sequestration - No new carbon sequestration assumed.

Construction Off-road Equipment Mitigation - Mitigation assumes 61% control for water exposed surfaces, 15 mph speed limit. Equipment emissions mitigation (for modeling purposes) assumes use of Tier 3 equipment.

Off-road Equipment - In-Lieu Const assumes 1 excavator, 1 backhoe, 1 water truck, per project proponent.

Off-road Equipment - Lift Station Const assumes 1 excavator, 1 backhoe, 1 water truck, per project proponent.

Off-road Equipment - Pipeline Const assumes 2 excavator, 1 backhoe, 1 water truck, per project proponent.

Operational Off-Road Equipment - All proposed equipment to be electric.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	2.00	55.00
tblConstructionPhase	NumDays	1.00	45.00
tblGrading	AcresOfGrading	0.00	20.63
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.2554	2.7871	1.7872	3.4200e-003	0.0261	0.1323	0.1585	5.1800e-003	0.1218	0.1269	0.0000	318.4778	318.4778	0.0929	0.0000	320.4286
2017	0.0773	0.8286	0.5748	1.1200e-003	4.8900e-003	0.0391	0.0440	1.3000e-003	0.0360	0.0373	0.0000	102.4041	102.4041	0.0303	0.0000	103.0413
Total	**0.3327**	**3.6157**	**2.3620**	**4.5400e-003**	**0.0310**	**0.1715**	**0.2025**	**6.4800e-003**	**0.1577**	**0.1642**	**0.0000**	**420.8819**	**420.8819**	**0.1232**	**0.0000**	**423.4699**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0854	1.5798	2.1526	3.4200e-003	0.0193	0.0725	0.0918	4.4400e-003	0.0725	0.0769	0.0000	318.4775	318.4775	0.0929	0.0000	320.4282
2017	0.0277	0.5158	0.7101	1.1200e-003	4.8900e-003	0.0238	0.0287	1.3000e-003	0.0238	0.0251	0.0000	102.4040	102.4040	0.0303	0.0000	103.0412
Total	**0.1131**	**2.0956**	**2.8627**	**4.5400e-003**	**0.0242**	**0.0962**	**0.1204**	**5.7400e-003**	**0.0962**	**0.1020**	**0.0000**	**420.8814**	**420.8814**	**0.1232**	**0.0000**	**423.4694**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**66.00**	**42.04**	**-21.20**	**0.00**	**22.05**	**43.87**	**40.52**	**11.42**	**39.00**	**37.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	In-Lieu Banking Construction	Site Preparation	1/1/2016	3/3/2016	5	45	
2	Lift Station Construction	Grading	3/4/2016	5/19/2016	5	55	
3	Pipeline Construction	Trenching	5/20/2016	4/20/2017	5	240	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Lift Station Construction	Graders	0	6.00	174	0.41
Lift Station Construction	Rubber Tired Dozers	0	6.00	255	0.40
Lift Station Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
In-Lieu Banking Construction	Graders	0	8.00	174	0.41
In-Lieu Banking Construction	Excavators	1	8.00	162	0.38
In-Lieu Banking Construction	Off-Highway Trucks	1	8.00	400	0.38
Lift Station Construction	Excavators	1	8.00	162	0.38
Lift Station Construction	Off-Highway Trucks	1	8.00	400	0.38
Pipeline Construction	Excavators	2	8.00	162	0.38
Pipeline Construction	Off-Highway Trucks	1	8.00	400	0.38
Pipeline Construction	Rubber Tired Dozers	0	6.00	255	0.40
Pipeline Construction	Graders	0	6.00	174	0.41
Pipeline Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
In-Lieu Banking Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
In-Lieu Banking Construction	Rubber Tired Dozers	0	7.00	255	0.40

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
Lift Station Construction	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
In-Lieu Banking Construction	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Construction	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 In-Lieu Banking Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0376	0.4171	0.2451	4.9000e-004		0.0198	0.0198		0.0182	0.0182	0.0000	45.7311	45.7311	0.0138	0.0000	46.0208
Total	**0.0376**	**0.4171**	**0.2451**	**4.9000e-004**	**2.7000e-004**	**0.0198**	**0.0200**	**3.0000e-005**	**0.0182**	**0.0182**	**0.0000**	**45.7311**	**45.7311**	**0.0138**	**0.0000**	**46.0208**

3.2 In-Lieu Banking Construction - 2016

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	8.9000e-004	1.3600e-003	0.0132	3.0000e-005	2.2300e-003	2.0000e-005	2.2500e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	1.9178	1.9178	1.0000e-004	0.0000	1.9200
Total	**8.9000e-004**	**1.3600e-003**	**0.0132**	**3.0000e-005**	**2.2300e-003**	**2.0000e-005**	**2.2500e-003**	**5.9000e-004**	**2.0000e-005**	**6.1000e-004**	**0.0000**	**1.9178**	**1.9178**	**1.0000e-004**	**0.0000**	**1.9200**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.2356	0.2999	4.9000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	45.7310	45.7310	0.0138	0.0000	46.0207
Total	**0.0119**	**0.2356**	**0.2999**	**4.9000e-004**	**1.0000e-004**	**0.0108**	**0.0109**	**1.0000e-005**	**0.0108**	**0.0108**	**0.0000**	**45.7310**	**45.7310**	**0.0138**	**0.0000**	**46.0207**

3.2 In-Lieu Banking Construction - 2016

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	8.9000e-004	1.3600e-003	0.0132	3.0000e-005	2.2300e-003	2.0000e-005	2.2500e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	1.9178	1.9178	1.0000e-004	0.0000	1.9200
Total	**8.9000e-004**	**1.3600e-003**	**0.0132**	**3.0000e-005**	**2.2300e-003**	**2.0000e-005**	**2.2500e-003**	**5.9000e-004**	**2.0000e-005**	**6.1000e-004**	**0.0000**	**1.9178**	**1.9178**	**1.0000e-004**	**0.0000**	**1.9200**

3.3 Lift Station Construction - 2016

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					0.0109	0.0000	0.0109	1.1800e-003	0.0000	1.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0461	0.5119	0.3008	6.0000e-004		0.0242	0.0242		0.0223	0.0223	0.0000	56.1327	56.1327	0.0169	0.0000	56.4882
Total	**0.0461**	**0.5119**	**0.3008**	**6.0000e-004**	**0.0109**	**0.0242**	**0.0352**	**1.1800e-003**	**0.0223**	**0.0235**	**0.0000**	**56.1327**	**56.1327**	**0.0169**	**0.0000**	**56.4882**

3.3 Lift Station Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6700e-003	0.0161	3.0000e-005	2.7200e-003	2.0000e-005	2.7500e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.3440	2.3440	1.3000e-004	0.0000	2.3467
Total	**1.0900e-003**	**1.6700e-003**	**0.0161**	**3.0000e-005**	**2.7200e-003**	**2.0000e-005**	**2.7500e-003**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**0.0000**	**2.3440**	**2.3440**	**1.3000e-004**	**0.0000**	**2.3467**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2700e-003	0.0000	4.2700e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.2892	0.3681	6.0000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	56.1326	56.1326	0.0169	0.0000	56.4881
Total	**0.0146**	**0.2892**	**0.3681**	**6.0000e-004**	**4.2700e-003**	**0.0132**	**0.0175**	**4.6000e-004**	**0.0132**	**0.0137**	**0.0000**	**56.1326**	**56.1326**	**0.0169**	**0.0000**	**56.4881**

3.3 Lift Station Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6700e-003	0.0161	3.0000e-005	2.7200e-003	2.0000e-005	2.7500e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.3440	2.3440	1.3000e-004	0.0000	2.3467
Total	**1.0900e-003**	**1.6700e-003**	**0.0161**	**3.0000e-005**	**2.7200e-003**	**2.0000e-005**	**2.7500e-003**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**0.0000**	**2.3440**	**2.3440**	**1.3000e-004**	**0.0000**	**2.3467**

3.4 Pipeline Construction - 2016

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	0.1657	1.8490	1.1530	2.1600e-003		0.0882	0.0882		0.0812	0.0812	0.0000	203.7753	203.7753	0.0615	0.0000	205.0661
Total	**0.1657**	**1.8490**	**1.1530**	**2.1600e-003**		**0.0882**	**0.0882**		**0.0812**	**0.0812**	**0.0000**	**203.7753**	**203.7753**	**0.0615**	**0.0000**	**205.0661**

3.4 Pipeline Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	6.0900e-003	0.0590	1.1000e-004	9.9700e-003	8.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7200e-003	0.0000	8.5769	8.5769	4.7000e-004	0.0000	8.5868
Total	**4.0000e-003**	**6.0900e-003**	**0.0590**	**1.1000e-004**	**9.9700e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**7.0000e-005**	**2.7200e-003**	**0.0000**	**8.5769**	**8.5769**	**4.7000e-004**	**0.0000**	**8.5868**

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	0.0530	1.0458	1.3964	2.1600e-003		0.0484	0.0484		0.0484	0.0484	0.0000	203.7751	203.7751	0.0615	0.0000	205.0658
Total	**0.0530**	**1.0458**	**1.3964**	**2.1600e-003**		**0.0484**	**0.0484**		**0.0484**	**0.0484**	**0.0000**	**203.7751**	**203.7751**	**0.0615**	**0.0000**	**205.0658**

3.4 Pipeline Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	6.0900e-003	0.0590	1.1000e-004	9.9700e-003	8.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7200e-003	0.0000	8.5769	8.5769	4.7000e-004	0.0000	8.5868
Total	**4.0000e-003**	**6.0900e-003**	**0.0590**	**1.1000e-004**	**9.9700e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**7.0000e-005**	**2.7200e-003**	**0.0000**	**8.5769**	**8.5769**	**4.7000e-004**	**0.0000**	**8.5868**

3.4 Pipeline Construction - 2017

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	0.0756	0.8260	0.5499	1.0600e-003		0.0391	0.0391		0.0360	0.0360	0.0000	98.3656	98.3656	0.0301	0.0000	98.9985
Total	**0.0756**	**0.8260**	**0.5499**	**1.0600e-003**		**0.0391**	**0.0391**		**0.0360**	**0.0360**	**0.0000**	**98.3656**	**98.3656**	**0.0301**	**0.0000**	**98.9985**

3.4 Pipeline Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	2.6100e-003	0.0249	6.0000e-005	4.8900e-003	4.0000e-005	4.9300e-003	1.3000e-003	3.0000e-005	1.3300e-003	0.0000	4.0385	4.0385	2.1000e-004	0.0000	4.0428
Total	**1.6800e-003**	**2.6100e-003**	**0.0249**	**6.0000e-005**	**4.8900e-003**	**4.0000e-005**	**4.9300e-003**	**1.3000e-003**	**3.0000e-005**	**1.3300e-003**	**0.0000**	**4.0385**	**4.0385**	**2.1000e-004**	**0.0000**	**4.0428**

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	0.0260	0.5132	0.6852	1.0600e-003		0.0237	0.0237		0.0237	0.0237	0.0000	98.3655	98.3655	0.0301	0.0000	98.9984
Total	**0.0260**	**0.5132**	**0.6852**	**1.0600e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**	**0.0000**	**98.3655**	**98.3655**	**0.0301**	**0.0000**	**98.9984**

3.4 Pipeline Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	2.6100e-003	0.0249	6.0000e-005	4.8900e-003	4.0000e-005	4.9300e-003	1.3000e-003	3.0000e-005	1.3300e-003	0.0000	4.0385	4.0385	2.1000e-004	0.0000	4.0428
Total	**1.6800e-003**	**2.6100e-003**	**0.0249**	**6.0000e-005**	**4.8900e-003**	**4.0000e-005**	**4.9300e-003**	**1.3000e-003**	**3.0000e-005**	**1.3300e-003**	**0.0000**	**4.0385**	**4.0385**	**2.1000e-004**	**0.0000**	**4.0428**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407411	0.071652	0.163259	0.194400	0.057030	0.008208	0.019805	0.065406	0.001858	0.001474	0.006105	0.001154	0.002237

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Recharge Basin

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	560.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - TOTAL ACREAGE: 560

Construction Phase - SITE PREP: 30 DAYS.; GRADING: 225 DAYS; INFRASTRUCTURE: 75 DAYS

Off-road Equipment - OFFROAD EQUIPMENT USE EMISSIONS CALCULATED SEPARATELY. REFER TO SPREADSHEET.

Grading - DUST EMISSIONS ASSOCIATED WITH MATERIAL MOVEMENT BASED ON MODEL DEFAULTS.

Off-road Equipment - Assumes 1 dozer, 2 loaders, per project proponent.

Off-road Equipment - Assumes 2 scrapers, 2 tractors, 1 graders, 2 water trucks, per project proponent.

Off-road Equipment - Assumes 1 excavator, 1 water truck, 1 backhoe, per project proponent.

Trips and VMT - VEHICLE TRIPS BASED ON MODEL DEFAULTS.

On-road Fugitive Dust - ON-ROAD FUGITIVE DUST BASED ON MODEL DEFAULTS.

Architectural Coating - ARCHITECTURAL COATINGS APPLICATION & DEMOLITION DO NOT APPLY.

Land Use Change - Loss of carbon sequestration assumes removal of 240 acres of row crop and 320 acres of orchard.

Sequestration - No new carbon sequestration assumed.

Construction Off-road Equipment Mitigation - Mitigation assumes 61% control for water exposed surfaces, 15 mph speed limit. Equipment emissions mitigation (for modeling purposes) assumes use of Tier 3 equipment.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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	9,300.00	75.00
tblConstructionPhase	NumDays	930.00	225.00
tblConstructionPhase	NumDays	360.00	30.00
tblConstructionPhase	PhaseEndDate	4/6/2016	4/14/2016
tblConstructionPhase	PhaseStartDate	12/24/2015	1/1/2016
tblGrading	AcresOfGrading	562.50	2,325.00
tblLandUse	LotAcreage	0.00	560.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.8005	9.2618	5.3636	8.2700e-003	1.3497	0.4214	1.7711	0.1898	0.3877	0.5775	0.0000	782.3162	782.3162	0.2279	0.0000	787.1014
2016	0.0629	0.6975	0.4098	8.1000e-004	0.0000	0.0330	0.0330	0.0000	0.0304	0.0304	0.0000	76.4999	76.4999	0.0231	0.0000	76.9845
Total	**0.8634**	**9.9593**	**5.7734**	**9.0800e-003**	**1.3497**	**0.4544**	**1.8041**	**0.1898**	**0.4181**	**0.6079**	**0.0000**	**858.8161**	**858.8161**	**0.2509**	**0.0000**	**864.0858**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2072	3.8535	4.7358	8.2700e-003	0.5426	0.1633	0.7059	0.0783	0.1633	0.2416	0.0000	782.3153	782.3153	0.2279	0.0000	787.1005
2016	0.0199	0.3941	0.5016	8.1000e-004	0.0000	0.0180	0.0180	0.0000	0.0180	0.0180	0.0000	76.4998	76.4998	0.0231	0.0000	76.9844
Total	**0.2270**	**4.2476**	**5.2374**	**9.0800e-003**	**0.5426**	**0.1813**	**0.7239**	**0.0783**	**0.1813**	**0.2596**	**0.0000**	**858.8151**	**858.8151**	**0.2509**	**0.0000**	**864.0848**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**73.71**	**57.35**	**9.28**	**0.00**	**59.80**	**60.10**	**59.88**	**58.73**	**56.64**	**57.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-37,008.0000
Total	**-37,008.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Recharge Basin Site Preparation	Site Preparation	1/1/2015	2/11/2015	5	30	
2	Recharge Basin Grading	Grading	2/12/2015	12/23/2015	5	225	
3	Recharge Basin Infrastructure	Building Construction	1/1/2016	4/14/2016	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Recharge Basin Infrastructure	Cranes	0	7.00	226	0.29
Recharge Basin Infrastructure	Forklifts	0	8.00	89	0.20
Recharge Basin Infrastructure	Generator Sets	0	8.00	84	0.74
Recharge Basin Grading	Excavators	0	8.00	162	0.38
Recharge Basin Grading	Off-Highway Trucks	2	8.00	400	0.38
Recharge Basin Infrastructure	Excavators	1	8.00	162	0.38
Recharge Basin Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Recharge Basin Infrastructure	Off-Highway Trucks	1	8.00	400	0.38
Recharge Basin Infrastructure	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Recharge Basin Grading	Rubber Tired Dozers	0	8.00	255	0.40
Recharge Basin Grading	Graders	1	8.00	174	0.41
Recharge Basin Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Recharge Basin Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Recharge Basin Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Recharge Basin Grading	Scrapers	2	8.00	361	0.48
Recharge Basin Infrastructure	Welders	0	8.00	46	0.45

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
Recharge Basin Infrastructure	3	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Recharge Basin Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Recharge Basin Grading	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Recharge Basin Site Preparation - 2015

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0299	0.3188	0.2374	2.3000e-004		0.0181	0.0181		0.0167	0.0167	0.0000	21.6215	21.6215	6.4500e-003	0.0000	21.7570
Total	**0.0299**	**0.3188**	**0.2374**	**2.3000e-004**	**0.0903**	**0.0181**	**0.1085**	**0.0497**	**0.0167**	**0.0663**	**0.0000**	**21.6215**	**21.6215**	**6.4500e-003**	**0.0000**	**21.7570**

3.2 Recharge Basin Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0400e-003	0.0101	2.0000e-005	1.4900e-003	1.0000e-005	1.5000e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3289	1.3289	8.0000e-005	0.0000	1.3305
Total	**6.9000e-004**	**1.0400e-003**	**0.0101**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5000e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.3289**	**1.3289**	**8.0000e-005**	**0.0000**	**1.3305**

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					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5200e-003	0.1146	0.1404	2.3000e-004		6.0200e-003	6.0200e-003		6.0200e-003	6.0200e-003	0.0000	21.6215	21.6215	6.4500e-003	0.0000	21.7570
Total	**5.5200e-003**	**0.1146**	**0.1404**	**2.3000e-004**	**0.0352**	**6.0200e-003**	**0.0413**	**0.0194**	**6.0200e-003**	**0.0254**	**0.0000**	**21.6215**	**21.6215**	**6.4500e-003**	**0.0000**	**21.7570**

3.2 Recharge Basin Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0400e-003	0.0101	2.0000e-005	1.4900e-003	1.0000e-005	1.5000e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3289	1.3289	8.0000e-005	0.0000	1.3305
Total	**6.9000e-004**	**1.0400e-003**	**0.0101**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5000e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.3289**	**1.3289**	**8.0000e-005**	**0.0000**	**1.3305**

3.3 Recharge Basin Grading - 2015

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					1.2328	0.0000	1.2328	0.1331	0.0000	0.1331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7583	8.9245	4.9455	7.7400e-003		0.4031	0.4031		0.3708	0.3708	0.0000	736.9415	736.9415	0.2200	0.0000	741.5617
Total	**0.7583**	**8.9245**	**4.9455**	**7.7400e-003**	**1.2328**	**0.4031**	**1.6359**	**0.1331**	**0.3708**	**0.5039**	**0.0000**	**736.9415**	**736.9415**	**0.2200**	**0.0000**	**741.5617**

3.3 Recharge Basin Grading - 2015

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	0.0116	0.0175	0.1706	2.9000e-004	0.0251	2.1000e-004	0.0253	6.6700e-003	2.0000e-004	6.8600e-003	0.0000	22.4244	22.4244	1.3200e-003	0.0000	22.4522
Total	**0.0116**	**0.0175**	**0.1706**	**2.9000e-004**	**0.0251**	**2.1000e-004**	**0.0253**	**6.6700e-003**	**2.0000e-004**	**6.8600e-003**	**0.0000**	**22.4244**	**22.4244**	**1.3200e-003**	**0.0000**	**22.4522**

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					0.4808	0.0000	0.4808	0.0519	0.0000	0.0519	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1893	3.7203	4.4147	7.7400e-003		0.1571	0.1571		0.1571	0.1571	0.0000	736.9406	736.9406	0.2200	0.0000	741.5608
Total	**0.1893**	**3.7203**	**4.4147**	**7.7400e-003**	**0.4808**	**0.1571**	**0.6379**	**0.0519**	**0.1571**	**0.2090**	**0.0000**	**736.9406**	**736.9406**	**0.2200**	**0.0000**	**741.5608**

3.3 Recharge Basin Grading - 2015

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	0.0116	0.0175	0.1706	2.9000e-004	0.0251	2.1000e-004	0.0253	6.6700e-003	2.0000e-004	6.8600e-003	0.0000	22.4244	22.4244	1.3200e-003	0.0000	22.4522
Total	**0.0116**	**0.0175**	**0.1706**	**2.9000e-004**	**0.0251**	**2.1000e-004**	**0.0253**	**6.6700e-003**	**2.0000e-004**	**6.8600e-003**	**0.0000**	**22.4244**	**22.4244**	**1.3200e-003**	**0.0000**	**22.4522**

3.4 Recharge Basin Infrastructure - 2016

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	0.0629	0.6975	0.4098	8.1000e-004		0.0330	0.0330		0.0304	0.0304	0.0000	76.4999	76.4999	0.0231	0.0000	76.9845
Total	**0.0629**	**0.6975**	**0.4098**	**8.1000e-004**		**0.0330**	**0.0330**		**0.0304**	**0.0304**	**0.0000**	**76.4999**	**76.4999**	**0.0231**	**0.0000**	**76.9845**

3.4 Recharge Basin Infrastructure - 2016

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.3941	0.5016	8.1000e-004		0.0180	0.0180		0.0180	0.0180	0.0000	76.4998	76.4998	0.0231	0.0000	76.9844
Total	**0.0199**	**0.3941**	**0.5016**	**8.1000e-004**		**0.0180**	**0.0180**		**0.0180**	**0.0180**	**0.0000**	**76.4998**	**76.4998**	**0.0231**	**0.0000**	**76.9844**

3.4 Recharge Basin Infrastructure - 2016

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407411	0.071652	0.163259	0.194400	0.057030	0.008208	0.019805	0.065406	0.001858	0.001474	0.006105	0.001154	0.002237

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-37,008.0000	0.0000	0.0000	-37,008.0000

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	240 / 0	-1,488.0000	0.0000	0.0000	-1,488.0000
Trees	320 / 0	-35,520.0000	0.0000	0.0000	-35,520.0000
Total		**-37,008.0000**	**0.0000**	**0.0000**	**-37,008.0000**

SVWBA PIXLEY GROUNDWATER BANK - Proposed Project Equipment & Vehicle Trips

Tulare County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed project offroad equipment and vehicle maintenance trips calculated using the construction module. Operational emissions do not apply.

Construction Phase - .

Off-road Equipment - Reflects average monthly emisisons (lbs/mo), based on estimated average annual/monthly hours of equipment use provided by the project applicant.

Trips and VMT - Assumes an average of 2 trip/month, 20 mile average trip distance; emission factors based on LDA,LDT1,LDT2 averages.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	87.00	200.00
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.34	0.34
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.7333	7.3748	4.3881	6.3400e-003	0.0304	0.4418	0.4722	8.0600e-003	0.4065	0.4145	0.0000	640.1028	640.1028	0.1885	0.0000	644.0609
Total	**0.7333**	**7.3748**	**4.3881**	**6.3400e-003**	**0.0304**	**0.4418**	**0.4722**	**8.0600e-003**	**0.4065**	**0.4145**	**0.0000**	**640.1028**	**640.1028**	**0.1885**	**0.0000**	**644.0609**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.7333	7.3748	4.3881	6.3400e-003	0.0304	0.4418	0.4722	8.0600e-003	0.4065	0.4145	0.0000	640.1028	640.1028	0.1885	0.0000	644.0609
Total	**0.7333**	**7.3748**	**4.3881**	**6.3400e-003**	**0.0304**	**0.4418**	**0.4722**	**8.0600e-003**	**0.4065**	**0.4145**	**0.0000**	**640.1028**	**640.1028**	**0.1885**	**0.0000**	**644.0609**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Operational Emissions Calculation	Demolition	1/1/2017	1/2/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Operational Emissions Calculation	Graders	1	3.33	174	0.41
Operational Emissions Calculation	Other General Industrial Equipment	1	1.33	200	0.34
Operational Emissions Calculation	Concrete/Industrial Saws	0	8.00	81	0.73
Operational Emissions Calculation	Rubber Tired Dozers	0	1.00	255	0.40
Operational Emissions Calculation	Tractors/Loaders/Backhoes	1	5.00	120	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Operational Emissions Calculation	3	2.00	0.00	0.00	20.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Operational Emissions Calculation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7226	7.3604	4.2151	5.9700e-003		0.4416	0.4416		0.4063	0.4063		610.7352	610.7352	0.1871		614.6649
Total	**0.7226**	**7.3604**	**4.2151**	**5.9700e-003**		**0.4416**	**0.4416**		**0.4063**	**0.4063**		**610.7352**	**610.7352**	**0.1871**		**614.6649**

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	0.0107	0.0144	0.1731	3.7000e-004	0.0304	2.2000e-004	0.0306	8.0600e-003	2.0000e-004	8.2600e-003		29.3676	29.3676	1.3500e-003		29.3960
Total	**0.0107**	**0.0144**	**0.1731**	**3.7000e-004**	**0.0304**	**2.2000e-004**	**0.0306**	**8.0600e-003**	**2.0000e-004**	**8.2600e-003**		**29.3676**	**29.3676**	**1.3500e-003**		**29.3960**

3.2 Operational Emissions Calculation - 2017

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	0.7226	7.3604	4.2151	5.9700e-003		0.4416	0.4416		0.4063	0.4063	0.0000	610.7352	610.7352	0.1871		614.6649
Total	**0.7226**	**7.3604**	**4.2151**	**5.9700e-003**		**0.4416**	**0.4416**		**0.4063**	**0.4063**	**0.0000**	**610.7352**	**610.7352**	**0.1871**		**614.6649**

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	0.0107	0.0144	0.1731	3.7000e-004	0.0304	2.2000e-004	0.0306	8.0600e-003	2.0000e-004	8.2600e-003		29.3676	29.3676	1.3500e-003		29.3960
Total	**0.0107**	**0.0144**	**0.1731**	**3.7000e-004**	**0.0304**	**2.2000e-004**	**0.0306**	**8.0600e-003**	**2.0000e-004**	**8.2600e-003**		**29.3676**	**29.3676**	**1.3500e-003**		**29.3960**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407498	0.071487	0.163204	0.194129	0.057003	0.008191	0.019775	0.065759	0.001887	0.001487	0.006158	0.001182	0.002240

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Proposed Project Equipment & Vehicle Trips

Tulare County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed project offroad equipment and vehicle maintenance trips calculated using the construction module. Operational emissions do not apply.

Construction Phase - .

Off-road Equipment - Reflects average monthly emisisons (lbs/mo), based on estimated average annual/monthly hours of equipment use provided by the project applicant.

Trips and VMT - Assumes an average of 2 trip/month, 20 mile average trip distance; emission factors based on LDA,LDT1,LDT2 averages.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	87.00	200.00
tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.34	0.34
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.7317	7.3774	4.3589	6.2900e-003	0.0304	0.4418	0.4722	8.0600e-003	0.4065	0.4145	0.0000	636.4174	636.4174	0.1885	0.0000	640.3755
Total	**0.7317**	**7.3774**	**4.3589**	**6.2900e-003**	**0.0304**	**0.4418**	**0.4722**	**8.0600e-003**	**0.4065**	**0.4145**	**0.0000**	**636.4174**	**636.4174**	**0.1885**	**0.0000**	**640.3755**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.7317	7.3774	4.3589	6.2900e-003	0.0304	0.4418	0.4722	8.0600e-003	0.4065	0.4145	0.0000	636.4174	636.4174	0.1885	0.0000	640.3755
Total	**0.7317**	**7.3774**	**4.3589**	**6.2900e-003**	**0.0304**	**0.4418**	**0.4722**	**8.0600e-003**	**0.4065**	**0.4145**	**0.0000**	**636.4174**	**636.4174**	**0.1885**	**0.0000**	**640.3755**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Operational Emissions Calculation	Demolition	1/1/2017	1/2/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Operational Emissions Calculation	Graders	1	3.33	174	0.41
Operational Emissions Calculation	Other General Industrial Equipment	1	1.33	200	0.34
Operational Emissions Calculation	Concrete/Industrial Saws	0	8.00	81	0.73
Operational Emissions Calculation	Rubber Tired Dozers	0	1.00	255	0.40
Operational Emissions Calculation	Tractors/Loaders/Backhoes	1	5.00	120	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Operational Emissions Calculation	3	2.00	0.00	0.00	20.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Operational Emissions Calculation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7226	7.3604	4.2151	5.9700e-003		0.4416	0.4416		0.4063	0.4063		610.7352	610.7352	0.1871		614.6649
Total	**0.7226**	**7.3604**	**4.2151**	**5.9700e-003**		**0.4416**	**0.4416**		**0.4063**	**0.4063**		**610.7352**	**610.7352**	**0.1871**		**614.6649**

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	9.1300e-003	0.0170	0.1438	3.2000e-004	0.0304	2.2000e-004	0.0306	8.0600e-003	2.0000e-004	8.2600e-003		25.6823	25.6823	1.3500e-003		25.7107
Total	**9.1300e-003**	**0.0170**	**0.1438**	**3.2000e-004**	**0.0304**	**2.2000e-004**	**0.0306**	**8.0600e-003**	**2.0000e-004**	**8.2600e-003**		**25.6823**	**25.6823**	**1.3500e-003**		**25.7107**

3.2 Operational Emissions Calculation - 2017

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	0.7226	7.3604	4.2151	5.9700e-003		0.4416	0.4416		0.4063	0.4063	0.0000	610.7352	610.7352	0.1871		614.6649
Total	**0.7226**	**7.3604**	**4.2151**	**5.9700e-003**		**0.4416**	**0.4416**		**0.4063**	**0.4063**	**0.0000**	**610.7352**	**610.7352**	**0.1871**		**614.6649**

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	9.1300e-003	0.0170	0.1438	3.2000e-004	0.0304	2.2000e-004	0.0306	8.0600e-003	2.0000e-004	8.2600e-003		25.6823	25.6823	1.3500e-003		25.7107
Total	**9.1300e-003**	**0.0170**	**0.1438**	**3.2000e-004**	**0.0304**	**2.2000e-004**	**0.0306**	**8.0600e-003**	**2.0000e-004**	**8.2600e-003**		**25.6823**	**25.6823**	**1.3500e-003**		**25.7107**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407498	0.071487	0.163204	0.194129	0.057003	0.008191	0.019775	0.065759	0.001887	0.001487	0.006158	0.001182	0.002240

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

AIR QUALITY GENERAL CONFORMITY ANALYSIS

FOR

SOUTH VALLEY WATER BANK PROJECT

TULARE COUNTY, CA

NOVEMBER 2014

PREPARED FOR:

SOUTH VALLEY
WATER BANK AUTHORITY
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INTRODUCTION

This report provides an assessment of the Proposed South Valley Water Bank Project (Project) with regard to federal General Conformity requirements. This assessment was based, in part, on information obtained from the California Air Resources Board (ARB), and the United States Environmental Protection Agency (U.S.EPA). A glossary of commonly used terminology and acronyms, which may be helpful in understanding this report, is included in **Appendix A**.

Proposed Project

The proposed water bank is a 30,000 acre-feet per year dry year return water bank. The project includes a 560 acre dedicated recharge basins with a well field of eleven recovery wells located within the facility boundaries. The project also includes 2,200 acres of in-lieu banking area with five groundwater recovery wells. The proposed project area is depicted in **Figure 1**.

Regulatory Background

Federal Clean Air Act

The Clean Air Act (CAA) required the Environmental Protection Agency (EPA) to establish a list of pollutants that "may reasonably be anticipated to endanger public health and welfare" and set National Ambient Air Quality Standards (NAAQS) to protect the public from adverse impacts of these pollutants. The list consists of the following six criteria pollutants: sulfur dioxide (SO_2), particulate matter (PM_{10}) and $PM_{2.5}$), nitrogen dioxide (NO_2), carbon monoxide (CO), ozone (O_3), and lead (Pb). The EPA also has designated areas where the air quality does not meet NAAQS for one or more of the above criteria air pollutants as nonattainment areas. In nonattainment areas, a State must develop a State Implementation Plan (SIP) that demonstrates how it will attain and maintain the NAAQS. Areas previously in non-attainment, but where the air quality has improved to below the NAAQS levels, are designated as maintenance areas subject to an air quality maintenance plan.

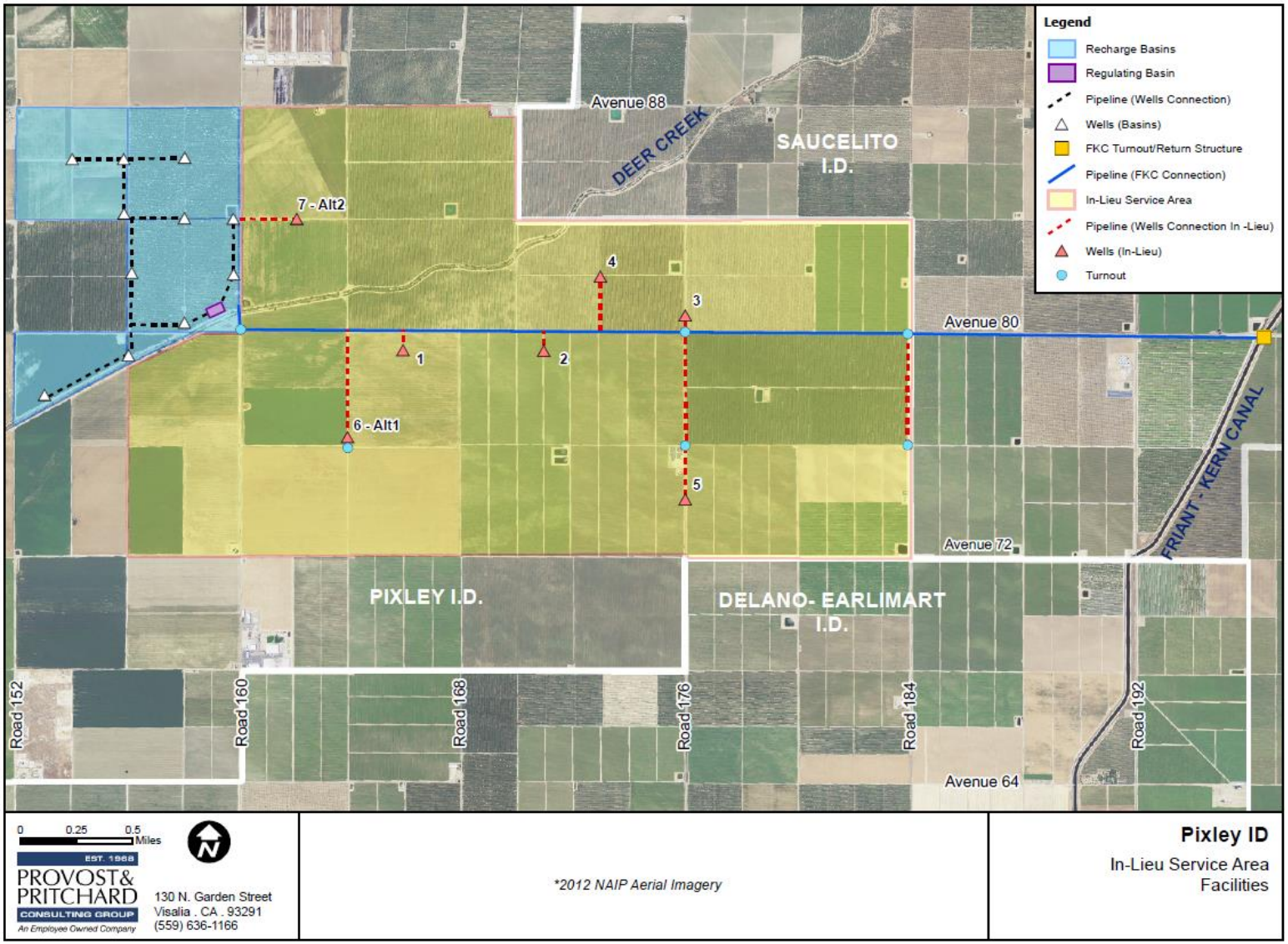
General Conformity

Title 40 of the Code of Federal Regulations, Part 93, requires that the federal government not engage, support, or provide financial assistance for licensing, permitting, or approving any activity not conforming to an approved CAA implementation plan. Title I, section 176(c)(1), of the CAA defines conformity as the upholding of "an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving attainment of such standards." Accordingly, proposed Federal actions should not, through additional air pollutant emissions:

- cause or contribute to new violations of any NAAQS in any area;
- increase the frequency or severity of any existing violation of any NAAQS; or
- delay timely attainment of any NAAQS or interim emission reductions.

The General Conformity regulations take into account air pollutant emissions associated with actions that are federally funded, licensed, permitted, or approved. These regulations ensure that emissions associated with federal actions do not contribute to air quality degradation, thus preventing the achievement of state and federal air quality goals. In short, General Conformity refers to the process of evaluating plans, programs, and projects to determine and demonstrate that they meet the requirements of the CAA and applicable SIP. In general, the General Conformity regulations divide the air conformity process into two distinct areas: (1) Applicability Analysis, and (2) Conformity Determination.

Figure 1
Proposed Project Location and Facilities



Federal agencies must initially assess if an action is subject to the Conformity Rule (Applicability Analysis) and then, if applicable, whether the action conforms to an applicable implementation plan (Conformity Determination).

On March 24, 2010, the U.S. EPA revised the General Conformity regulations. These most recent revisions improve the process federal entities use to demonstrate that their actions will not contribute to a NAAQS violation, provides tools to encourage better communication and air quality planning between states and federal agencies, and encourages both the federal agencies and the states to take early actions to ensure projects will conform to the appropriate state, tribal, or federal implementation plans for attaining or maintaining the NAAQS. The following is a summary of the revisions recently made to the Conformity regulations (U.S.EPA 2010):

- Allows federal facilities expecting future expansion or modifications to negotiate a facility-wide emission budget with applicable state air quality agencies. Actions taken that do not exceed these budgets would be deemed to conform to the SIP and would not need a conformity determination.
- Incorporates an early emission reduction credit program for all agencies that follow the Airport Early Emission Reduction guidance developed jointly by EPA and the Federal Aviation Administration. This program encourages emission reduction actions on federal installations by providing emission reduction credits that can be used to demonstrate conformity for subsequent actions on the facility.
- Allows emissions of one precursor pollutant to be offset by the reduction of emissions of another precursor pollutant. For example both oxides of nitrogen and volatile organic compounds are ozone precursors – they are emitted and then react in the atmosphere to form ground-level ozone. In an area that does not meet EPA's ground-level ozone standard, reductions in nitrogen oxide emissions could be offset by reductions of volatile organic compounds.
- Allows alternative schedules for mitigating emission increases where state air quality agencies can accommodate temporary emission increases in exchange for long-term or permanent emission reductions.
- Removes requirements for federal agencies to conduct conformity determinations for "regionally significant" actions. Such actions have emissions greater than 10 percent of the emissions inventory for a nonattainment area. These analyses have been conducted for 16 years and have never shown an action to interfere with attainment or maintenance of a NAAQS.
- Lists categories of actions that federal agencies can presume to conform. The final rule also allows states to establish "presumed to conform" lists for actions in their state.

General Conformity Emission Levels

When assessing the applicability of a proposed Federal action to General Conformity requirements, General Conformity requirements would be deemed to apply to a Proposed Federal action when the total of direct and indirect emissions caused by the Federal action would equal or exceed the *de minimis* emission levels of criteria pollutants within corresponding nonattainment or maintenance areas. General Conformity *de minimis* emission levels, expressed in tons per year (TPY), are summarized in **Table 1**. If the federal action will cause emissions that equal or exceed the *de minimis* emission levels in any nonattainment or maintenance area and the action is not otherwise exempt, "presumed to conform," or included in the existing emissions budget of the applicable implementation plan for attaining or maintaining the NAAQS, the

agency must conduct a conformity determination before implementation of the proposed Federal action (U.S.EPA 2010).

Table 1
General Conformity Emission Levels

Pollutant	General Conformity *de minimis* Emission Levels (tons per year)
Nonattainment Areas	
Ozone (VOC's or NO_X)	
Serious NAA's	50
Severe NAA's	25
Extreme NAA's	10
Other Ozone NAA's outside an ozone transport region	100
Other Ozone NAA's inside an ozone transport region	
VOC	50
NOX	100
Carbon Monoxide: All NAA's	100
SO2 and NO2: All NAA's	100
PM10	
Moderate NAA's	100
Serious NAA's	70
PM2.5	
Direct Emissions	100
SO2	100
NOX (Unless determined not be significant precursors)	100
VOC or Ammonia (if determined to be significant precursors)	100
Pb: All NAA's	25
Maintenance Areas	
Ozone (NOX), SO2 or NO2: All MA's	100
Ozone (VOC's):	
Maintenance areas inside an ozone transport region	50
Maintenance areas outside an ozone transport region	100
Carbon Monoxide: All MA's	100
PM10 (All MA's):	100
Pb (All MA's):	25

Source: U.S.EPA 2010

Exemptions from General Conformity Requirements

In accordance with General Conformity regulations, the following actions are exempt:

- Actions where the total of direct and indirect emissions are below the specified emissions levels
- Actions which would result in no emissions increase or an increase in emissions that is clearly de minimis
- Actions where the emissions are not reasonably foreseeable, such as the following:
    - Initial Outer Continental Shelf lease sales which are made on a broad scale and are followed by exploration and development plans on a project level
    - Electric power marketing activities that involve the acquisition, sale and transmission of electric energy

- Actions which implement a decision to conduct or carry out a conforming program such as prescribed burning actions which are consistent with a conforming land management plan.
- Actions which include major or minor new or modified stationary sources requiring a permit under the New Source Review program or the prevention of significant deterioration program.
- Actions in response to emergencies or natural disasters such as hurricanes, earthquakes, etc., which are commenced on the order of hours or days after the emergency or disaster and, if applicable, which meet the requirements for Federal actions which are part of a continuing response
- Actions which include research, investigations, studies, demonstrations, or training (unless otherwise exempted) where no environmental detriment is incurred and/or, the particular action furthers air quality research, as determined by the State agency primarily responsible for the applicable SIP
- Actions which include alteration and additions of existing structures as specifically required by new or existing applicable environmental legislation or environmental regulations (e.g., hush houses for aircraft engines and scrubbers for air emissions)
- Actions which include direct emissions from remedial and removal actions carried out under CERCLA (and associated regulations to the extent such emissions either comply with the substantive requirements of the PSD/NSR permitting program or are exempted from other environmental regulation under the provisions of CERCLA and applicable regulations issued under CERCLA.)

APPLICABILITY ANALYSIS

As stated previously, the first step in a general conformity evaluation is an analysis of whether the General Conformity requirements apply to a Federal action proposed to be taken in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a Federal action requires a general conformity determination for each pollutant where the total of direct and indirect emissions caused by the Federal action would equal or exceed an annual *de minimis* emission levels for criteria air pollutants identified within corresponding nonattainment or maintenance areas. The following provides an analysis of General Conformity requirements applicable to the proposed project:

Attainment Status

The proposed project is located in an area designated *Extreme Nonattainment* for the Ozone NAAQS and *Nonattainment* for the $PM_{2.5}$ NAAQS. The Ozone and $PM_{2.5}$ nonattainment areas are depicted in **Figure 2** and **Figure 3**, respectively. The proposed project is also located in a maintenance area for the CO NAAQS.

Figure 2
Area Designations for Ozone National Ambient Air Quality Standards

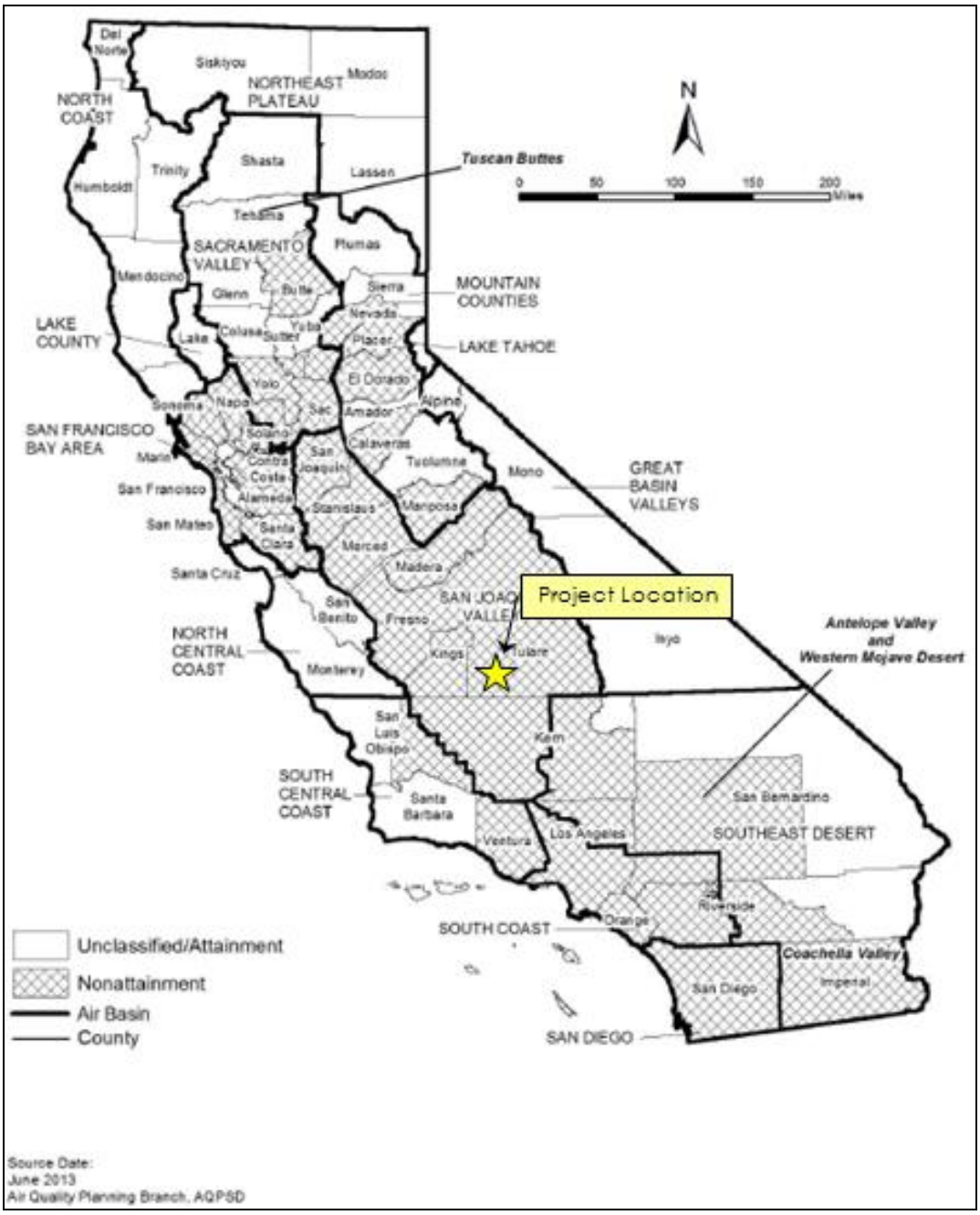


Figure 3
Area Designations for $PM_{2.5}$ National Ambient Air Quality Standards

Proposed Project Emissions

Methodology

Short-term Construction-Generated Emissions

Short-term construction emissions associated with the proposed project were calculated using the California Emissions Estimator Model (CalEEMod), version 2013.2.2. Emissions modeling includes direct and indirect emissions generated during site preparation/grading, as well as, the installation of basin and in-lieu bank infrastructure and pipelines. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the project applicant. All remaining assumptions were based on the default parameters contained in the model. Localized air quality impacts associated with the proposed project would be minor and were qualitatively assessed. Modeling assumptions and output files are included in **Appendix B** of this report.

Long-term Operational Emissions

Long-term operational emissions associated with the proposed project were calculated using the CalEEMod, version 2013.2.2. Emissions modeling included direct and indirect emissions, including the use of off-road equipment and on-road vehicle trips associated with routine maintenance activities. No stationary sources of emissions are proposed. Modeling assumptions and output files are included in **Appendix B** of this report.

Net Changes in Emissions

Net changes in annual emissions were quantified based on a comparison of project-generated emissions to emissions generated by existing agricultural land use activities. Existing emissions associated with agricultural activities were quantified using CalEEMod, version 2013.2.2, based on operational data provided by the project applicant. Existing operational emissions are summarized in **Table 2**.

Table 2
Existing Agricultural Land Use Emissions

Source	Annual Emissions (tons/year)[1]				
	ROG	NO_X	CO	SO_2	$PM_{2.5}$
Agricultural Pumps (Natural Gas Fueled)	0.09	0.85	0.55	0.00	0.03
Off-road Equipment-Orchard	0.01	0.07	0.05	0.00	0.01
Off-road Equipment-Field Crop	0.01	0.07	0.04	0.00	0.00
Worker Vehicle Trips-Orchard	0.00	0.00	0.01	0.00	0.00
Worker Vehicle Trips-Field Crop	0.00	0.00	0.01	0.00	0.00
Total:	0.10	1.00	0.65	0.00	0.04

1. *Emissions were quantified using CalEEMod, version 2013.2.2. Refer to **Appendix B** for modeling results and assumptions. Totals may not sum due to rounding.*
2. *SO_2 , NO_X, and VOCs are also considered $PM_{2.5}$ precursors.*

Short-term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 3**. As indicated, construction of the proposed project would generate maximum net increases in emissions of approximately 0.7 tons/year of ROG, 8.26 tons/year of NO_x, 4.71 tons/year of CO, 0.01 tons/year of SO_2, and 0.54 tons/year of $PM_{2.5}$. Construction-generated emissions would not exceed the General Conformity *de minimis* emission levels.

Table 3
Short-term Construction-Generated Emissions

Construction Activity	Construction Year	Annual Emissions (Tons/Year)[1]				
		VOC[2,3]	NO_X[3]	CO	SO_2[3]	$PM_{2.5}$[4]
Recharge Basin Site Preparation	2015	0.03	0.32	0.25	0.00	0.07
Recharge Basin Grading	2015	0.77	8.95	5.12	0.01	0.51
Recharge Basin Infrastructure	2016	0.06	0.70	0.41	0.00	0.03
In-Lieu Banking Construction	2016	0.04	0.42	0.25	0.00	0.02
Lift Station Construction	2016	0.05	0.51	0.30	0.00	0.02
Pipeline Construction	2016-2017	0.17	1.85	1.15	0.00	0.08
Total Annual Emissions by Construction Year						
2015		*0.80*	*9.26*	*5.36*	*0.01*	*0.58*
2016		*0.32*	*3.49*	*2.20*	*0.00*	*0.16*
2017		*0.08*	*0.83*	*0.58*	*0.00*	*0.04*
Net Change in Annual Emissions Compared to Existing Conditions						
2015		*0.7*	*8.26*	*4.71*	*0.01*	*0.54*
2016		*0.22*	*2.49*	*1.55*	*0*	*0.12*
2017		*-0.02*	*-0.17*	*-0.07*	*0*	*0*
General Conformity de minimis Level		*10*	*10*	*100*	*100*	*100*
Exceeds General Conformity de minimis Level?		*No*	*No*	*No*	*No*	*No*

1. Emissions were quantified using CalEEMod, version 2013.2.2. Refer to ***Appendix B*** *for modeling results and assumptions. Totals may not sum due to rounding.*
2. Represents volatile organic compounds (VOCs)/reactive organic gases (ROG).
3. SO_2 , NO_X, and VOCs are considered $PM_{2.5}$ precursors. The de minimis threshold for $PM_{2.5}$ within nonattainment areas is 100 tons/year.
4. Represents direct emissions of $PM_{2.5}$.

Long-term Operational Emissions

Long-term operation of the proposed project would result in emissions generated by routine maintenance activities, including the occasional use of off-road equipment and worker vehicle trips. Estimated operational emissions are summarized in **Table 4**. As indicated, operation of the proposed project would generate maximum annual emissions of approximately 0.4 tons/year of NO_X and 0.03 tons/year of CO. Emissions of VOCs, SO_2, and $PM_{2.5}$ would be negligible. In comparison to emissions generated by existing agricultural uses, the proposed project would result in an overall net reduction in annual emissions of these same pollutants. Total annual emissions from operational activities would not exceed the corresponding General Conformity *de minimis* emission levels.

Table 4
Long-term Operational Emissions

Source	Annual Emissions (tons/year)[1]				
	VOC[2,3]	NO_X[3]	CO	SO_2[3]	$PM_{2.5}$[4]
Off-Road Maintenance Equipment	0.00	0.04	0.03	0.00	0.00
Maintenance Worker Vehicle Trips	0.00	0.00	0.00	0.00	0.00
Total Proposed Project Emissions:	0.00	0.04	0.03	0.00	0.00
Net Change Compared to Existing Conditions:	*-0.1*	*-0.09*	*-0.63*	*0.00*	*-0.04*
General Conformity de minimis Level	*10*	*10*	*100*	*100*	*100*
Exceeds General Conformity de minimis Level?	*No*	*No*	*No*	*No*	*No*

1. *Emissions were quantified using CalEEMod, version 2013.2.2. Refer to* ***Appendix B*** *for modeling results and assumptions. Totals may not sum due to rounding.*
2. *Represents volatile organic compounds (VOCs)/reactive organic gases (ROG).*
3. *SO_2 , NO_X, and VOCs are considered $PM_{2.5}$ precursors. The de minimis threshold for $PM_{2.5}$ within nonattainment areas is 100 tons/year.*
4. *Represents direct emissions of $PM_{2.5}$.*

Applicability Determination

As discussed above, the total of direct and indirect emissions attributable to the proposed project are less than the corresponding General Conformity *de minimis* emission levels. Given that the net emissions associated with the Proposed Action are less than the General Conformity *de minimis* emission levels, the Proposed Action is not subject to General Conformity determination requirements.

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APPENDIX A
Acronyms & Terminology

This glossary provides a summary of common acronyms and terminology used in this report.

Acronyms

ARB. California Air Resources Board

U.S.EPA. United States Environmental Protection Agency

SIP. State Implementation Plan

NAAQS. National Ambient Air Quality Standards

Terminology

Applicability analysis is the process of determining if your Federal action must be supported by a conformity determination.

Conformity determination is the evaluation made after an applicability analysis is completed that a Federal action conforms to the applicable implementation plan and meets the requirements of this subpart.

Conformity evaluation is the entire process from the applicability analysis through the conformity determination demonstrating that the Federal action conforms to the requirements of this subpart.

Direct emissions means those emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment or maintenance area and occur at the same time and place as the action and are reasonably foreseeable.

Indirect emissions means those emissions of a criteria pollutant or its precursors. For the purposes of this definition, even if a federal licensing, rulemaking or other approving action is a required initial step for a subsequent activity that causes emissions, such initial steps do not mean that a federal agency can practically control any resulting emissions:

(1) That are caused or initiated by the Federal action and originate in the same nonattainment or maintenance area but occur at a different time or place as the action;
(2) That are reasonably foreseeable;
(3) That the agency can practically control; and
(4) For which the agency has continuing program responsibility.

Maintenance area means an area that was designated as nonattainment and has been re-designated in 40 CFR part 81 to attainment, meeting the provisions of section 107(d)(3)(E) of the Act and has a maintenance plan approved under section 175A of the Act.

National ambient air quality standards (NAAQS) are those standards established pursuant to section 109 of the Act and include standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO2), ozone, particulate matter (PM10 and PM2.5), and sulfur dioxide (SO2).

Nonattainment area means an area that was designated as nonattainment under section 107 of the CAA and described in 40 CFR part 81.

APPENDIX B

Emissions Modeling

PIXLEY GROUNDWATER BANKING PROJECT

EMISSIONS SUMMARY

	ANNUAL EMISSIONS (TONS)											
					PM10			PM2.5				BAU2004
	ROG	NOX	CO	SO2	FUG	EXH	TOT	FUG	EXH	TOT	MTCO2e	MTCO2e
EXISTING EMISSION												
NATURAL GAS-FUELED PUMPS	0.0852	0.8497	0.5495	0.00183	0	0.0305	0.0305	0	0.0305	0.0305	157.6	157.6
OFFROAD EQUIPMENT												
Orchard (lbs/mo)	1.3104	11.8084	7.8809	0.00976	0	0.964	0.964	0	0.8868	0.8868	1032.6	1142.2
tons/yr	0.0078624	0.07085	0.047285	5.86E-05	0	0.005784	0.005784	0	0.005321	0.005321	6.2	6.9
Field Crop (lbs/mo)	0.9398	10.7411	6.6102	0.0106	0	0.5348	0.5348	0	0.492	0.492	1119.2	1244.0
tons/yr	0.0056388	0.064447	0.039661	6.36E-05	0	0.003209	0.003209	0	0.002952	0.002952	6.7	7.5
VEHICLE TRIPS												
Orchard (lbs/mo)	0.0715	0.0939	1.146	0.00186	0.152	0.00124	0.1533	0.0403	0.00113	0.0415	159.1	197.6
tons/yr	0.000429	0.000563	0.006876	1.12E-05	0.000912	7.44E-06	0.00092	0.00024	6.78E-06	0.000249	1.0	1.2
Field Crop (lbs/mo)	0.17	0.1495	1.8275	0.00284	0.2282	0.00201	0.2302	0.0605	0.00183	0.0624	242.3	300.9
tons/yr	0.00102	0.000897	0.010965	1.7E-05	0.001369	1.21E-05	0.001381	0.00036	1.1E-05	0.000374	1.5	1.8
ELECTRICAL PUMPS	0	0	0	0	0	0	0	0	0	0	108.3	155.7
TOTAL	0.1001502	0.986457	0.654288	0.00198	0.002281	0.039512	0.041794	0.0006	0.038791	0.039396	281.2121	330.5607
PROJECT CONSTRUCTION EMISSIONS - UNCONTROLLED												
RECHARGE BASIN SITE PREPARATION												
ONSITE	0.0299	0.3188	0.2374	0.0002	0.0903	0.0181	0.1085	0.0497	0.0167	0.0663	21.7570	
OFFSITE	0.0007	0.0010	0.0101	0.0000	0.0015	0.0010	0.0015	0.0004	0.0000	0.0004	1.3305	
TOTAL	0.0306	0.3198	0.2475	0.0003	0.0918	0.0191	0.1100	0.0501	0.0167	0.0667	23.0875	
RECHARGE BASIN GRADING												
ONSITE	0.7583	8.9245	4.9455	0.0077	1.2328	0.4031	1.6359	0.1331	0.3708	0.5039	741.5617	
OFFSITE	0.0116	0.0175	0.1705	0.0003	0.0251	0.0002	0.0253	0.0067	0.0002	0.0069	22.4522	
TOTAL	0.7699	8.9420	5.1160	0.0080	1.2579	0.4033	1.6612	0.1398	0.3710	0.5108	764.0139	
RECHARGE BASIN INFRASTRUCTURE												
ONSITE	0.0629	0.6975	0.4098	0.0008	0.0000	0.0330	0.0330	0.0000	0.0304	0.0304	76.9845	
OFFSITE	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
TOTAL	0.0629	0.6975	0.4098	0.0008	0.0000	0.0330	0.0330	0.0000	0.0304	0.0304	76.9845	
IN-LIEU BANKING CONSTRUCTION												
ONSITE	0.0376	0.4171	0.2451	0.0005	0.0003	0.0198	0.0200	0.0000	0.0162	0.0162	46.0208	
OFFSITE	0.0009	0.0014	0.0132	0.0000	0.0022	0.0000	0.0023	0.0006	0.0000	0.0006	1.9200	
TOTAL	0.0385	0.4185	0.2583	0.0005	0.0025	0.0198	0.0223	0.0006	0.0162	0.0168	47.9408	
LIFT STATION CONSTRUCTION												
ONSITE	0.0461	0.5119	0.3008	0.0006	0.0109	0.0240	0.0350	0.0012	0.0223	0.0235	56.4800	
OFFSITE	0.0010	0.0017	0.0161	0.0000	0.0027	0.0002	0.0028	0.0007	0.0000	0.0007	2.3467	
TOTAL	0.0471	0.5136	0.3169	0.0006	0.0136	0.0242	0.0378	0.0019	0.0223	0.0242	58.8267	

	ANNUAL EMISSIONS (TONS)											
					PM10			PM2.5				BAU2004
	ROG	NOX	CO	SO2	FUG	EXH	TOT	FUG	EXH	TOT	MTCO2e	MTCO2e
PIPELINE CONSTRUCTION												
ONSITE	0.1657	1.8490	1.1530	0.0022		0.0882	0.0882		0.0812	0.0812	205.0661	
OFFSITE	0.0004	0.0061	0.0590	0.0001	0.0100	0.0001	0.0101	0.0027	0.0001	0.0027	8.5868	
TOTAL	0.1661	1.8551	1.2120	0.0023	0.0100	0.0883	0.0983	0.0027	0.0813	0.0839	213.6529	
	1.1151	12.7465	7.5605	0.0125	1.3758	0.5877	1.9625	0.1950	0.5379	0.7328	1184.5063	
PROJECT OPERATIONAL EMISSIONS												
OFFROAD EQUIPMENT (lbs/mo)	0.7226	7.3604	4.2151	0.00597	0	0.4416	0.4416	0	0.4063	0.4063	614.7	
tons/yr	0.0043	0.044162	0.025291	3.58E-05	0	0.00265	0.00265	0	0.002438	0.002438	3.7	
VEHICLE TRIPS (lbs/mo)	0.00913	0.017	0.1438	0.00032	0.0304	0.00022	0.0306	0.00806	0.0002	0.00826	25.7	
tons/yr	0.0001	0.000102	0.000863	1.92E-06	0.000182	1.32E-06	0.000184	4.8E-05	1.2E-06	4.96E-05	0.2	
ELECTRICAL PUMPS	0	0	0	0	0	0	0	0	0	0	7587.2	
TOTAL	0.004	0.044	0.026	0.000	0.000	0.003	0.003	0.000	0.002	0.002	7591.0	

Emissions quantified using the CalEEMod computer program.

Note: The SJVAPCD considers projects that comply with an adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions to have a less-than-significant impact. Emissions generated by the proposed project would be largely attributable to the consumption of fuels, including fuels required for the production of electricity, which are subject to ARB's Cap-and-Trade regulation ARB's Cap & Trade regulation is an adopted statewide plan for reducing or mitigating GHG emissions from targeted industries, including electricity generation and fuel distributors/suppliers. As a result, project-specific GHG emissions, which are the result of electricity/fuel use, would be mitigated through compliance wth the ARB's Cap & Trade. Therefore, additional project-specific mitigation would not be required.

LOSS OF CARBON SEQUESTRATION

*Represents a one-time (non-reoccurring) loss.

Field Crop	-1488
Amortized	-49.6
Total	-1537.6

Changes in carbon sequestration do not account for increased GHG emissions associated with agricultural practices, such as the application of soil fertilizers and amendments or indirect emissions associated with crop harvesting/production. Agriculture activities serve as both sources and sinks for greenhouse gases. The primary sources of GHGs in agriculture include nitrogen-based fertilizers; the combustion of fossil fuels (e.g., gasoline, diesel, etc.) and waste management. Based on information obtained from the U.S. EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2012, overall GHG emissions associated with agricultural management activities currently out weigh the carbon sequestion potential of agricultural land, accounting for approximately 8 percent of the total GHG inventory within the U.S. Net changes in GHG emissions/carbon sequestration can vary widely depending on various factors. The existing orchard would be removed with or without project implementation.
Emissions quantified using the CalEEMod computer program and electricity intensity factors derived from US EPA eGrid database.

SVWBA PIXLEY GROUNDWATER BANK - Existing Ag Equipment & Vehicle Trips

Tulare County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling reflects existing equipment and vehicle trips based on data provided by the project applicant. EMISSIONS REFLECTED ARE IN LBS/MONTH.

Land Use - .

Construction Phase - Existing equipment use represent average monthly emissions (lbs/month) based on annual usage data provided by the project applicant. Operational emissions do not apply.

Off-road Equipment - Based on data provided by the project applicant.

Off-road Equipment - Based on data provided by the project applicant.

Grading - Dust from material movement not included.

Demolition - Demolition not included.

Trips and VMT - Represents monthly vehice trip emissions based on data provided by the project applicant and average emission fleet mix EFs for LDA, LDT1, AND LDT2.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	97.00	130.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	400.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	130.00
tblOffRoadEquipment	HorsePower	87.00	250.00
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	11.70
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	3.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3819	11.9023	9.0269	0.0134	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,354.2264	1,354.2264	0.3454	0.0000	1,361.4805
Total	**1.3819**	**11.9023**	**9.0269**	**0.0134**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,354.2264**	**1,354.2264**	**0.3454**	**0.0000**	**1,361.4805**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3819	11.9023	9.0269	0.0134	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,354.2264	1,354.2264	0.3454	0.0000	1,361.4805
Total	**1.3819**	**11.9023**	**9.0269**	**0.0134**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,354.2264**	**1,354.2264**	**0.3454**	**0.0000**	**1,361.4805**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Existing Orchard	Demolition	1/1/2015	1/1/2015	5	1	
2	Existing Row Crop	Site Preparation	1/2/2015	1/2/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Existing Orchard	Tractors/Loaders/Backhoes	1	0.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	3.30	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	10.80	90	0.37
Existing Row Crop	Other General Industrial Equipment	1	1.70	400	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	90	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	130	0.34
Existing Row Crop	Graders	0	8.00	174	0.41
Existing Row Crop	Other General Industrial Equipment	1	0.80	250	0.34
Existing Orchard	Concrete/Industrial Saws	0	8.00	81	0.73
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Rubber Tired Dozers	0	8.00	255	0.40
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Row Crop	Tractors/Loaders/Backhoes	1	11.70	130	0.37
Existing Row Crop	Rubber Tired Dozers	0	7.00	255	0.40

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
Existing Orchard	5	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Existing Row Crop	5	30.00	0.00	0.00	10.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868		1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**		**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0715	0.0939	1.1460	1.8600e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		158.9573	158.9573	8.4800e-003		159.1354
Total	**0.0715**	**0.0939**	**1.1460**	**1.8600e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**158.9573**	**158.9573**	**8.4800e-003**		**159.1354**

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868	0.0000	1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**	**0.0000**	**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0715	0.0939	1.1460	1.8600e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		158.9573	158.9573	8.4800e-003		159.1354
Total	**0.0715**	**0.0939**	**1.1460**	**1.8600e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**158.9573**	**158.9573**	**8.4800e-003**		**159.1354**

3.3 Existing Row Crop - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920		1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**		**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1700	0.1495	1.8275	2.8400e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		242.0365	242.0365	0.0134		242.3178
Total	**0.1700**	**0.1495**	**1.8275**	**2.8400e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**242.0365**	**242.0365**	**0.0134**		**242.3178**

3.3 Existing Row Crop - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920	0.0000	1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**	**0.0000**	**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1700	0.1495	1.8275	2.8400e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		242.0365	242.0365	0.0134		242.3178
Total	**0.1700**	**0.1495**	**1.8275**	**2.8400e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**242.0365**	**242.0365**	**0.0134**		**242.3178**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.408999	0.071178	0.163258	0.196144	0.057919	0.008335	0.018354	0.062533	0.001936	0.001543	0.006293	0.001241	0.002268

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Existing Ag Equipment & Vehicle Trips

Tulare County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling reflects existing equipment and vehicle trips based on data provided by the project applicant. EMISSIONS REFLECTED ARE IN LBS/MONTH.

Land Use - .

Construction Phase - Existing equipment use represent average monthly emissions (lbs/month) based on annual usage data provided by the project applicant. Operational emissions do not apply.

Off-road Equipment - Based on data provided by the project applicant.

Off-road Equipment - Based on data provided by the project applicant.

Grading - Dust from material movement not included.

Demolition - Demolition not included.

Trips and VMT - Represents monthly vehice trip emissions based on data provided by the project applicant and average emission fleet mix EFs for LDA, LDT1, AND LDT2.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	97.00	130.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	97.00	90.00
tblOffRoadEquipment	HorsePower	87.00	400.00
tblOffRoadEquipment	HorsePower	87.00	90.00
tblOffRoadEquipment	HorsePower	87.00	130.00
tblOffRoadEquipment	HorsePower	87.00	250.00
tblOffRoadEquipment	OffRoadEquipmentType	Rubber Tired Dozers	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	UsageHours	8.00	10.80
tblOffRoadEquipment	UsageHours	8.00	11.70
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	8.00	3.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	VendorTripLength	6.60	0.00
tblTripsAndVMT	WorkerTripLength	16.80	20.00
tblTripsAndVMT	WorkerTripLength	16.80	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3734	11.9198	8.8533	0.0131	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,324.3241	1,324.3241	0.3454	0.0000	1,331.5782
Total	**1.3734**	**11.9198**	**8.8533**	**0.0131**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,324.3241**	**1,324.3241**	**0.3454**	**0.0000**	**1,331.5782**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	1.3734	11.9198	8.8533	0.0131	0.2282	0.9652	1.1173	0.0605	0.8880	0.9283	0.0000	1,324.3241	1,324.3241	0.3454	0.0000	1,331.5782
Total	**1.3734**	**11.9198**	**8.8533**	**0.0131**	**0.2282**	**0.9652**	**1.1173**	**0.0605**	**0.8880**	**0.9283**	**0.0000**	**1,324.3241**	**1,324.3241**	**0.3454**	**0.0000**	**1,331.5782**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Existing Orchard	Demolition	1/1/2015	1/1/2015	5	1	
2	Existing Row Crop	Site Preparation	1/2/2015	1/2/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Existing Orchard	Tractors/Loaders/Backhoes	1	0.80	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	3.30	90	0.37
Existing Orchard	Tractors/Loaders/Backhoes	1	10.80	90	0.37
Existing Row Crop	Other General Industrial Equipment	1	1.70	400	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	90	0.34
Existing Row Crop	Other General Industrial Equipment	1	1.70	130	0.34
Existing Row Crop	Graders	0	8.00	174	0.41
Existing Row Crop	Other General Industrial Equipment	1	0.80	250	0.34
Existing Orchard	Concrete/Industrial Saws	0	8.00	81	0.73
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Orchard	Rubber Tired Dozers	0	8.00	255	0.40
Existing Orchard	Other General Industrial Equipment	1	6.70	90	0.34
Existing Row Crop	Tractors/Loaders/Backhoes	1	11.70	130	0.37
Existing Row Crop	Rubber Tired Dozers	0	7.00	255	0.40

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
Existing Orchard	5	10.00	0.00	0.00	20.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT
Existing Row Crop	5	30.00	0.00	0.00	10.00	0.00	0.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868		1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**		**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0630	0.1114	0.9724	1.6300e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		139.1212	139.1212	8.4800e-003		139.2993
Total	**0.0630**	**0.1114**	**0.9724**	**1.6300e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**139.1212**	**139.1212**	**8.4800e-003**		**139.2993**

3.2 Existing Orchard - 2015

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	1.3104	11.8084	7.8809	9.7600e-003		0.9640	0.9640		0.8868	0.8868	0.0000	1,026.2071	1,026.2071	0.3064		1,032.6408
Total	**1.3104**	**11.8084**	**7.8809**	**9.7600e-003**		**0.9640**	**0.9640**		**0.8868**	**0.8868**	**0.0000**	**1,026.2071**	**1,026.2071**	**0.3064**		**1,032.6408**

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	0.0630	0.1114	0.9724	1.6300e-003	0.1520	1.2400e-003	0.1533	0.0403	1.1300e-003	0.0415		139.1212	139.1212	8.4800e-003		139.2993
Total	**0.0630**	**0.1114**	**0.9724**	**1.6300e-003**	**0.1520**	**1.2400e-003**	**0.1533**	**0.0403**	**1.1300e-003**	**0.0415**		**139.1212**	**139.1212**	**8.4800e-003**		**139.2993**

3.3 Existing Row Crop - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920		1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**		**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1475	0.1774	1.6327	2.4800e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		212.1341	212.1341	0.0134		212.4155
Total	**0.1475**	**0.1774**	**1.6327**	**2.4800e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**212.1341**	**212.1341**	**0.0134**		**212.4155**

3.3 Existing Row Crop - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9398	10.7411	6.6102	0.0106		0.5348	0.5348		0.4920	0.4920	0.0000	1,112.1899	1,112.1899	0.3320		1,119.1627
Total	**0.9398**	**10.7411**	**6.6102**	**0.0106**	**0.0000**	**0.5348**	**0.5348**	**0.0000**	**0.4920**	**0.4920**	**0.0000**	**1,112.1899**	**1,112.1899**	**0.3320**		**1,119.1627**

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	0.1475	0.1774	1.6327	2.4800e-003	0.2282	2.0100e-003	0.2302	0.0605	1.8300e-003	0.0624		212.1341	212.1341	0.0134		212.4155
Total	**0.1475**	**0.1774**	**1.6327**	**2.4800e-003**	**0.2282**	**2.0100e-003**	**0.2302**	**0.0605**	**1.8300e-003**	**0.0624**		**212.1341**	**212.1341**	**0.0134**		**212.4155**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.408999	0.071178	0.163258	0.196144	0.057919	0.008335	0.018354	0.062533	0.001936	0.001543	0.006293	0.001241	0.002268

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Existing Pumps

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions associated with existing pumps (to be removed).

Land Use - .

Construction Phase - No construction included in this model run.

Off-road Equipment - OFFROAD EQUIPMENT USE EMISSIONS CALCULATED SEPARATELY. REFER TO SPREADSHEET.

Grading - .

Trips and VMT - .

On-road Fugitive Dust - .

Architectural Coating - .

Land Use Change - Loss of carbon sequestration included in Recharge Basin calculation.

Sequestration - No new carbon sequestration assumed.

Construction Off-road Equipment Mitigation - Mitigation does not apply.

Operational Off-Road Equipment - Operational off-road equipment emissions represent emissions to be removed. Includes (1) 200hp & (1) 125 hp CNG-powered pumps.

Off-road Equipment - .

Energy Use -

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperHorsePower	84.00	200.00
tblOperationalOffRoadEquipment	OperHorsePower	84.00	125.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.43
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.43
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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
Offroad	0.0852	0.8497	0.5495	1.8300e-003		0.0305	0.0305		0.0305	0.0305	0.0000	157.4503	157.4503	6.7800e-003	0.0000	157.5926
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0852**	**0.8497**	**0.5495**	**1.8300e-003**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**157.4503**	**157.4503**	**6.7800e-003**	**0.0000**	**157.5927**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
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
Offroad	0.0852	0.8497	0.5495	1.8300e-003		0.0305	0.0305		0.0305	0.0305	0.0000	157.4503	157.4503	6.7800e-003	0.0000	157.5926
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0852**	**0.8497**	**0.5495**	**1.8300e-003**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**0.0305**	**0.0305**	**0.0000**	**157.4503**	**157.4503**	**6.7800e-003**	**0.0000**	**157.5927**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**100.00**	**100.00**	**100.00**	**100.00**	**0.00**	**100.00**	**100.00**	**0.00**	**100.00**	**100.00**	**0.00**	**100.00**	**100.00**	**100.00**	**0.00**	**100.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	None	Site Preparation	1/1/2015	1/1/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
None	Graders	0	8.00	174	0.41
None	Tractors/Loaders/Backhoes	0	8.00	97	0.37
None	Rubber Tired Dozers	0	7.00	255	0.40

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
None	0	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 None - 2015

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 None - 2015

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407411	0.071652	0.163259	0.194400	0.057030	0.008208	0.019805	0.065406	0.001858	0.001474	0.006105	0.001154	0.002237

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	0.0000	0.0000	0.0000	0.0000
Mitigated	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			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Pumps	1	4.43	260	200	0.74	CNG
Pumps	1	4.43	260	125	0.74	CNG

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Pumps	0.0852	0.8497	0.5495	1.8300e-003		0.0305	0.0305		0.0305	0.0305	0.0000	157.4503	157.4503	6.7800e-003	0.0000	157.5926
Total	**0.0852**	**0.8497**	**0.5495**	**1.8300e-003**		**0.0305**	**0.0305**		**0.0305**	**0.0305**	**0.0000**	**157.4503**	**157.4503**	**6.7800e-003**	**0.0000**	**157.5926**

10.0 Vegetation

SVWBA PIXLEY GROUNDWATER BANK - Recharge Basin

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	560.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - TOTAL ACREAGE: 560

Construction Phase - SITE PREP: 30 DAYS.; GRADING: 225 DAYS; INFRASTRUCTURE: 75 DAYS

Off-road Equipment - OFFROAD EQUIPMENT USE EMISSIONS CALCULATED SEPARATELY. REFER TO SPREADSHEET.

Grading - DUST EMISSIONS ASSOCIATED WITH MATERIAL MOVEMENT BASED ON MODEL DEFAULTS.

Off-road Equipment - Assumes 1 dozer, 2 loaders, per project proponent.

Off-road Equipment - Assumes 2 scrapers, 2 tractors, 1 graders, 2 water trucks, per project proponent.

Off-road Equipment - Assumes 1 excavator, 1 water truck, 1 backhoe, per project proponent.

Trips and VMT - VEHICLE TRIPS BASED ON MODEL DEFAULTS.

On-road Fugitive Dust - ON-ROAD FUGITIVE DUST BASED ON MODEL DEFAULTS.

Architectural Coating - ARCHITECTURAL COATINGS APPLICATION & DEMOLITION DO NOT APPLY.

Land Use Change - Loss of carbon sequestration assumes removal of 240 acres of row crop and 320 acres of orchard.

Sequestration - No new carbon sequestration assumed.

Construction Off-road Equipment Mitigation - Mitigation assumes 61% control for water exposed surfaces, 15 mph speed limit. Equipment emissions mitigation (for modeling purposes) assumes use of Tier 3 equipment.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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	9,300.00	75.00
tblConstructionPhase	NumDays	930.00	225.00
tblConstructionPhase	NumDays	360.00	30.00
tblConstructionPhase	PhaseEndDate	4/6/2016	4/14/2016
tblConstructionPhase	PhaseStartDate	12/24/2015	1/1/2016
tblGrading	AcresOfGrading	562.50	2,325.00
tblLandUse	LotAcreage	0.00	560.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.8005	9.2618	5.3636	8.2700e-003	1.3497	0.4214	1.7711	0.1898	0.3877	0.5775	0.0000	782.3162	782.3162	0.2279	0.0000	787.1014
2016	0.0629	0.6975	0.4098	8.1000e-004	0.0000	0.0330	0.0330	0.0000	0.0304	0.0304	0.0000	76.4999	76.4999	0.0231	0.0000	76.9845
Total	**0.8634**	**9.9593**	**5.7734**	**9.0800e-003**	**1.3497**	**0.4544**	**1.8041**	**0.1898**	**0.4181**	**0.6079**	**0.0000**	**858.8161**	**858.8161**	**0.2509**	**0.0000**	**864.0858**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2072	3.8535	4.7358	8.2700e-003	0.5426	0.1633	0.7059	0.0783	0.1633	0.2416	0.0000	782.3153	782.3153	0.2279	0.0000	787.1005
2016	0.0199	0.3941	0.5016	8.1000e-004	0.0000	0.0180	0.0180	0.0000	0.0180	0.0180	0.0000	76.4998	76.4998	0.0231	0.0000	76.9844
Total	**0.2270**	**4.2476**	**5.2374**	**9.0800e-003**	**0.5426**	**0.1813**	**0.7239**	**0.0783**	**0.1813**	**0.2596**	**0.0000**	**858.8151**	**858.8151**	**0.2509**	**0.0000**	**864.0848**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**73.71**	**57.35**	**9.28**	**0.00**	**59.80**	**60.10**	**59.88**	**58.73**	**56.64**	**57.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	-37,008.0000
Total	**-37,008.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Recharge Basin Site Preparation	Site Preparation	1/1/2015	2/11/2015	5	30	
2	Recharge Basin Grading	Grading	2/12/2015	12/23/2015	5	225	
3	Recharge Basin Infrastructure	Building Construction	1/1/2016	4/14/2016	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Recharge Basin Infrastructure	Cranes	0	7.00	226	0.29
Recharge Basin Infrastructure	Forklifts	0	8.00	89	0.20
Recharge Basin Infrastructure	Generator Sets	0	8.00	84	0.74
Recharge Basin Grading	Excavators	0	8.00	162	0.38
Recharge Basin Grading	Off-Highway Trucks	2	8.00	400	0.38
Recharge Basin Infrastructure	Excavators	1	8.00	162	0.38
Recharge Basin Infrastructure	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Recharge Basin Infrastructure	Off-Highway Trucks	1	8.00	400	0.38
Recharge Basin Infrastructure	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Recharge Basin Grading	Rubber Tired Dozers	0	8.00	255	0.40
Recharge Basin Grading	Graders	1	8.00	174	0.41
Recharge Basin Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Recharge Basin Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Recharge Basin Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Recharge Basin Grading	Scrapers	2	8.00	361	0.48
Recharge Basin Infrastructure	Welders	0	8.00	46	0.45

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
Recharge Basin Infrastructure	3	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Recharge Basin Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Recharge Basin Grading	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Recharge Basin Site Preparation - 2015

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0299	0.3188	0.2374	2.3000e-004		0.0181	0.0181		0.0167	0.0167	0.0000	21.6215	21.6215	6.4500e-003	0.0000	21.7570
Total	**0.0299**	**0.3188**	**0.2374**	**2.3000e-004**	**0.0903**	**0.0181**	**0.1085**	**0.0497**	**0.0167**	**0.0663**	**0.0000**	**21.6215**	**21.6215**	**6.4500e-003**	**0.0000**	**21.7570**

3.2 Recharge Basin Site Preparation - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0400e-003	0.0101	2.0000e-005	1.4900e-003	1.0000e-005	1.5000e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3289	1.3289	8.0000e-005	0.0000	1.3305
Total	**6.9000e-004**	**1.0400e-003**	**0.0101**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5000e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.3289**	**1.3289**	**8.0000e-005**	**0.0000**	**1.3305**

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					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.5200e-003	0.1146	0.1404	2.3000e-004		6.0200e-003	6.0200e-003		6.0200e-003	6.0200e-003	0.0000	21.6215	21.6215	6.4500e-003	0.0000	21.7570
Total	**5.5200e-003**	**0.1146**	**0.1404**	**2.3000e-004**	**0.0352**	**6.0200e-003**	**0.0413**	**0.0194**	**6.0200e-003**	**0.0254**	**0.0000**	**21.6215**	**21.6215**	**6.4500e-003**	**0.0000**	**21.7570**

3.2 Recharge Basin Site Preparation - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.9000e-004	1.0400e-003	0.0101	2.0000e-005	1.4900e-003	1.0000e-005	1.5000e-003	4.0000e-004	1.0000e-005	4.1000e-004	0.0000	1.3289	1.3289	8.0000e-005	0.0000	1.3305
Total	**6.9000e-004**	**1.0400e-003**	**0.0101**	**2.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.5000e-003**	**4.0000e-004**	**1.0000e-005**	**4.1000e-004**	**0.0000**	**1.3289**	**1.3289**	**8.0000e-005**	**0.0000**	**1.3305**

3.3 Recharge Basin Grading - 2015

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					1.2328	0.0000	1.2328	0.1331	0.0000	0.1331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7583	8.9245	4.9455	7.7400e-003		0.4031	0.4031		0.3708	0.3708	0.0000	736.9415	736.9415	0.2200	0.0000	741.5617
Total	**0.7583**	**8.9245**	**4.9455**	**7.7400e-003**	**1.2328**	**0.4031**	**1.6359**	**0.1331**	**0.3708**	**0.5039**	**0.0000**	**736.9415**	**736.9415**	**0.2200**	**0.0000**	**741.5617**

3.3 Recharge Basin Grading - 2015

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	0.0116	0.0175	0.1706	2.9000e-004	0.0251	2.1000e-004	0.0253	6.6700e-003	2.0000e-004	6.8600e-003	0.0000	22.4244	22.4244	1.3200e-003	0.0000	22.4522
Total	**0.0116**	**0.0175**	**0.1706**	**2.9000e-004**	**0.0251**	**2.1000e-004**	**0.0253**	**6.6700e-003**	**2.0000e-004**	**6.8600e-003**	**0.0000**	**22.4244**	**22.4244**	**1.3200e-003**	**0.0000**	**22.4522**

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					0.4808	0.0000	0.4808	0.0519	0.0000	0.0519	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1893	3.7203	4.4147	7.7400e-003		0.1571	0.1571		0.1571	0.1571	0.0000	736.9406	736.9406	0.2200	0.0000	741.5608
Total	**0.1893**	**3.7203**	**4.4147**	**7.7400e-003**	**0.4808**	**0.1571**	**0.6379**	**0.0519**	**0.1571**	**0.2090**	**0.0000**	**736.9406**	**736.9406**	**0.2200**	**0.0000**	**741.5608**

3.3 Recharge Basin Grading - 2015

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	0.0116	0.0175	0.1706	2.9000e-004	0.0251	2.1000e-004	0.0253	6.6700e-003	2.0000e-004	6.8600e-003	0.0000	22.4244	22.4244	1.3200e-003	0.0000	22.4522
Total	**0.0116**	**0.0175**	**0.1706**	**2.9000e-004**	**0.0251**	**2.1000e-004**	**0.0253**	**6.6700e-003**	**2.0000e-004**	**6.8600e-003**	**0.0000**	**22.4244**	**22.4244**	**1.3200e-003**	**0.0000**	**22.4522**

3.4 Recharge Basin Infrastructure - 2016

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	0.0629	0.6975	0.4098	8.1000e-004		0.0330	0.0330		0.0304	0.0304	0.0000	76.4999	76.4999	0.0231	0.0000	76.9845
Total	**0.0629**	**0.6975**	**0.4098**	**8.1000e-004**		**0.0330**	**0.0330**		**0.0304**	**0.0304**	**0.0000**	**76.4999**	**76.4999**	**0.0231**	**0.0000**	**76.9845**

3.4 Recharge Basin Infrastructure - 2016

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0199	0.3941	0.5016	8.1000e-004		0.0180	0.0180		0.0180	0.0180	0.0000	76.4998	76.4998	0.0231	0.0000	76.9844
Total	**0.0199**	**0.3941**	**0.5016**	**8.1000e-004**		**0.0180**	**0.0180**		**0.0180**	**0.0180**	**0.0000**	**76.4998**	**76.4998**	**0.0231**	**0.0000**	**76.9844**

3.4 Recharge Basin Infrastructure - 2016

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407411	0.071652	0.163259	0.194400	0.057030	0.008208	0.019805	0.065406	0.001858	0.001474	0.006105	0.001154	0.002237

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-37,008.0000	0.0000	0.0000	-37,008.0000

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Cropland	240 / 0	-1,488.0000	0.0000	0.0000	-1,488.0000
Trees	320 / 0	-35,520.0000	0.0000	0.0000	-35,520.0000
Total		**-37,008.0000**	**0.0000**	**0.0000**	**-37,008.0000**

SVWBA PIXLEY GROUNDWATER BANK - In-Lieu Banking & Pipeline

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	51
Climate Zone	7			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - TOTAL ACREAGE OF DISTURBANCE: 1 (Fugitive dust calculations included in Recharge Basin Construction calculation).

Construction Phase - IN-LIEU BANK CONST: 45 DAYS; PIPELINE CONST: 240 DAYS; LIFT STATION CONST: 55 DAYS.

Off-road Equipment - OFFROAD EQUIPMENT USE EMISSIONS CALCULATED SEPARATELY. REFER TO SPREADSHEET.

Grading - DUST EMISSIONS ASSOCIATED WITH MATERIAL MOVEMENT BASED ON MODEL DEFAULTS.

Trips and VMT - VEHICLE TRIPS BASED ON MODEL DEFAULTS.

On-road Fugitive Dust - ON-ROAD FUGITIVE DUST BASED ON MODEL DEFAULTS.

Architectural Coating - ARCHITECTURAL COATINGS APPLICATION & DEMOLITION DO NOT APPLY.

Land Use Change - Loss of carbon sequestration included in Recharge Basin calculation.

Sequestration - No new carbon sequestration assumed.

Construction Off-road Equipment Mitigation - Mitigation assumes 61% control for water exposed surfaces, 15 mph speed limit. Equipment emissions mitigation (for modeling purposes) assumes use of Tier 3 equipment.

Off-road Equipment - In-Lieu Const assumes 1 excavator, 1 backhoe, 1 water truck, per project proponent.

Off-road Equipment - Lift Station Const assumes 1 excavator, 1 backhoe, 1 water truck, per project proponent.

Off-road Equipment - Pipeline Const assumes 2 excavator, 1 backhoe, 1 water truck, per project proponent.

Operational Off-Road Equipment - All proposed equipment to be electric.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	2.00	55.00
tblConstructionPhase	NumDays	1.00	45.00
tblGrading	AcresOfGrading	0.00	20.63
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.2554	2.7871	1.7872	3.4200e-003	0.0261	0.1323	0.1585	5.1800e-003	0.1218	0.1269	0.0000	318.4778	318.4778	0.0929	0.0000	320.4286
2017	0.0773	0.8286	0.5748	1.1200e-003	4.8900e-003	0.0391	0.0440	1.3000e-003	0.0360	0.0373	0.0000	102.4041	102.4041	0.0303	0.0000	103.0413
Total	**0.3327**	**3.6157**	**2.3620**	**4.5400e-003**	**0.0310**	**0.1715**	**0.2025**	**6.4800e-003**	**0.1577**	**0.1642**	**0.0000**	**420.8819**	**420.8819**	**0.1232**	**0.0000**	**423.4699**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0854	1.5798	2.1526	3.4200e-003	0.0193	0.0725	0.0918	4.4400e-003	0.0725	0.0769	0.0000	318.4775	318.4775	0.0929	0.0000	320.4282
2017	0.0277	0.5158	0.7101	1.1200e-003	4.8900e-003	0.0238	0.0287	1.3000e-003	0.0238	0.0251	0.0000	102.4040	102.4040	0.0303	0.0000	103.0412
Total	**0.1131**	**2.0956**	**2.8627**	**4.5400e-003**	**0.0242**	**0.0962**	**0.1204**	**5.7400e-003**	**0.0962**	**0.1020**	**0.0000**	**420.8814**	**420.8814**	**0.1232**	**0.0000**	**423.4694**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**66.00**	**42.04**	**-21.20**	**0.00**	**22.05**	**43.87**	**40.52**	**11.42**	**39.00**	**37.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	In-Lieu Banking Construction	Site Preparation	1/1/2016	3/3/2016	5	45	
2	Lift Station Construction	Grading	3/4/2016	5/19/2016	5	55	
3	Pipeline Construction	Trenching	5/20/2016	4/20/2017	5	240	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Lift Station Construction	Graders	0	6.00	174	0.41
Lift Station Construction	Rubber Tired Dozers	0	6.00	255	0.40
Lift Station Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
In-Lieu Banking Construction	Graders	0	8.00	174	0.41
In-Lieu Banking Construction	Excavators	1	8.00	162	0.38
In-Lieu Banking Construction	Off-Highway Trucks	1	8.00	400	0.38
Lift Station Construction	Excavators	1	8.00	162	0.38
Lift Station Construction	Off-Highway Trucks	1	8.00	400	0.38
Pipeline Construction	Excavators	2	8.00	162	0.38
Pipeline Construction	Off-Highway Trucks	1	8.00	400	0.38
Pipeline Construction	Rubber Tired Dozers	0	6.00	255	0.40
Pipeline Construction	Graders	0	6.00	174	0.41
Pipeline Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
In-Lieu Banking Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
In-Lieu Banking Construction	Rubber Tired Dozers	0	7.00	255	0.40

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
Lift Station Construction	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
In-Lieu Banking Construction	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Construction	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 In-Lieu Banking Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0376	0.4171	0.2451	4.9000e-004		0.0198	0.0198		0.0182	0.0182	0.0000	45.7311	45.7311	0.0138	0.0000	46.0208
Total	**0.0376**	**0.4171**	**0.2451**	**4.9000e-004**	**2.7000e-004**	**0.0198**	**0.0200**	**3.0000e-005**	**0.0182**	**0.0182**	**0.0000**	**45.7311**	**45.7311**	**0.0138**	**0.0000**	**46.0208**

3.2 In-Lieu Banking Construction - 2016

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	8.9000e-004	1.3600e-003	0.0132	3.0000e-005	2.2300e-003	2.0000e-005	2.2500e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	1.9178	1.9178	1.0000e-004	0.0000	1.9200
Total	**8.9000e-004**	**1.3600e-003**	**0.0132**	**3.0000e-005**	**2.2300e-003**	**2.0000e-005**	**2.2500e-003**	**5.9000e-004**	**2.0000e-005**	**6.1000e-004**	**0.0000**	**1.9178**	**1.9178**	**1.0000e-004**	**0.0000**	**1.9200**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.2356	0.2999	4.9000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	45.7310	45.7310	0.0138	0.0000	46.0207
Total	**0.0119**	**0.2356**	**0.2999**	**4.9000e-004**	**1.0000e-004**	**0.0108**	**0.0109**	**1.0000e-005**	**0.0108**	**0.0108**	**0.0000**	**45.7310**	**45.7310**	**0.0138**	**0.0000**	**46.0207**

3.2 In-Lieu Banking Construction - 2016

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	8.9000e-004	1.3600e-003	0.0132	3.0000e-005	2.2300e-003	2.0000e-005	2.2500e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	1.9178	1.9178	1.0000e-004	0.0000	1.9200
Total	**8.9000e-004**	**1.3600e-003**	**0.0132**	**3.0000e-005**	**2.2300e-003**	**2.0000e-005**	**2.2500e-003**	**5.9000e-004**	**2.0000e-005**	**6.1000e-004**	**0.0000**	**1.9178**	**1.9178**	**1.0000e-004**	**0.0000**	**1.9200**

3.3 Lift Station Construction - 2016

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					0.0109	0.0000	0.0109	1.1800e-003	0.0000	1.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0461	0.5119	0.3008	6.0000e-004		0.0242	0.0242		0.0223	0.0223	0.0000	56.1327	56.1327	0.0169	0.0000	56.4882
Total	**0.0461**	**0.5119**	**0.3008**	**6.0000e-004**	**0.0109**	**0.0242**	**0.0352**	**1.1800e-003**	**0.0223**	**0.0235**	**0.0000**	**56.1327**	**56.1327**	**0.0169**	**0.0000**	**56.4882**

3.3 Lift Station Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6700e-003	0.0161	3.0000e-005	2.7200e-003	2.0000e-005	2.7500e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.3440	2.3440	1.3000e-004	0.0000	2.3467
Total	**1.0900e-003**	**1.6700e-003**	**0.0161**	**3.0000e-005**	**2.7200e-003**	**2.0000e-005**	**2.7500e-003**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**0.0000**	**2.3440**	**2.3440**	**1.3000e-004**	**0.0000**	**2.3467**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2700e-003	0.0000	4.2700e-003	4.6000e-004	0.0000	4.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.2892	0.3681	6.0000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	56.1326	56.1326	0.0169	0.0000	56.4881
Total	**0.0146**	**0.2892**	**0.3681**	**6.0000e-004**	**4.2700e-003**	**0.0132**	**0.0175**	**4.6000e-004**	**0.0132**	**0.0137**	**0.0000**	**56.1326**	**56.1326**	**0.0169**	**0.0000**	**56.4881**

3.3 Lift Station Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0900e-003	1.6700e-003	0.0161	3.0000e-005	2.7200e-003	2.0000e-005	2.7500e-003	7.2000e-004	2.0000e-005	7.4000e-004	0.0000	2.3440	2.3440	1.3000e-004	0.0000	2.3467
Total	**1.0900e-003**	**1.6700e-003**	**0.0161**	**3.0000e-005**	**2.7200e-003**	**2.0000e-005**	**2.7500e-003**	**7.2000e-004**	**2.0000e-005**	**7.4000e-004**	**0.0000**	**2.3440**	**2.3440**	**1.3000e-004**	**0.0000**	**2.3467**

3.4 Pipeline Construction - 2016

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	0.1657	1.8490	1.1530	2.1600e-003		0.0882	0.0882		0.0812	0.0812	0.0000	203.7753	203.7753	0.0615	0.0000	205.0661
Total	**0.1657**	**1.8490**	**1.1530**	**2.1600e-003**		**0.0882**	**0.0882**		**0.0812**	**0.0812**	**0.0000**	**203.7753**	**203.7753**	**0.0615**	**0.0000**	**205.0661**

3.4 Pipeline Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	6.0900e-003	0.0590	1.1000e-004	9.9700e-003	8.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7200e-003	0.0000	8.5769	8.5769	4.7000e-004	0.0000	8.5868
Total	**4.0000e-003**	**6.0900e-003**	**0.0590**	**1.1000e-004**	**9.9700e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**7.0000e-005**	**2.7200e-003**	**0.0000**	**8.5769**	**8.5769**	**4.7000e-004**	**0.0000**	**8.5868**

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	0.0530	1.0458	1.3964	2.1600e-003		0.0484	0.0484		0.0484	0.0484	0.0000	203.7751	203.7751	0.0615	0.0000	205.0658
Total	**0.0530**	**1.0458**	**1.3964**	**2.1600e-003**		**0.0484**	**0.0484**		**0.0484**	**0.0484**	**0.0000**	**203.7751**	**203.7751**	**0.0615**	**0.0000**	**205.0658**

3.4 Pipeline Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-003	6.0900e-003	0.0590	1.1000e-004	9.9700e-003	8.0000e-005	0.0101	2.6500e-003	7.0000e-005	2.7200e-003	0.0000	8.5769	8.5769	4.7000e-004	0.0000	8.5868
Total	**4.0000e-003**	**6.0900e-003**	**0.0590**	**1.1000e-004**	**9.9700e-003**	**8.0000e-005**	**0.0101**	**2.6500e-003**	**7.0000e-005**	**2.7200e-003**	**0.0000**	**8.5769**	**8.5769**	**4.7000e-004**	**0.0000**	**8.5868**

3.4 Pipeline Construction - 2017

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	0.0756	0.8260	0.5499	1.0600e-003		0.0391	0.0391		0.0360	0.0360	0.0000	98.3656	98.3656	0.0301	0.0000	98.9985
Total	**0.0756**	**0.8260**	**0.5499**	**1.0600e-003**		**0.0391**	**0.0391**		**0.0360**	**0.0360**	**0.0000**	**98.3656**	**98.3656**	**0.0301**	**0.0000**	**98.9985**

3.4 Pipeline Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	2.6100e-003	0.0249	6.0000e-005	4.8900e-003	4.0000e-005	4.9300e-003	1.3000e-003	3.0000e-005	1.3300e-003	0.0000	4.0385	4.0385	2.1000e-004	0.0000	4.0428
Total	**1.6800e-003**	**2.6100e-003**	**0.0249**	**6.0000e-005**	**4.8900e-003**	**4.0000e-005**	**4.9300e-003**	**1.3000e-003**	**3.0000e-005**	**1.3300e-003**	**0.0000**	**4.0385**	**4.0385**	**2.1000e-004**	**0.0000**	**4.0428**

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	0.0260	0.5132	0.6852	1.0600e-003		0.0237	0.0237		0.0237	0.0237	0.0000	98.3655	98.3655	0.0301	0.0000	98.9984
Total	**0.0260**	**0.5132**	**0.6852**	**1.0600e-003**		**0.0237**	**0.0237**		**0.0237**	**0.0237**	**0.0000**	**98.3655**	**98.3655**	**0.0301**	**0.0000**	**98.9984**

3.4 Pipeline Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	2.6100e-003	0.0249	6.0000e-005	4.8900e-003	4.0000e-005	4.9300e-003	1.3000e-003	3.0000e-005	1.3300e-003	0.0000	4.0385	4.0385	2.1000e-004	0.0000	4.0428
Total	**1.6800e-003**	**2.6100e-003**	**0.0249**	**6.0000e-005**	**4.8900e-003**	**4.0000e-005**	**4.9300e-003**	**1.3000e-003**	**3.0000e-005**	**1.3300e-003**	**0.0000**	**4.0385**	**4.0385**	**2.1000e-004**	**0.0000**	**4.0428**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407411	0.071652	0.163259	0.194400	0.057030	0.008208	0.019805	0.065406	0.001858	0.001474	0.006105	0.001154	0.002237

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Vegetation