



D

Emissions Modeling

Page Intentionally Blank

Memo

Date: Tuesday, April 26, 2022

Project: Paradise Sewer Project

To: Town of Paradise

From: Tanya Kalaskar, Environmental Planner, HDR

Subject: Emissions Modeling

Introduction

This memorandum describes the methodology and inputs used in the emissions modeling prepared for the proposed Paradise Sewer Project (Proposed Project) by HDR in April 2022. The modeling results are summarized in Tables 1 through 4 of this memorandum. Attachment 1 is the modeling output that shows the detailed results.

About the Model

The purpose of the California Emissions Estimator Model (CalEEMod) is to provide a uniform platform for government agencies, land use planners, and environmental professionals to estimate potential emissions associated with both construction and operational use of land use projects. CalEEMod utilizes widely accepted methodologies for estimating emissions combined with default data that can be used when site-specific information is not available. Sources of these methodologies and default data include but are not limited to the United States Environmental Protection Agency (USEPA) AP-42 emission factors, California Air Resources Board (CARB) vehicle emission models, studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle.

Methodology

CalEEMod version 2020.4.0 was used to estimate the Proposed Project's criteria air pollutant and GHG emissions during its construction. Construction emissions were estimated using a combination of Project-specific information and model defaults. Criteria air pollutant and GHG emissions were estimated for the construction of the Core Collection System and Export Pipeline System.

Inputs

The CalEEMod data inputs are based on or derived from information provided in Chapter 2, Project Description. The following data were utilized as inputs into the model:

- Area disturbance
- Construction schedule
- Type of construction equipment
- Quantity of construction equipment

- Number of construction crews
- Number of construction workers
- Quantity of soil exported
- Quantity of fill material imported

Results

Criteria Air Pollutants

Table 1 summarizes the unmitigated construction criteria air pollutant emissions by year for the Core Collection System. Table 2 summarizes the unmitigated construction criteria air pollutant emissions by year for the Export Pipeline System.

Table 1. Unmitigated Construction Criteria Air Pollutant Emissions – Core Collection System

Year	ROG	NO _x	PM ₁₀	CO	SO ₂	PM _{2.5}
lb/day						
2023	11.81	89.41	5.94	114.10	0.24	4.05
2024	14.24	100.75	6.95	140.78	0.32	4.61
2025	13.15	87.06	6.33	137.95	0.32	4.04
Maximum Emissions	14.24	100.75	6.95	140.78	0.32	4.61
Total Emissions	39.20	277.22	19.22	392.83	0.88	12.7

Source: CalEEMod Results (see Attachment 1)

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = particulate matter 10 micrometers and smaller, CO = carbon monoxide, SO_x = sulfur oxides, PM_{2.5} = particulate matter 2.5 micrometers and smaller, lb = pound

Table 2. Unmitigated Construction Criteria Air Pollutant Emissions – Export Pipeline System

Year	ROG	NO _x	PM ₁₀	CO	SO ₂	PM _{2.5}
lb/day						
2023	9.78	75.26	5.19	105.27	0.25	3.51
2024	5.83	41.65	2.87	57.51	0.12	1.92
Maximum Emissions	9.78	75.26	5.19	105.27	0.25	3.51
Total Emissions	15.61	116.91	8.06	162.78	0.37	5.43

Source: CalEEMod Results (see Attachment 1)

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = particulate matter 10 micrometers and smaller, CO = carbon monoxide, SO_x = sulfur oxides, PM_{2.5} = particulate matter 2.5 micrometers and smaller, lb = pound

GHG Emissions

Table 3 summarizes the unmitigated construction GHG emissions by year for the Core Collection System. Table 4 summarizes the unmitigated construction GHG emissions by year for the Export Pipeline System.

Table 3. Unmitigated Construction GHG Emissions – Core Collection System

Year	GHG Emissions
	MT CO ₂ e
2023	706.62
2024	3,032.48
2025	522.31
Maximum Emissions	3,032.48
Total Emissions	4,261.41

Source: CalEEMod (see Attachment 1)

Notes: MT = metric tons, CO₂e = carbon dioxide equivalent, GHG = greenhouse gas

Table 4. Unmitigated Construction GHG Emissions – Export Pipeline System

Year	GHG Emissions
	MT CO ₂ e
2023	655.68
2024	793.39
Maximum Emissions	793.39
Total Emissions	1,449.07

Source: CalEEMod (see Attachment 1)

Notes: MT = metric tons, CO₂e = carbon dioxide equivalent, GHG = greenhouse gas

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Paradise - Core Collection System
Butte County AQMD Air District, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.67	Acre	10.67	464,785.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - from project description
- Construction Phase - adjusted based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Trips and VMT - from project description and notes
- Grading - from project description
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
------------	-------------	---------------	-----------

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	10.00	80.00
tblGrading	AcresOfGrading	0.00	10.67
tblGrading	MaterialExported	0.00	169,400.00
tblGrading	MaterialImported	0.00	62,600.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	9.00	425.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	170.00

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	22,939.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	833.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	88.00	154.00
tblTripsAndVMT	WorkerTripNumber	35.00	48.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.8062	89.4105	114.0989	0.2419	2.1452	3.7907	5.9359	0.5475	3.5034	4.0509	0.0000	23,425.2977	23,425.2977	6.7131	0.1016	23,623.4019
2024	14.2373	100.7475	140.7817	0.3164	2.7320	4.2140	6.9460	0.7257	3.8851	4.6108	0.0000	30,645.7328	30,645.7328	8.9635	0.1383	30,911.0329
2025	13.1470	87.0598	137.9531	0.3162	2.7320	3.5977	6.3296	0.7257	3.3180	4.0438	0.0000	30,616.7053	30,616.7053	8.9774	0.1319	30,880.4470
Maximum	14.2373	100.7475	140.7817	0.3164	2.7320	4.2140	6.9460	0.7257	3.8851	4.6108	0.0000	30,645.7328	30,645.7328	8.9774	0.1383	30,911.0329

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.8062	89.4105	114.0989	0.2419	2.1452	3.7907	5.9359	0.5475	3.5034	4.0509	0.0000	23,425.2977	23,425.2977	6.7131	0.1016	23,623.4019
2024	14.2373	100.7475	140.7817	0.3164	2.7320	4.2140	6.9460	0.7257	3.8851	4.6108	0.0000	30,645.7328	30,645.7328	8.9635	0.1383	30,911.0329
2025	13.1470	87.0598	137.9531	0.3162	2.7320	3.5977	6.3296	0.7257	3.3180	4.0438	0.0000	30,616.7053	30,616.7053	8.9774	0.1319	30,880.4469
Maximum	14.2373	100.7475	140.7817	0.3164	2.7320	4.2140	6.9460	0.7257	3.8851	4.6108	0.0000	30,645.7328	30,645.7328	8.9774	0.1383	30,911.0329

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2179	1.0000e-005	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005	0.0000	2.4900e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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
Total	0.2179	1.0000e-005	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3400e-003	2.3400e-003	1.0000e-005	0.0000	2.4900e-003

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	6/1/2023	11/20/2023	5	80	
2	Pipe Installation	Trenching	10/1/2023	2/14/2025	5	360	
3	Pump Installation	Trenching	6/1/2024	3/7/2025	5	200	
4	Asphalt Replacement	Paving	11/15/2024	3/6/2025	5	80	

Acres of Grading (Site Preparation Phase): 10.67

Acres of Grading (Grading Phase): 0

Acres of Paving: 10.67

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	7	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	7	8.00	510	0.38
Pipe Installation	Plate Compactors	7	8.00	8	0.43
Pipe Installation	Rollers	7	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Scrapers	0	8.00	367	0.48
Pipe Installation	Tractors/Loaders/Backhoes	7	8.00	170	0.37
Pump Installation	Cement and Mortar Mixers	2	8.00	425	0.56
Pump Installation	Cranes	0	7.00	231	0.29
Pump Installation	Excavators	4	8.00	310	0.38
Pump Installation	Forklifts	0	8.00	89	0.20
Pump Installation	Generator Sets	0	8.00	84	0.74
Pump Installation	Plate Compactors	2	8.00	8	0.43
Pump Installation	Rollers	2	8.00	20	0.38
Pump Installation	Tractors/Loaders/Backhoes	4	8.00	170	0.37
Pump Installation	Welders	0	8.00	46	0.45
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	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
Asphalt Removal	5	14.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	35	154.00	0.00	1,500.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pump Installation	14	48.00	0.00	833.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222		1,889.3552	1,889.3552	0.4486		1,900.5697
Total	0.8538	7.3468	11.3459	0.0197	0.1414	0.3390	0.4805	0.0153	0.3222	0.3374		1,889.3552	1,889.3552	0.4486		1,900.5697

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6400e-003	0.3685	0.1022	1.5500e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		164.4432	164.4432	4.0000e-004	0.0259	172.1555
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
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	0.0868	0.4152	0.7885	3.0700e-003	0.2035	4.1200e-003	0.2076	0.0544	3.9100e-003	0.0583		317.7880	317.7880	4.8200e-003	0.0300	326.8497

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					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222	0.0000	1,889.3552	1,889.3552	0.4486		1,900.5697
Total	0.8538	7.3468	11.3459	0.0197	0.1414	0.3390	0.4805	0.0153	0.3222	0.3374	0.0000	1,889.3552	1,889.3552	0.4486		1,900.5697

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6400e-003	0.3685	0.1022	1.5500e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		164.4432	164.4432	4.0000e-004	0.0259	172.1555
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
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	0.0868	0.4152	0.7885	3.0700e-003	0.2035	4.1200e-003	0.2076	0.0544	3.9100e-003	0.0583		317.7880	317.7880	4.8200e-003	0.0300	326.8497

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651		19,366.7535	19,366.7535	6.2106		19,522.0185
Total	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651		19,366.7535	19,366.7535	6.2106		19,522.0185

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6500e-003	0.3688	0.1023	1.5600e-003	0.0439	3.2300e-003	0.0471	0.0120	3.0900e-003	0.0151		164.6078	164.6078	4.0000e-004	0.0259	172.3278
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
Worker	0.8597	0.5143	7.5494	0.0167	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,686.7932	1,686.7932	0.0487	0.0457	1,701.6363
Total	0.8684	0.8831	7.6517	0.0183	1.8003	0.0132	1.8135	0.4779	0.0122	0.4901		1,851.4009	1,851.4009	0.0491	0.0716	1,873.9641

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	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651	0.0000	19,366.7535	19,366.7535	6.2106		19,522.0185
Total	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651	0.0000	19,366.7535	19,366.7535	6.2106		19,522.0185

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6500e-003	0.3688	0.1023	1.5600e-003	0.0439	3.2300e-003	0.0471	0.0120	3.0900e-003	0.0151		164.6078	164.6078	4.0000e-004	0.0259	172.3278
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
Worker	0.8597	0.5143	7.5494	0.0167	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,686.7932	1,686.7932	0.0487	0.0457	1,701.6363
Total	0.8684	0.8831	7.6517	0.0183	1.8003	0.0132	1.8135	0.4779	0.0122	0.4901		1,851.4009	1,851.4009	0.0491	0.0716	1,873.9641

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315		19,374.2725	19,374.2725	6.2130		19,529.5982
Total	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315		19,374.2725	19,374.2725	6.2130		19,529.5982

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3631	0.1023	1.5200e-003	0.0439	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3921	161.3921	4.0000e-004	0.0254	168.9613
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
Worker	0.7956	0.4541	6.8908	0.0161	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,631.6657	1,631.6657	0.0435	0.0420	1,645.2792
Total	0.8042	0.8172	6.9931	0.0177	1.8003	0.0125	1.8129	0.4779	0.0117	0.4895		1,793.0578	1,793.0578	0.0439	0.0674	1,814.2405

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	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315	0.0000	19,374.2725	19,374.2725	6.2130		19,529.5982
Total	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315	0.0000	19,374.2725	19,374.2725	6.2130		19,529.5982

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3631	0.1023	1.5200e-003	0.0439	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3921	161.3921	4.0000e-004	0.0254	168.9613
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
Worker	0.7956	0.4541	6.8908	0.0161	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,631.6657	1,631.6657	0.0435	0.0420	1,645.2792
Total	0.8042	0.8172	6.9931	0.0177	1.8003	0.0125	1.8129	0.4779	0.0117	0.4895		1,793.0578	1,793.0578	0.0439	0.0674	1,814.2405

3.3 Pipe Installation - 2025

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	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860		19,433.6069	19,433.6069	6.2322		19,589.4124
Total	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860		19,433.6069	19,433.6069	6.2322		19,589.4124

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3562	0.1021	1.4900e-003	0.0439	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.7393	157.7393	4.0000e-004	0.0248	165.1372
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
Worker	0.7409	0.4040	6.3325	0.0156	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,576.5062	1,576.5062	0.0390	0.0389	1,589.0667
Total	0.7494	0.7602	6.4346	0.0171	1.8003	0.0120	1.8123	0.4779	0.0112	0.4890		1,734.2455	1,734.2455	0.0394	0.0637	1,754.2038

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	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860	0.0000	19,433.6069	19,433.6069	6.2322		19,589.4124
Total	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860	0.0000	19,433.6069	19,433.6069	6.2322		19,589.4124

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3562	0.1021	1.4900e-003	0.0439	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.7393	157.7393	4.0000e-004	0.0248	165.1372
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
Worker	0.7409	0.4040	6.3325	0.0156	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,576.5062	1,576.5062	0.0390	0.0389	1,589.0667
Total	0.7494	0.7602	6.4346	0.0171	1.8003	0.0120	1.8123	0.4779	0.0112	0.4890		1,734.2455	1,734.2455	0.0394	0.0637	1,754.2038

3.4 Pump Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660		6,196.4705	6,196.4705	1.9889		6,246.1935
Total	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660		6,196.4705	6,196.4705	1.9889		6,246.1935

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3630	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3276	161.3276	4.0000e-004	0.0254	168.8937
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
Worker	0.2480	0.1415	2.1478	5.0300e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		508.5711	508.5711	0.0136	0.0131	512.8143
Total	0.2566	0.5045	2.2500	6.5500e-003	0.5913	6.1200e-003	0.5974	0.1572	5.7500e-003	0.1630		669.8987	669.8987	0.0140	0.0385	681.7080

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	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660	0.0000	6,196.4705	6,196.4705	1.9889		6,246.1935
Total	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660	0.0000	6,196.4705	6,196.4705	1.9889		6,246.1935

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5800e-003	0.3630	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0471	0.0120	3.0700e-003	0.0151		161.3276	161.3276	4.0000e-004	0.0254	168.8937
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
Worker	0.2480	0.1415	2.1478	5.0300e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		508.5711	508.5711	0.0136	0.0131	512.8143
Total	0.2566	0.5045	2.2500	6.5500e-003	0.5913	6.1200e-003	0.5974	0.1572	5.7500e-003	0.1630		669.8987	669.8987	0.0140	0.0385	681.7080

3.4 Pump Installation - 2025

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	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959		6,201.0163	6,201.0163	1.9904		6,250.7761
Total	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959		6,201.0163	6,201.0163	1.9904		6,250.7761

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3561	0.1021	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.6762	157.6762	4.0000e-004	0.0248	165.0711
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
Worker	0.2309	0.1259	1.9738	4.8600e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		491.3786	491.3786	0.0122	0.0121	495.2935
Total	0.2394	0.4820	2.0758	6.3500e-003	0.5913	5.9200e-003	0.5972	0.1572	5.5600e-003	0.1628		649.0547	649.0547	0.0126	0.0369	660.3646

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	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959	0.0000	6,201.0163	6,201.0163	1.9904		6,250.7761
Total	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959	0.0000	6,201.0163	6,201.0163	1.9904		6,250.7761

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5000e-003	0.3561	0.1021	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.6762	157.6762	4.0000e-004	0.0248	165.0711
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
Worker	0.2309	0.1259	1.9738	4.8600e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		491.3786	491.3786	0.0122	0.0121	495.2935
Total	0.2394	0.4820	2.0758	6.3500e-003	0.5913	5.9200e-003	0.5972	0.1572	5.5600e-003	0.1628		649.0547	649.0547	0.0126	0.0369	660.3646

3.5 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2590	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5700e-003	0.3628	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0470	0.0120	3.0700e-003	0.0151		161.2307	161.2307	4.0000e-004	0.0253	168.7924
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
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	0.1429	0.4394	1.2656	4.2500e-003	0.3404	4.7800e-003	0.3451	0.0907	4.5200e-003	0.0952		436.7068	436.7068	7.7400e-003	0.0324	446.5668

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	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2590	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.5700e-003	0.3628	0.1022	1.5200e-003	0.0438	3.2100e-003	0.0470	0.0120	3.0700e-003	0.0151		161.2307	161.2307	4.0000e-004	0.0253	168.7924
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
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	0.1429	0.4394	1.2656	4.2500e-003	0.3404	4.7800e-003	0.3451	0.0907	4.5200e-003	0.0952		436.7068	436.7068	7.7400e-003	0.0324	446.5668

3.5 Asphalt Replacement - 2025

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	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151		2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1941	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151		2,175.0370	2,175.0370	0.6959		2,192.4339

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.4900e-003	0.3559	0.1020	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.5815	157.5815	4.0000e-004	0.0248	164.9721
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
Worker	0.1251	0.0682	1.0691	2.6300e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		266.1634	266.1634	6.5800e-003	6.5600e-003	268.2840
Total	0.1336	0.4241	1.1711	4.1200e-003	0.3404	4.6600e-003	0.3450	0.0907	4.4000e-003	0.0951		423.7449	423.7449	6.9800e-003	0.0313	433.2560

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	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151	0.0000	2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1941	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151	0.0000	2,175.0370	2,175.0370	0.6959		2,192.4339

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.4900e-003	0.3559	0.1020	1.4900e-003	0.0438	3.1700e-003	0.0470	0.0120	3.0300e-003	0.0151		157.5815	157.5815	4.0000e-004	0.0248	164.9721
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
Worker	0.1251	0.0682	1.0691	2.6300e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		266.1634	266.1634	6.5800e-003	6.5600e-003	268.2840
Total	0.1336	0.4241	1.1711	4.1200e-003	0.3404	4.6600e-003	0.3450	0.0907	4.4000e-003	0.0951		423.7449	423.7449	6.9800e-003	0.0313	433.2560

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	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

4.2 Trip Summary Information

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.015908	0.000716	0.000409	0.032995	0.001089	0.004690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Unmitigated	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

CalEEMod Version: CalEEMod.2020.4.0

Page 1 of 1

Date: 4/21/2022 3:37 PM

Paradise - Core Collection System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paradise - Core Collection System

Butte County AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.67	Acre	10.67	464,785.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - from project description
- Construction Phase - adjusted based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Trips and VMT - from project description and notes
- Grading - from project description
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
------------	-------------	---------------	-----------

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	10.00	80.00
tblGrading	AcresOfGrading	0.00	10.67
tblGrading	MaterialExported	0.00	169,400.00
tblGrading	MaterialImported	0.00	62,600.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	9.00	425.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	170.00

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	22,939.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	833.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	88.00	154.00
tblTripsAndVMT	WorkerTripNumber	35.00	48.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.7047	89.6005	112.5483	0.2398	2.1452	3.7907	5.9360	0.5475	3.5035	4.0509	0.0000	23,208.378 6	23,208.378 6	6.7160	0.1090	23,408.751 2
2024	14.1126	100.9923	138.8899	0.3136	2.7320	4.2141	6.9460	0.7257	3.8851	4.6109	0.0000	30,361.839 9	30,361.839 9	8.9674	0.1475	30,629.970 7
2025	13.0331	87.2858	136.2384	0.3134	2.7320	3.5977	6.3297	0.7257	3.3181	4.0438	0.0000	30,343.114 0	30,343.114 0	8.9813	0.1404	30,609.470 6
Maximum	14.1126	100.9923	138.8899	0.3136	2.7320	4.2141	6.9460	0.7257	3.8851	4.6109	0.0000	30,361.839 9	30,361.839 9	8.9813	0.1475	30,629.970 7

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	11.7047	89.6005	112.5483	0.2398	2.1452	3.7907	5.9360	0.5475	3.5035	4.0509	0.0000	23,208.378 5	23,208.378 5	6.7160	0.1090	23,408.751 2
2024	14.1126	100.9923	138.8899	0.3136	2.7320	4.2141	6.9460	0.7257	3.8851	4.6109	0.0000	30,361.839 9	30,361.839 9	8.9674	0.1475	30,629.970 7
2025	13.0331	87.2858	136.2384	0.3134	2.7320	3.5977	6.3297	0.7257	3.3181	4.0438	0.0000	30,343.113 9	30,343.113 9	8.9813	0.1404	30,609.470 6
Maximum	14.1126	100.9923	138.8899	0.3136	2.7320	4.2141	6.9460	0.7257	3.8851	4.6109	0.0000	30,361.839 9	30,361.839 9	8.9813	0.1475	30,629.970 7

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2179	1.0000e-005	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005	0.0000	2.4900e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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
Total	0.2179	1.0000e-005	1.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.3400e-003	2.3400e-003	1.0000e-005	0.0000	2.4900e-003

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	11/20/2023	5	80	
2	Pipe Installation	Trenching	10/1/2023	2/14/2025	5	360	
3	Pump Installation	Trenching	6/1/2024	3/7/2025	5	200	
4	Asphalt Replacement	Paving	11/15/2024	3/6/2025	5	80	

Acres of Grading (Site Preparation Phase): 10.67

Acres of Grading (Grading Phase): 0

Acres of Paving: 10.67

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	7	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	7	8.00	510	0.38
Pipe Installation	Plate Compactors	7	8.00	8	0.43
Pipe Installation	Rollers	7	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Scrapers	0	8.00	367	0.48
Pipe Installation	Tractors/Loaders/Backhoes	7	8.00	170	0.37
Pump Installation	Cement and Mortar Mixers	2	8.00	425	0.56
Pump Installation	Cranes	0	7.00	231	0.29
Pump Installation	Excavators	4	8.00	310	0.38
Pump Installation	Forklifts	0	8.00	89	0.20
Pump Installation	Generator Sets	0	8.00	84	0.74
Pump Installation	Plate Compactors	2	8.00	8	0.43
Pump Installation	Rollers	2	8.00	20	0.38
Pump Installation	Tractors/Loaders/Backhoes	4	8.00	170	0.37
Pump Installation	Welders	0	8.00	46	0.45
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	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
Asphalt Removal	5	14.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	35	154.00	0.00	1,500.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pump Installation	14	48.00	0.00	833.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222		1,889.3552	1,889.3552	0.4486		1,900.5697
Total	0.8538	7.3468	11.3459	0.0197	0.1414	0.3390	0.4805	0.0153	0.3222	0.3374		1,889.3552	1,889.3552	0.4486		1,900.5697

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9000e-003	0.3998	0.1047	1.5600e-003	0.0438	3.2300e-003	0.0470	0.0120	3.0900e-003	0.0151		164.8095	164.8095	3.7000e-004	0.0259	172.5383
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
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	0.0777	0.4572	0.6614	2.9000e-003	0.2035	4.1300e-003	0.2076	0.0544	3.9200e-003	0.0583		300.0167	300.0167	5.0500e-003	0.0307	309.2811

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					0.1414	0.0000	0.1414	0.0153	0.0000	0.0153			0.0000			0.0000
Off-Road	0.8538	7.3468	11.3459	0.0197		0.3390	0.3390		0.3222	0.3222	0.0000	1,889.3552	1,889.3552	0.4486		1,900.5697
Total	0.8538	7.3468	11.3459	0.0197	0.1414	0.3390	0.4805	0.0153	0.3222	0.3374	0.0000	1,889.3552	1,889.3552	0.4486		1,900.5697

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9000e-003	0.3998	0.1047	1.5600e-003	0.0438	3.2300e-003	0.0470	0.0120	3.0900e-003	0.0151		164.8095	164.8095	3.7000e-004	0.0259	172.5383
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
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	0.0777	0.4572	0.6614	2.9000e-003	0.2035	4.1300e-003	0.2076	0.0544	3.9200e-003	0.0583		300.0167	300.0167	5.0500e-003	0.0307	309.2811

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651		19,366.7535	19,366.7535	6.2106		19,522.0185
Total	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651		19,366.7535	19,366.7535	6.2106		19,522.0185

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9100e-003	0.4002	0.1048	1.5600e-003	0.0439	3.2400e-003	0.0471	0.0120	3.1000e-003	0.0151		164.9745	164.9745	3.7000e-004	0.0259	172.7110
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
Worker	0.7680	0.6309	6.1233	0.0147	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,487.2786	1,487.2786	0.0514	0.0524	1,504.1710
Total	0.7759	1.0311	6.2282	0.0163	1.8003	0.0132	1.8135	0.4779	0.0123	0.4901		1,652.2531	1,652.2531	0.0518	0.0783	1,676.8820

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	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651	0.0000	19,366.7535	19,366.7535	6.2106		19,522.0185
Total	9.9973	80.7655	94.3128	0.2010		3.4344	3.4344		3.1651	3.1651	0.0000	19,366.7535	19,366.7535	6.2106		19,522.0185

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9100e-003	0.4002	0.1048	1.5600e-003	0.0439	3.2400e-003	0.0471	0.0120	3.1000e-003	0.0151		164.9745	164.9745	3.7000e-004	0.0259	172.7110
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
Worker	0.7680	0.6309	6.1233	0.0147	1.7565	9.9300e-003	1.7664	0.4658	9.1500e-003	0.4750		1,487.2786	1,487.2786	0.0514	0.0524	1,504.1710
Total	0.7759	1.0311	6.2282	0.0163	1.8003	0.0132	1.8135	0.4779	0.0123	0.4901		1,652.2531	1,652.2531	0.0518	0.0783	1,676.8820

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315		19,374.2725	19,374.2725	6.2130		19,529.5982
Total	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315		19,374.2725	19,374.2725	6.2130		19,529.5982

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3941	0.1048	1.5300e-003	0.0439	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.7566	161.7566	3.6000e-004	0.0254	169.3421
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
Worker	0.7129	0.5567	5.6079	0.0142	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,439.1754	1,439.1754	0.0462	0.0481	1,454.6677
Total	0.7207	0.9508	5.7127	0.0158	1.8003	0.0126	1.8129	0.4779	0.0117	0.4895		1,600.9319	1,600.9319	0.0466	0.0735	1,624.0098

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	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315	0.0000	19,374.2725	19,374.2725	6.2130		19,529.5982
Total	9.7408	76.1744	92.7522	0.2010		3.1804	3.1804		2.9315	2.9315	0.0000	19,374.2725	19,374.2725	6.2130		19,529.5982

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3941	0.1048	1.5300e-003	0.0439	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.7566	161.7566	3.6000e-004	0.0254	169.3421
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
Worker	0.7129	0.5567	5.6079	0.0142	1.7565	9.3300e-003	1.7658	0.4658	8.5900e-003	0.4744		1,439.1754	1,439.1754	0.0462	0.0481	1,454.6677
Total	0.7207	0.9508	5.7127	0.0158	1.8003	0.0126	1.8129	0.4779	0.0117	0.4895		1,600.9319	1,600.9319	0.0466	0.0735	1,624.0098

3.3 Pipe Installation - 2025

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	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860		19,433.6069	19,433.6069	6.2322		19,589.4124
Total	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860		19,433.6069	19,433.6069	6.2322		19,589.4124

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7600e-003	0.3867	0.1046	1.4900e-003	0.0439	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.1000	158.1000	3.6000e-004	0.0249	165.5141
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
Worker	0.6655	0.4950	5.1693	0.0138	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,390.9814	1,390.9814	0.0417	0.0445	1,405.2754
Total	0.6732	0.8817	5.2739	0.0153	1.8003	0.0120	1.8123	0.4779	0.0112	0.4890		1,549.0814	1,549.0814	0.0420	0.0693	1,570.7895

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	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860	0.0000	19,433.6069	19,433.6069	6.2322		19,589.4124
Total	8.9226	65.2015	90.8710	0.2017		2.6962	2.6962		2.4860	2.4860	0.0000	19,433.6069	19,433.6069	6.2322		19,589.4124

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7600e-003	0.3867	0.1046	1.4900e-003	0.0439	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.1000	158.1000	3.6000e-004	0.0249	165.5141
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
Worker	0.6655	0.4950	5.1693	0.0138	1.7565	8.8300e-003	1.7653	0.4658	8.1300e-003	0.4740		1,390.9814	1,390.9814	0.0417	0.0445	1,405.2754
Total	0.6732	0.8817	5.2739	0.0153	1.8003	0.0120	1.8123	0.4779	0.0112	0.4890		1,549.0814	1,549.0814	0.0420	0.0693	1,570.7895

3.4 Pump Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660		6,196.4705	6,196.4705	1.9889		6,246.1935
Total	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660		6,196.4705	6,196.4705	1.9889		6,246.1935

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3939	0.1048	1.5300e-003	0.0438	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.6919	161.6919	3.6000e-004	0.0254	169.2744
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
Worker	0.2222	0.1735	1.7479	4.4400e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		448.5741	448.5741	0.0144	0.0150	453.4029
Total	0.2300	0.5675	1.8527	5.9700e-003	0.5913	6.1300e-003	0.5974	0.1572	5.7600e-003	0.1630		610.2660	610.2660	0.0148	0.0404	622.6773

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	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660	0.0000	6,196.4705	6,196.4705	1.9889		6,246.1935
Total	2.0339	14.5442	24.0133	0.0643		0.6135	0.6135		0.5660	0.5660	0.0000	6,196.4705	6,196.4705	1.9889		6,246.1935

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8400e-003	0.3939	0.1048	1.5300e-003	0.0438	3.2200e-003	0.0471	0.0120	3.0800e-003	0.0151		161.6919	161.6919	3.6000e-004	0.0254	169.2744
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
Worker	0.2222	0.1735	1.7479	4.4400e-003	0.5475	2.9100e-003	0.5504	0.1452	2.6800e-003	0.1479		448.5741	448.5741	0.0144	0.0150	453.4029
Total	0.2300	0.5675	1.8527	5.9700e-003	0.5913	6.1300e-003	0.5974	0.1572	5.7600e-003	0.1630		610.2660	610.2660	0.0148	0.0404	622.6773

3.4 Pump Installation - 2025

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	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959		6,201.0163	6,201.0163	1.9904		6,250.7761
Total	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959		6,201.0163	6,201.0163	1.9904		6,250.7761

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3865	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.0368	158.0368	3.6000e-004	0.0248	165.4479
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
Worker	0.2074	0.1543	1.6112	4.2900e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		433.5527	433.5527	0.0130	0.0139	438.0079
Total	0.2152	0.5408	1.7158	5.7800e-003	0.5913	5.9300e-003	0.5972	0.1572	5.5700e-003	0.1628		591.5894	591.5894	0.0134	0.0387	603.4558

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	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959	0.0000	6,201.0163	6,201.0163	1.9904		6,250.7761
Total	1.9079	12.7663	23.9407	0.0643		0.5373	0.5373		0.4959	0.4959	0.0000	6,201.0163	6,201.0163	1.9904		6,250.7761

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3865	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		158.0368	158.0368	3.6000e-004	0.0248	165.4479
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
Worker	0.2074	0.1543	1.6112	4.2900e-003	0.5475	2.7500e-003	0.5502	0.1452	2.5300e-003	0.1477		433.5527	433.5527	0.0130	0.0139	438.0079
Total	0.2152	0.5408	1.7158	5.7800e-003	0.5913	5.9300e-003	0.5972	0.1572	5.5700e-003	0.1628		591.5894	591.5894	0.0134	0.0387	603.4558

3.5 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2590	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8300e-003	0.3937	0.1047	1.5300e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		161.5948	161.5948	3.6000e-004	0.0254	169.1728
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
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	0.1282	0.4877	1.0515	3.9300e-003	0.3404	4.7900e-003	0.3452	0.0907	4.5300e-003	0.0952		404.5725	404.5725	8.1600e-003	0.0335	414.7660

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	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2590	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8300e-003	0.3937	0.1047	1.5300e-003	0.0438	3.2200e-003	0.0470	0.0120	3.0800e-003	0.0151		161.5948	161.5948	3.6000e-004	0.0254	169.1728
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
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	0.1282	0.4877	1.0515	3.9300e-003	0.3404	4.7900e-003	0.3452	0.0907	4.5300e-003	0.0952		404.5725	404.5725	8.1600e-003	0.0335	414.7660

3.5 Asphalt Replacement - 2025

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	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151		2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1941	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151		2,175.0370	2,175.0370	0.6959		2,192.4339

Unmitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3863	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		157.9419	157.9419	3.6000e-004	0.0248	165.3486
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
Worker	0.1124	0.0836	0.8727	2.3200e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		234.8410	234.8410	7.0400e-003	7.5100e-003	237.2543
Total	0.1201	0.4699	0.9772	3.8100e-003	0.3404	4.6700e-003	0.3450	0.0907	4.4100e-003	0.0951		392.7829	392.7829	7.4000e-003	0.0323	402.6029

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	0.8447	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151	0.0000	2,175.0370	2,175.0370	0.6959		2,192.4339
Paving	0.3494					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1941	7.4257	13.4599	0.0226		0.3416	0.3416		0.3151	0.3151	0.0000	2,175.0370	2,175.0370	0.6959		2,192.4339

Mitigated Construction Off-Site

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7500e-003	0.3863	0.1045	1.4900e-003	0.0438	3.1800e-003	0.0470	0.0120	3.0400e-003	0.0151		157.9419	157.9419	3.6000e-004	0.0248	165.3486
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
Worker	0.1124	0.0836	0.8727	2.3200e-003	0.2965	1.4900e-003	0.2980	0.0786	1.3700e-003	0.0800		234.8410	234.8410	7.0400e-003	7.5100e-003	237.2543
Total	0.1201	0.4699	0.9772	3.8100e-003	0.3404	4.6700e-003	0.3450	0.0907	4.4100e-003	0.0951		392.7829	392.7829	7.4000e-003	0.0323	402.6029

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	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

4.2 Trip Summary Information

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.015908	0.000716	0.000409	0.032995	0.001089	0.004690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Unmitigated	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003
Total	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005		2.4900e-003

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0531					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	0.1646					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	1.0000e-004	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005			2.4900e-003
Total	0.2179	1.0000e-005	1.0900e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.3400e-003	2.3400e-003	1.0000e-005			2.4900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

CalEEMod Version: CalEEMod.2020.4.0

Page 1 of 1

Date: 4/21/2022 3:39 PM

Paradise - Core Collection System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Paradise - Core Collection System
Butte County AQMD Air District, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	10.67	Acre	10.67	464,785.20	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - from project description
- Construction Phase - adjusted based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Trips and VMT - from project description and notes
- Grading - from project description
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
------------	-------------	---------------	-----------

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tblConstructionPhase	NumDays	20.00	80.00
tblConstructionPhase	NumDays	10.00	80.00
tblGrading	AcresOfGrading	0.00	10.67
tblGrading	MaterialExported	0.00	169,400.00
tblGrading	MaterialImported	0.00	62,600.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	9.00	425.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	170.00

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	22,939.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	833.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	88.00	154.00
tblTripsAndVMT	WorkerTripNumber	35.00	48.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3862	2.9673	3.7513	7.9800e-003	0.0695	0.1258	0.1953	0.0176	0.1163	0.1339	0.0000	700.6103	700.6103	0.2010	3.2900e-003	706.6157
2024	1.5604	11.3843	15.1174	0.0342	0.2743	0.4720	0.7463	0.0731	0.4351	0.5082	0.0000	3,006.7467	3,006.7467	0.8922	0.0115	3,032.4796
2025	0.2393	1.5931	2.5432	5.8900e-003	0.0497	0.0659	0.1156	0.0133	0.0607	0.0740	0.0000	517.7561	517.7561	0.1525	2.4800e-003	522.3078
Maximum	1.5604	11.3843	15.1174	0.0342	0.2743	0.4720	0.7463	0.0731	0.4351	0.5082	0.0000	3,006.7467	3,006.7467	0.8922	0.0115	3,032.4796

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3862	2.9673	3.7513	7.9800e-003	0.0695	0.1258	0.1953	0.0176	0.1163	0.1339	0.0000	700.6096	700.6096	0.2010	3.2900e-003	706.6149
2024	1.5604	11.3843	15.1173	0.0342	0.2743	0.4720	0.7463	0.0731	0.4351	0.5082	0.0000	3,006.7434	3,006.7434	0.8922	0.0115	3,032.4763
2025	0.2393	1.5931	2.5432	5.8900e-003	0.0497	0.0659	0.1156	0.0133	0.0607	0.0740	0.0000	517.7555	517.7555	0.1525	2.4800e-003	522.3073
Maximum	1.5604	11.3843	15.1173	0.0342	0.2743	0.4720	0.7463	0.0731	0.4351	0.5082	0.0000	3,006.7434	3,006.7434	0.8922	0.0115	3,032.4763

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2023	10-31-2023	1.3112	1.3112
2	11-1-2023	1-31-2024	3.0488	3.0488
3	2-1-2024	4-30-2024	2.8148	2.8148
4	5-1-2024	7-31-2024	3.2539	3.2539
5	8-1-2024	10-31-2024	3.4469	3.4469
6	11-1-2024	1-31-2025	3.5676	3.5676
7	2-1-2025	4-30-2025	0.6831	0.6831
		Highest	3.5676	3.5676

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	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Total	0.0398	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-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	tons/yr										MT/yr					
Area	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0398	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	11/20/2023	5	80	
2	Pipe Installation	Trenching	10/1/2023	2/14/2025	5	360	
3	Pump Installation	Trenching	6/1/2024	3/7/2025	5	200	
4	Asphalt Replacement	Paving	11/15/2024	3/6/2025	5	80	

Acres of Grading (Site Preparation Phase): 10.67

Acres of Grading (Grading Phase): 0

Acres of Paving: 10.67

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	7	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	7	8.00	510	0.38
Pipe Installation	Plate Compactors	7	8.00	8	0.43
Pipe Installation	Rollers	7	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Scrapers	0	8.00	367	0.48
Pipe Installation	Tractors/Loaders/Backhoes	7	8.00	170	0.37

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pump Installation	Cement and Mortar Mixers	2	8.00	425	0.56
Pump Installation	Cranes	0	7.00	231	0.29
Pump Installation	Excavators	4	8.00	310	0.38
Pump Installation	Forklifts	0	8.00	89	0.20
Pump Installation	Generator Sets	0	8.00	84	0.74
Pump Installation	Plate Compactors	2	8.00	8	0.43
Pump Installation	Rollers	2	8.00	20	0.38
Pump Installation	Tractors/Loaders/Backhoes	4	8.00	170	0.37
Pump Installation	Welders	0	8.00	46	0.45
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	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
Asphalt Removal	5	14.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	35	154.00	0.00	1,500.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pump Installation	14	48.00	0.00	833.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	333.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.6600e-003	0.0000	5.6600e-003	6.1000e-004	0.0000	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0342	0.2939	0.4538	7.9000e-004		0.0136	0.0136		0.0129	0.0129	0.0000	68.5598	68.5598	0.0163	0.0000	68.9667
Total	0.0342	0.2939	0.4538	7.9000e-004	5.6600e-003	0.0136	0.0192	6.1000e-004	0.0129	0.0135	0.0000	68.5598	68.5598	0.0163	0.0000	68.9667

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0156	4.1300e-003	6.0000e-005	1.6900e-003	1.3000e-004	1.8200e-003	4.7000e-004	1.2000e-004	5.9000e-004	0.0000	5.9728	5.9728	1.0000e-005	9.4000e-004	6.2529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6700e-003	2.0400e-003	0.0226	6.0000e-005	6.1200e-003	4.0000e-005	6.1500e-003	1.6300e-003	3.0000e-005	1.6600e-003	0.0000	5.0536	5.0536	1.6000e-004	1.6000e-004	5.1052
Total	3.0000e-003	0.0176	0.0268	1.2000e-004	7.8100e-003	1.7000e-004	7.9700e-003	2.1000e-003	1.5000e-004	2.2500e-003	0.0000	11.0264	11.0264	1.7000e-004	1.1000e-003	11.3581

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.6600e-003	0.0000	5.6600e-003	6.1000e-004	0.0000	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0342	0.2939	0.4538	7.9000e-004		0.0136	0.0136		0.0129	0.0129	0.0000	68.5597	68.5597	0.0163	0.0000	68.9666
Total	0.0342	0.2939	0.4538	7.9000e-004	5.6600e-003	0.0136	0.0192	6.1000e-004	0.0129	0.0135	0.0000	68.5597	68.5597	0.0163	0.0000	68.9666

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3000e-004	0.0156	4.1300e-003	6.0000e-005	1.6900e-003	1.3000e-004	1.8200e-003	4.7000e-004	1.2000e-004	5.9000e-004	0.0000	5.9728	5.9728	1.0000e-005	9.4000e-004	6.2529
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6700e-003	2.0400e-003	0.0226	6.0000e-005	6.1200e-003	4.0000e-005	6.1500e-003	1.6300e-003	3.0000e-005	1.6600e-003	0.0000	5.0536	5.0536	1.6000e-004	1.6000e-004	5.1052
Total	3.0000e-003	0.0176	0.0268	1.2000e-004	7.8100e-003	1.7000e-004	7.9700e-003	2.1000e-003	1.5000e-004	2.2500e-003	0.0000	11.0264	11.0264	1.7000e-004	1.1000e-003	11.3581

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3249	2.6249	3.0652	6.5300e-003		0.1116	0.1116		0.1029	0.1029	0.0000	570.9998	570.9998	0.1831	0.0000	575.5775
Total	0.3249	2.6249	3.0652	6.5300e-003		0.1116	0.1116		0.1029	0.1029	0.0000	570.9998	570.9998	0.1831	0.0000	575.5775

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0127	3.3600e-003	5.0000e-005	1.3700e-003	1.1000e-004	1.4800e-003	3.8000e-004	1.0000e-004	4.8000e-004	0.0000	4.8578	4.8578	1.0000e-005	7.6000e-004	5.0856
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	0.0239	0.0183	0.2022	4.9000e-004	0.0547	3.2000e-004	0.0550	0.0146	3.0000e-004	0.0148	0.0000	45.1666	45.1666	1.4300e-003	1.4300e-003	45.6278
Total	0.0241	0.0309	0.2055	5.4000e-004	0.0560	4.3000e-004	0.0565	0.0149	4.0000e-004	0.0153	0.0000	50.0244	50.0244	1.4400e-003	2.1900e-003	50.7134

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.3249	2.6249	3.0652	6.5300e-003		0.1116	0.1116		0.1029	0.1029	0.0000	570.9991	570.9991	0.1831	0.0000	575.5768
Total	0.3249	2.6249	3.0652	6.5300e-003		0.1116	0.1116		0.1029	0.1029	0.0000	570.9991	570.9991	0.1831	0.0000	575.5768

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.7000e-004	0.0127	3.3600e-003	5.0000e-005	1.3700e-003	1.1000e-004	1.4800e-003	3.8000e-004	1.0000e-004	4.8000e-004	0.0000	4.8578	4.8578	1.0000e-005	7.6000e-004	5.0856
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	0.0239	0.0183	0.2022	4.9000e-004	0.0547	3.2000e-004	0.0550	0.0146	3.0000e-004	0.0148	0.0000	45.1666	45.1666	1.4300e-003	1.4300e-003	45.6278
Total	0.0241	0.0309	0.2055	5.4000e-004	0.0560	4.3000e-004	0.0565	0.0149	4.0000e-004	0.0153	0.0000	50.0244	50.0244	1.4400e-003	2.1900e-003	50.7134

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2760	9.9789	12.1505	0.0263		0.4166	0.4166		0.3840	0.3840	0.0000	2,302.4618	2,302.4618	0.7384	0.0000	2,320.9209
Total	1.2760	9.9789	12.1505	0.0263		0.4166	0.4166		0.3840	0.3840	0.0000	2,302.4618	2,302.4618	0.7384	0.0000	2,320.9209

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0800e-003	0.0502	0.0135	2.0000e-004	5.5300e-003	4.2000e-004	5.9600e-003	1.5200e-003	4.0000e-004	1.9300e-003	0.0000	19.1982	19.1982	5.0000e-005	3.0200e-003	20.0986
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	0.0891	0.0649	0.7452	1.9200e-003	0.2204	1.2200e-003	0.2216	0.0586	1.1300e-003	0.0598	0.0000	176.1546	176.1546	5.1800e-003	5.2900e-003	177.8594
Total	0.0902	0.1151	0.7588	2.1200e-003	0.2259	1.6400e-003	0.2276	0.0602	1.5300e-003	0.0617	0.0000	195.3528	195.3528	5.2300e-003	8.3100e-003	197.9580

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2760	9.9788	12.1505	0.0263		0.4166	0.4166		0.3840	0.3840	0.0000	2,302.4591	2,302.4591	0.7384	0.0000	2,320.9182
Total	1.2760	9.9788	12.1505	0.0263		0.4166	0.4166		0.3840	0.3840	0.0000	2,302.4591	2,302.4591	0.7384	0.0000	2,320.9182

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0800e-003	0.0502	0.0135	2.0000e-004	5.5300e-003	4.2000e-004	5.9600e-003	1.5200e-003	4.0000e-004	1.9300e-003	0.0000	19.1982	19.1982	5.0000e-005	3.0200e-003	20.0986
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	0.0891	0.0649	0.7452	1.9200e-003	0.2204	1.2200e-003	0.2216	0.0586	1.1300e-003	0.0598	0.0000	176.1546	176.1546	5.1800e-003	5.2900e-003	177.8594
Total	0.0902	0.1151	0.7588	2.1200e-003	0.2259	1.6400e-003	0.2276	0.0602	1.5300e-003	0.0617	0.0000	195.3528	195.3528	5.2300e-003	8.3100e-003	197.9580

3.3 Pipe Installation - 2025

Unmitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1472	1.0758	1.4994	3.3300e-003		0.0445	0.0445		0.0410	0.0410	0.0000	290.8929	290.8929	0.0933	0.0000	293.2251
Total	0.1472	1.0758	1.4994	3.3300e-003		0.0445	0.0445		0.0410	0.0410	0.0000	290.8929	290.8929	0.0933	0.0000	293.2251

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.2100e-003	1.7000e-003	2.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.3634	2.3634	1.0000e-005	3.7000e-004	2.4742
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	0.0105	7.2700e-003	0.0864	2.3000e-004	0.0278	1.5000e-004	0.0279	7.3900e-003	1.3000e-004	7.5200e-003	0.0000	21.4428	21.4428	5.9000e-004	6.2000e-004	21.6410
Total	0.0106	0.0135	0.0881	2.5000e-004	0.0285	2.0000e-004	0.0287	7.5800e-003	1.8000e-004	7.7600e-003	0.0000	23.8062	23.8062	6.0000e-004	9.9000e-004	24.1152

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1472	1.0758	1.4994	3.3300e-003		0.0445	0.0445		0.0410	0.0410	0.0000	290.8925	290.8925	0.0933	0.0000	293.2247
Total	0.1472	1.0758	1.4994	3.3300e-003		0.0445	0.0445		0.0410	0.0410	0.0000	290.8925	290.8925	0.0933	0.0000	293.2247

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.2100e-003	1.7000e-003	2.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.3634	2.3634	1.0000e-005	3.7000e-004	2.4742
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	0.0105	7.2700e-003	0.0864	2.3000e-004	0.0278	1.5000e-004	0.0279	7.3900e-003	1.3000e-004	7.5200e-003	0.0000	21.4428	21.4428	5.9000e-004	6.2000e-004	21.6410
Total	0.0106	0.0135	0.0881	2.5000e-004	0.0285	2.0000e-004	0.0287	7.5800e-003	1.8000e-004	7.7600e-003	0.0000	23.8062	23.8062	6.0000e-004	9.9000e-004	24.1152

3.4 Pump Installation - 2024

Unmitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1546	1.1054	1.8250	4.8900e-003		0.0466	0.0466		0.0430	0.0430	0.0000	427.2221	427.2221	0.1371	0.0000	430.6503
Total	0.1546	1.1054	1.8250	4.8900e-003		0.0466	0.0466		0.0430	0.0430	0.0000	427.2221	427.2221	0.1371	0.0000	430.6503

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3000e-004	0.0291	7.8500e-003	1.2000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1200e-003	0.0000	11.1335	11.1335	3.0000e-005	1.7500e-003	11.6556
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	0.0161	0.0117	0.1348	3.5000e-004	0.0399	2.2000e-004	0.0401	0.0106	2.0000e-004	0.0108	0.0000	31.8535	31.8535	9.4000e-004	9.6000e-004	32.1618
Total	0.0168	0.0409	0.1426	4.7000e-004	0.0431	4.6000e-004	0.0435	0.0115	4.3000e-004	0.0119	0.0000	42.9869	42.9869	9.7000e-004	2.7100e-003	43.8173

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1546	1.1054	1.8250	4.8900e-003		0.0466	0.0466		0.0430	0.0430	0.0000	427.2216	427.2216	0.1371	0.0000	430.6498
Total	0.1546	1.1054	1.8250	4.8900e-003		0.0466	0.0466		0.0430	0.0430	0.0000	427.2216	427.2216	0.1371	0.0000	430.6498

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3000e-004	0.0291	7.8500e-003	1.2000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1200e-003	0.0000	11.1335	11.1335	3.0000e-005	1.7500e-003	11.6556
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	0.0161	0.0117	0.1348	3.5000e-004	0.0399	2.2000e-004	0.0401	0.0106	2.0000e-004	0.0108	0.0000	31.8535	31.8535	9.4000e-004	9.6000e-004	32.1618
Total	0.0168	0.0409	0.1426	4.7000e-004	0.0431	4.6000e-004	0.0435	0.0115	4.3000e-004	0.0119	0.0000	42.9869	42.9869	9.7000e-004	2.7100e-003	43.8173

3.4 Pump Installation - 2025

Unmitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0458	0.3064	0.5746	1.5400e-003		0.0129	0.0129		0.0119	0.0119	0.0000	135.0112	135.0112	0.0433	0.0000	136.0946
Total	0.0458	0.3064	0.5746	1.5400e-003		0.0129	0.0129		0.0119	0.0119	0.0000	135.0112	135.0112	0.0433	0.0000	136.0946

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	9.0200e-003	2.4700e-003	4.0000e-005	1.0100e-003	8.0000e-005	1.0900e-003	2.8000e-004	7.0000e-005	3.5000e-004	0.0000	3.4363	3.4363	1.0000e-005	5.4000e-004	3.5975
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	4.7400e-003	3.3000e-003	0.0392	1.1000e-004	0.0126	7.0000e-005	0.0127	3.3500e-003	6.0000e-005	3.4100e-003	0.0000	9.7214	9.7214	2.7000e-004	2.8000e-004	9.8113
Total	4.9400e-003	0.0123	0.0416	1.5000e-004	0.0136	1.5000e-004	0.0137	3.6300e-003	1.3000e-004	3.7600e-003	0.0000	13.1577	13.1577	2.8000e-004	8.2000e-004	13.4087

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0458	0.3064	0.5746	1.5400e-003		0.0129	0.0129		0.0119	0.0119	0.0000	135.0111	135.0111	0.0433	0.0000	136.0945
Total	0.0458	0.3064	0.5746	1.5400e-003		0.0129	0.0129		0.0119	0.0119	0.0000	135.0111	135.0111	0.0433	0.0000	136.0945

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-004	9.0200e-003	2.4700e-003	4.0000e-005	1.0100e-003	8.0000e-005	1.0900e-003	2.8000e-004	7.0000e-005	3.5000e-004	0.0000	3.4363	3.4363	1.0000e-005	5.4000e-004	3.5975
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	4.7400e-003	3.3000e-003	0.0392	1.1000e-004	0.0126	7.0000e-005	0.0127	3.3500e-003	6.0000e-005	3.4100e-003	0.0000	9.7214	9.7214	2.7000e-004	2.8000e-004	9.8113
Total	4.9400e-003	0.0123	0.0416	1.5000e-004	0.0136	1.5000e-004	0.0137	3.6300e-003	1.3000e-004	3.7600e-003	0.0000	13.1577	13.1577	2.8000e-004	8.2000e-004	13.4087

3.5 Asphalt Replacement - 2024

Unmitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0150	0.1364	0.2229	3.7000e-004		6.5400e-003	6.5400e-003		6.0300e-003	6.0300e-003	0.0000	32.5615	32.5615	0.0104	0.0000	32.8219
Paving	5.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0208	0.1364	0.2229	3.7000e-004		6.5400e-003	6.5400e-003		6.0300e-003	6.0300e-003	0.0000	32.5615	32.5615	0.0104	0.0000	32.8219

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.3200e-003	1.7000e-003	3.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.4157	2.4157	1.0000e-005	3.8000e-004	2.5290
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	1.9000e-003	1.3800e-003	0.0159	4.0000e-005	4.6900e-003	3.0000e-005	4.7100e-003	1.2500e-003	2.0000e-005	1.2700e-003	0.0000	3.7459	3.7459	1.1000e-004	1.1000e-004	3.7822
Total	2.0400e-003	7.7000e-003	0.0176	7.0000e-005	5.3900e-003	8.0000e-005	5.4600e-003	1.4400e-003	7.0000e-005	1.5100e-003	0.0000	6.1616	6.1616	1.2000e-004	4.9000e-004	6.3112

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0150	0.1364	0.2229	3.7000e-004		6.5400e-003	6.5400e-003		6.0300e-003	6.0300e-003	0.0000	32.5614	32.5614	0.0104	0.0000	32.8219
Paving	5.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0208	0.1364	0.2229	3.7000e-004		6.5400e-003	6.5400e-003		6.0300e-003	6.0300e-003	0.0000	32.5614	32.5614	0.0104	0.0000	32.8219

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	6.3200e-003	1.7000e-003	3.0000e-005	7.0000e-004	5.0000e-005	7.5000e-004	1.9000e-004	5.0000e-005	2.4000e-004	0.0000	2.4157	2.4157	1.0000e-005	3.8000e-004	2.5290
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	1.9000e-003	1.3800e-003	0.0159	4.0000e-005	4.6900e-003	3.0000e-005	4.7100e-003	1.2500e-003	2.0000e-005	1.2700e-003	0.0000	3.7459	3.7459	1.1000e-004	1.1000e-004	3.7822
Total	2.0400e-003	7.7000e-003	0.0176	7.0000e-005	5.3900e-003	8.0000e-005	5.4600e-003	1.4400e-003	7.0000e-005	1.5100e-003	0.0000	6.1616	6.1616	1.2000e-004	4.9000e-004	6.3112

3.5 Asphalt Replacement - 2025

Unmitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1745	0.3163	5.3000e-004		8.0300e-003	8.0300e-003		7.4000e-003	7.4000e-003	0.0000	46.3693	46.3693	0.0148	0.0000	46.7402
Paving	8.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0281	0.1745	0.3163	5.3000e-004		8.0300e-003	8.0300e-003		7.4000e-003	7.4000e-003	0.0000	46.3693	46.3693	0.0148	0.0000	46.7402

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	8.8300e-003	2.4200e-003	4.0000e-005	9.9000e-004	7.0000e-005	1.0700e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.3627	3.3627	1.0000e-005	5.3000e-004	3.5204
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5200e-003	1.7500e-003	0.0208	6.0000e-005	6.6700e-003	4.0000e-005	6.7100e-003	1.7800e-003	3.0000e-005	1.8100e-003	0.0000	5.1561	5.1561	1.4000e-004	1.5000e-004	5.2037
Total	2.7100e-003	0.0106	0.0232	1.0000e-004	7.6600e-003	1.1000e-004	7.7800e-003	2.0500e-003	1.0000e-004	2.1500e-003	0.0000	8.5188	8.5188	1.5000e-004	6.8000e-004	8.7241

Mitigated Construction On-Site

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1745	0.3163	5.3000e-004		8.0300e-003	8.0300e-003		7.4000e-003	7.4000e-003	0.0000	46.3692	46.3692	0.0148	0.0000	46.7401
Paving	8.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0281	0.1745	0.3163	5.3000e-004		8.0300e-003	8.0300e-003		7.4000e-003	7.4000e-003	0.0000	46.3692	46.3692	0.0148	0.0000	46.7401

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	8.8300e-003	2.4200e-003	4.0000e-005	9.9000e-004	7.0000e-005	1.0700e-003	2.7000e-004	7.0000e-005	3.4000e-004	0.0000	3.3627	3.3627	1.0000e-005	5.3000e-004	3.5204
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5200e-003	1.7500e-003	0.0208	6.0000e-005	6.6700e-003	4.0000e-005	6.7100e-003	1.7800e-003	3.0000e-005	1.8100e-003	0.0000	5.1561	5.1561	1.4000e-004	1.5000e-004	5.2037
Total	2.7100e-003	0.0106	0.0232	1.0000e-004	7.6600e-003	1.1000e-004	7.7800e-003	2.0500e-003	1.0000e-004	2.1500e-003	0.0000	8.5188	8.5188	1.5000e-004	6.8000e-004	8.7241

4.0 Operational Detail - Mobile

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.503715	0.054648	0.185256	0.140437	0.041036	0.008223	0.010879	0.015908	0.000716	0.000409	0.032995	0.001089	0.004690

5.0 Energy Detail

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Unmitigated	0.0398	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004

6.2 Area by SubCategory

Unmitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0300					0.0000	0.0000		0.0000	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	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Total	0.0397	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-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	tons/yr										MT/yr					
Architectural Coating	9.6900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0300					0.0000	0.0000		0.0000	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	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004
Total	0.0397	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.9000e-004	1.9000e-004	0.0000	0.0000	2.0000e-004

7.0 Water Detail

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr		
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000

Mitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

10.0 Stationary Equipment

CalEEMod Version: CalEEMod.2020.4.0

Page 1 of 1

Date: 4/21/2022 3:35 PM

Paradise - Core Collection System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Paradise - Export Pipeline System
Butte County AQMD Air District, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.95	Acre	5.95	259,182.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - from project description
- Construction Phase - from project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Trips and VMT - from notes and project description
- Grading - from project description

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblGrading	AcresOfGrading	0.00	5.95
tblGrading	MaterialExported	0.00	60,800.00
tblGrading	MaterialImported	0.00	22,900.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	9.00	425.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	10,463.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	HaulingTripNumber	0.00	107.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	38.00	66.00
tblTripsAndVMT	WorkerTripNumber	18.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.7754	75.2586	105.2680	0.2523	1.9545	3.2397	5.1942	0.4851	3.0256	3.5108	0.0000	24,423.010	24,423.010	6.5770	0.1232	24,624.155
												0	0			2
2024	5.8303	41.6499	57.5060	0.1204	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,659.929	11,659.929	3.3852	0.0576	11,761.718
												5	5			3

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	9.7754	75.2586	105.2680	0.2523	1.9545	3.2397	5.1942	0.4851	3.0256	3.5108	0.0000	24,423.010 0	24,423.010 0	6.5770	0.1232	24,624.155 2
---------	--------	---------	----------	--------	--------	--------	--------	--------	--------	--------	--------	-----------------	-----------------	--------	--------	-----------------

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.7754	75.2586	105.2680	0.2523	1.9545	3.2397	5.1942	0.4851	3.0256	3.5108	0.0000	24,423.010 0	24,423.010 0	6.5770	0.1232	24,624.155 2
2024	5.8303	41.6499	57.5060	0.1204	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,659.929 5	11,659.929 5	3.3852	0.0576	11,761.718 3
Maximum	9.7754	75.2586	105.2680	0.2523	1.9545	3.2397	5.1942	0.4851	3.0256	3.5108	0.0000	24,423.010 0	24,423.010 0	6.5770	0.1232	24,624.155 2

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

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					

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Total	0.1215	1.0000e-005	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000	0.0000	1.3900e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1215	1.0000e-005	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000	0.0000	1.3900e-003

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

3.0 Construction Detail

Construction Phase

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	10/23/2023	5	60	
2	Pipe Installation	Trenching	10/1/2023	8/30/2024	5	240	
3	Structure Installation	Trenching	10/1/2023	11/24/2023	5	40	
4	HDD	Trenching	10/1/2023	12/22/2023	5	60	
5	Bore and Jack	Trenching	10/1/2023	12/22/2023	5	60	
6	Asphalt Replacement	Paving	6/10/2024	8/30/2024	5	60	

Acres of Grading (Site Preparation Phase): 5.95

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.95

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	3	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	3	8.00	510	0.38
Pipe Installation	Plate Compactors	3	8.00	8	0.43
Pipe Installation	Rollers	3	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pipe Installation	Tractors/Loaders/Backhoes	3	8.00	170	0.37
Structure Installation	Cement and Mortar Mixers	1	8.00	425	0.56
Structure Installation	Cranes	0	7.00	231	0.29
Structure Installation	Excavators	2	8.00	310	0.38
Structure Installation	Forklifts	0	8.00	89	0.20
Structure Installation	Generator Sets	0	8.00	84	0.74
Structure Installation	Plate Compactors	1	8.00	8	0.43
Structure Installation	Rollers	1	8.00	20	0.38
Structure Installation	Tractors/Loaders/Backhoes	2	8.00	170	0.37
Structure Installation	Welders	0	8.00	46	0.45
HDD	Air Compressors	0	6.00	78	0.48
HDD	Bore/Drill Rigs	1	8.00	650	0.50
HDD	Generator Sets	1	8.00	84	0.74
HDD	Other Material Handling Equipment	1	8.00	168	0.40
HDD	Pumps	1	8.00	84	0.74
HDD	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Bore and Jack	Bore/Drill Rigs	1	8.00	650	0.50
Bore and Jack	Generator Sets	1	8.00	84	0.74
Bore and Jack	Other Material Handling Equipment	1	8.00	168	0.40
Bore and Jack	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	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
Asphalt Removal	5	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	15	66.00	0.00	640.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Structure Installation	7	24.00	0.00	107.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
HDD	5	18.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Bore and Jack	4	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284		1,935.6213	1,935.6213	0.4635		1,947.2098
Total	0.8688	7.5463	11.6657	0.0201	0.2629	0.3458	0.6087	0.0352	0.3284	0.3636		1,935.6213	1,935.6213	0.4635		1,947.2098

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	0.0837	0.2828	0.7518	2.5200e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		258.6938	258.6938	4.6800e-003	0.0207	264.9840

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					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284	0.0000	1,935.6213	1,935.6213	0.4635		1,947.2098
Total	0.8688	7.5463	11.6657	0.0201	0.2629	0.3458	0.6087	0.0352	0.3284	0.3636	0.0000	1,935.6213	1,935.6213	0.4635		1,947.2098

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	0.0837	0.2828	0.7518	2.5200e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		258.6938	258.6938	4.6800e-003	0.0207	264.9840

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565		8,300.0372	8,300.0372	2.6617		8,366.5794
Total	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565		8,300.0372	8,300.0372	2.6617		8,366.5794

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.3684	0.2204	3.2354	7.1500e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		722.9114	722.9114	0.0209	0.0196	729.2727
Total	0.3740	0.4565	3.3009	8.1500e-003	0.7808	6.3200e-003	0.7872	0.2073	5.9000e-003	0.2132		828.2603	828.2603	0.0211	0.0362	839.5625

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	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565	0.0000	8,300.0372	8,300.0372	2.6617		8,366.5794
Total	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565	0.0000	8,300.0372	8,300.0372	2.6617		8,366.5794

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.3684	0.2204	3.2354	7.1500e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		722.9114	722.9114	0.0209	0.0196	729.2727
Total	0.3740	0.4565	3.3009	8.1500e-003	0.7808	6.3200e-003	0.7872	0.2073	5.9000e-003	0.2132		828.2603	828.2603	0.0211	0.0362	839.5625

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563		8,303.2596	8,303.2596	2.6627		8,369.8278
Total	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563		8,303.2596	8,303.2596	2.6627		8,369.8278

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
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
Worker	0.3410	0.1946	2.9532	6.9200e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		699.2853	699.2853	0.0186	0.0180	705.1196
Total	0.3465	0.4270	3.0187	7.9000e-003	0.7808	6.0600e-003	0.7869	0.2073	5.6500e-003	0.2130		802.5763	802.5763	0.0189	0.0343	813.2549

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	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563	0.0000	8,303.2596	8,303.2596	2.6627		8,369.8278
Total	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563	0.0000	8,303.2596	8,303.2596	2.6627		8,369.8278

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
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
Worker	0.3410	0.1946	2.9532	6.9200e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		699.2853	699.2853	0.0186	0.0180	705.1196
Total	0.3465	0.4270	3.0187	7.9000e-003	0.7808	6.0600e-003	0.7869	0.2073	5.6500e-003	0.2130		802.5763	802.5763	0.0189	0.0343	813.2549

3.4 Structure Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075		3,097.6724	3,097.6724	0.9943		3,122.5294
Total	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075		3,097.6724	3,097.6724	0.9943		3,122.5294

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5500e-003	0.2368	0.0657	1.0000e-003	0.0282	2.0700e-003	0.0302	7.7200e-003	1.9800e-003	9.7100e-003		105.6782	105.6782	2.6000e-004	0.0166	110.6345
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
Worker	0.1340	0.0802	1.1765	2.6000e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		262.8769	262.8769	7.5800e-003	7.1300e-003	265.1901
Total	0.1395	0.3169	1.2422	3.6000e-003	0.3019	3.6200e-003	0.3055	0.0803	3.4100e-003	0.0837		368.5551	368.5551	7.8400e-003	0.0237	375.8245

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	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075	0.0000	3,097.6724	3,097.6724	0.9943		3,122.5294
Total	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075	0.0000	3,097.6724	3,097.6724	0.9943		3,122.5294

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5500e-003	0.2368	0.0657	1.0000e-003	0.0282	2.0700e-003	0.0302	7.7200e-003	1.9800e-003	9.7100e-003		105.6782	105.6782	2.6000e-004	0.0166	110.6345
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
Worker	0.1340	0.0802	1.1765	2.6000e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		262.8769	262.8769	7.5800e-003	7.1300e-003	265.1901
Total	0.1395	0.3169	1.2422	3.6000e-003	0.3019	3.6200e-003	0.3055	0.0803	3.4100e-003	0.0837		368.5551	368.5551	7.8400e-003	0.0237	375.8245

3.5 HDD - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751		4,848.0020	4,848.0020	1.2209		4,878.5232
Total	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751		4,848.0020	4,848.0020	1.2209		4,878.5232

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.1005	0.0601	0.8824	1.9500e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		197.1576	197.1576	5.6900e-003	5.3400e-003	198.8926
Total	0.1060	0.2962	0.9479	2.9500e-003	0.2334	3.2300e-003	0.2366	0.0622	3.0500e-003	0.0652		302.5066	302.5066	5.9500e-003	0.0219	309.1823

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	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751	0.0000	4,848.0020	4,848.0020	1.2209		4,878.5232
Total	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751	0.0000	4,848.0020	4,848.0020	1.2209		4,878.5232

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003			105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.1005	0.0601	0.8824	1.9500e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555			197.1576	197.1576	5.6900e-003	5.3400e-003	198.8926
Total	0.1060	0.2962	0.9479	2.9500e-003	0.2334	3.2300e-003	0.2366	0.0622	3.0500e-003	0.0652			302.5066	302.5066	5.9500e-003	0.0219	309.1823

3.6 Bore and Jack - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402			4,224.9674	4,224.9674	1.1924		4,254.7761
Total	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402			4,224.9674	4,224.9674	1.1924		4,254.7761

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	0.0837	0.2828	0.7518	2.5200e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		258.6938	258.6938	4.6800e-003	0.0207	264.9840

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	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402	0.0000	4,224.9674	4,224.9674	1.1924		4,254.7761
Total	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402	0.0000	4,224.9674	4,224.9674	1.1924		4,254.7761

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.5400e-003	0.2360	0.0655	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.3490	105.3490	2.6000e-004	0.0166	110.2898
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
Worker	0.0782	0.0468	0.6863	1.5200e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		153.3448	153.3448	4.4200e-003	4.1600e-003	154.6942
Total	0.0837	0.2828	0.7518	2.5200e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		258.6938	258.6938	4.6800e-003	0.0207	264.9840

3.7 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1694	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
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
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	0.1398	0.3091	1.2288	3.7100e-003	0.3246	3.6300e-003	0.3282	0.0863	3.4200e-003	0.0898		378.7670	378.7670	7.6000e-003	0.0233	385.9097

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	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1694	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.4900e-003	0.2324	0.0655	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.2910	103.2910	2.6000e-004	0.0162	108.1353
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
Worker	0.1343	0.0767	1.1634	2.7300e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		275.4760	275.4760	7.3400e-003	7.1000e-003	277.7744
Total	0.1398	0.3091	1.2288	3.7100e-003	0.3246	3.6300e-003	0.3282	0.0863	3.4200e-003	0.0898		378.7670	378.7670	7.6000e-003	0.0233	385.9097

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	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

4.2 Trip Summary Information

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.493657	0.054963	0.187598	0.144453	0.043526	0.008501	0.010722	0.015710	0.000733	0.000410	0.033593	0.001127	0.005006

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Unmitigated	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

CalEEMod Version: CalEEMod.2020.4.0

Page 1 of 1

Date: 4/21/2022 4:05 PM

Paradise - Export Pipeline System - Butte County AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Paradise - Export Pipeline System
Butte County AQMD Air District, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.95	Acre	5.95	259,182.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - from project description
- Construction Phase - from project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Trips and VMT - from notes and project description
- Grading - from project description

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblGrading	AcresOfGrading	0.00	5.95
tblGrading	MaterialExported	0.00	60,800.00
tblGrading	MaterialImported	0.00	22,900.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	9.00	425.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	10,463.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	HaulingTripNumber	0.00	107.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	38.00	66.00
tblTripsAndVMT	WorkerTripNumber	18.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.6919	75.4622	104.0168	0.2506	1.9545	3.2398	5.1943	0.4851	3.0257	3.5108	0.0000	24,247.989	24,247.989	6.5793	0.1293	24,450.997
												6	6			2
2024	5.7799	41.7508	56.7428	0.1192	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,545.401	11,545.401	3.3868	0.0613	11,648.333
												7	7			9

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	9.6919	75.4622	104.0168	0.2506	1.9545	3.2398	5.1943	0.4851	3.0257	3.5108	0.0000	24,247.9896	24,247.9896	6.5793	0.1293	24,450.9972
---------	--------	---------	----------	--------	--------	--------	--------	--------	--------	--------	--------	-------------	-------------	--------	--------	-------------

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.6919	75.4622	104.0168	0.2506	1.9545	3.2398	5.1943	0.4851	3.0257	3.5108	0.0000	24,247.9896	24,247.9896	6.5793	0.1293	24,450.9972
2024	5.7799	41.7508	56.7428	0.1192	1.1055	1.7694	2.8748	0.2937	1.6311	1.9248	0.0000	11,545.4017	11,545.4017	3.3868	0.0613	11,648.3339
Maximum	9.6919	75.4622	104.0168	0.2506	1.9545	3.2398	5.1943	0.4851	3.0257	3.5108	0.0000	24,247.9896	24,247.9896	6.5793	0.1293	24,450.9972

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

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					

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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
Total	0.1215	1.0000e-005	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.3000e-003	1.3000e-003	0.0000	0.0000	1.3900e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1215	1.0000e-005	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.3000e-003	1.3000e-003	0.0000	0.0000	1.3900e-003

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

3.0 Construction Detail

Construction Phase

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	10/23/2023	5	60	
2	Pipe Installation	Trenching	10/1/2023	8/30/2024	5	240	
3	Structure Installation	Trenching	10/1/2023	11/24/2023	5	40	
4	HDD	Trenching	10/1/2023	12/22/2023	5	60	
5	Bore and Jack	Trenching	10/1/2023	12/22/2023	5	60	
6	Asphalt Replacement	Paving	6/10/2024	8/30/2024	5	60	

Acres of Grading (Site Preparation Phase): 5.95

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.95

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	3	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	3	8.00	510	0.38
Pipe Installation	Plate Compactors	3	8.00	8	0.43
Pipe Installation	Rollers	3	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pipe Installation	Tractors/Loaders/Backhoes	3	8.00	170	0.37
Structure Installation	Cement and Mortar Mixers	1	8.00	425	0.56
Structure Installation	Cranes	0	7.00	231	0.29
Structure Installation	Excavators	2	8.00	310	0.38
Structure Installation	Forklifts	0	8.00	89	0.20
Structure Installation	Generator Sets	0	8.00	84	0.74
Structure Installation	Plate Compactors	1	8.00	8	0.43
Structure Installation	Rollers	1	8.00	20	0.38
Structure Installation	Tractors/Loaders/Backhoes	2	8.00	170	0.37
Structure Installation	Welders	0	8.00	46	0.45
HDD	Air Compressors	0	6.00	78	0.48
HDD	Bore/Drill Rigs	1	8.00	650	0.50
HDD	Generator Sets	1	8.00	84	0.74
HDD	Other Material Handling Equipment	1	8.00	168	0.40
HDD	Pumps	1	8.00	84	0.74
HDD	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Bore and Jack	Bore/Drill Rigs	1	8.00	650	0.50
Bore and Jack	Generator Sets	1	8.00	84	0.74
Bore and Jack	Other Material Handling Equipment	1	8.00	168	0.40
Bore and Jack	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	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
Asphalt Removal	5	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	15	66.00	0.00	640.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Structure Installation	7	24.00	0.00	107.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
HDD	5	18.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Bore and Jack	4	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284		1,935.6213	1,935.6213	0.4635		1,947.2098
Total	0.8688	7.5463	11.6657	0.0201	0.2629	0.3458	0.6087	0.0352	0.3284	0.3636		1,935.6213	1,935.6213	0.4635		1,947.2098

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	0.0749	0.3135	0.6238	2.3400e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		240.7908	240.7908	4.9200e-003	0.0214	247.2779

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					0.2629	0.0000	0.2629	0.0352	0.0000	0.0352			0.0000			0.0000
Off-Road	0.8688	7.5463	11.6657	0.0201		0.3458	0.3458		0.3284	0.3284	0.0000	1,935.6213	1,935.6213	0.4635		1,947.2098
Total	0.8688	7.5463	11.6657	0.0201	0.2629	0.3458	0.6087	0.0352	0.3284	0.3636	0.0000	1,935.6213	1,935.6213	0.4635		1,947.2098

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	0.0749	0.3135	0.6238	2.3400e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		240.7908	240.7908	4.9200e-003	0.0214	247.2779

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565		8,300.0372	8,300.0372	2.6617		8,366.5794
Total	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565		8,300.0372	8,300.0372	2.6617		8,366.5794

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.3291	0.2704	2.6243	6.3100e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		637.4051	637.4051	0.0220	0.0224	644.6447
Total	0.3342	0.5265	2.6914	7.3100e-003	0.7808	6.3200e-003	0.7872	0.2073	5.9000e-003	0.2132		742.9888	742.9888	0.0223	0.0390	755.1798

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	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565	0.0000	8,300.0372	8,300.0372	2.6617		8,366.5794
Total	4.2846	34.6138	40.4198	0.0861		1.4719	1.4719		1.3565	1.3565	0.0000	8,300.0372	8,300.0372	2.6617		8,366.5794

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.3291	0.2704	2.6243	6.3100e-003	0.7528	4.2500e-003	0.7570	0.1996	3.9200e-003	0.2036		637.4051	637.4051	0.0220	0.0224	644.6447
Total	0.3342	0.5265	2.6914	7.3100e-003	0.7808	6.3200e-003	0.7872	0.2073	5.9000e-003	0.2132		742.9888	742.9888	0.0223	0.0390	755.1798

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563		8,303.2596	8,303.2596	2.6627		8,369.8278
Total	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563		8,303.2596	8,303.2596	2.6627		8,369.8278

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
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
Worker	0.3055	0.2386	2.4034	6.1000e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		616.7894	616.7894	0.0198	0.0206	623.4290
Total	0.3105	0.4908	2.4704	7.0800e-003	0.7808	6.0600e-003	0.7869	0.2073	5.6500e-003	0.2130		720.3136	720.3136	0.0200	0.0369	731.8079

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	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563	0.0000	8,303.2596	8,303.2596	2.6627		8,369.8278
Total	4.1746	32.6462	39.7510	0.0862		1.3630	1.3630		1.2563	1.2563	0.0000	8,303.2596	8,303.2596	2.6627		8,369.8278

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
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
Worker	0.3055	0.2386	2.4034	6.1000e-003	0.7528	4.0000e-003	0.7568	0.1996	3.6800e-003	0.2033		616.7894	616.7894	0.0198	0.0206	623.4290
Total	0.3105	0.4908	2.4704	7.0800e-003	0.7808	6.0600e-003	0.7869	0.2073	5.6500e-003	0.2130		720.3136	720.3136	0.0200	0.0369	731.8079

3.4 Structure Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075		3,097.6724	3,097.6724	0.9943		3,122.5294
Total	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075		3,097.6724	3,097.6724	0.9943		3,122.5294

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0800e-003	0.2570	0.0673	1.0000e-003	0.0282	2.0800e-003	0.0302	7.7200e-003	1.9900e-003	9.7100e-003		105.9136	105.9136	2.4000e-004	0.0167	110.8805
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
Worker	0.1197	0.0983	0.9543	2.2900e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		231.7837	231.7837	8.0200e-003	8.1600e-003	234.4163
Total	0.1248	0.3553	1.0216	3.2900e-003	0.3019	3.6300e-003	0.3055	0.0803	3.4200e-003	0.0837		337.6973	337.6973	8.2600e-003	0.0248	345.2967

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	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075	0.0000	3,097.6724	3,097.6724	0.9943		3,122.5294
Total	1.0442	7.8626	11.9759	0.0321		0.3334	0.3334		0.3075	0.3075	0.0000	3,097.6724	3,097.6724	0.9943		3,122.5294

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0800e-003	0.2570	0.0673	1.0000e-003	0.0282	2.0800e-003	0.0302	7.7200e-003	1.9900e-003	9.7100e-003		105.9136	105.9136	2.4000e-004	0.0167	110.8805
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
Worker	0.1197	0.0983	0.9543	2.2900e-003	0.2737	1.5500e-003	0.2753	0.0726	1.4300e-003	0.0740		231.7837	231.7837	8.0200e-003	8.1600e-003	234.4163
Total	0.1248	0.3553	1.0216	3.2900e-003	0.3019	3.6300e-003	0.3055	0.0803	3.4200e-003	0.0837		337.6973	337.6973	8.2600e-003	0.0248	345.2967

3.5 HDD - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751		4,848.0020	4,848.0020	1.2209		4,878.5232
Total	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751		4,848.0020	4,848.0020	1.2209		4,878.5232

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.0898	0.0737	0.7157	1.7200e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		173.8378	173.8378	6.0100e-003	6.1200e-003	175.8122
Total	0.0948	0.3299	0.7828	2.7200e-003	0.2334	3.2300e-003	0.2366	0.0622	3.0500e-003	0.0652		279.4214	279.4214	6.2500e-003	0.0227	286.3472

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	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751	0.0000	4,848.0020	4,848.0020	1.2209		4,878.5232
Total	1.5594	13.1769	18.9687	0.0504		0.6022	0.6022		0.5751	0.5751	0.0000	4,848.0020	4,848.0020	1.2209		4,878.5232

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.0898	0.0737	0.7157	1.7200e-003	0.2053	1.1600e-003	0.2065	0.0545	1.0700e-003	0.0555		173.8378	173.8378	6.0100e-003	6.1200e-003	175.8122
Total	0.0948	0.3299	0.7828	2.7200e-003	0.2334	3.2300e-003	0.2366	0.0622	3.0500e-003	0.0652		279.4214	279.4214	6.2500e-003	0.0227	286.3472

3.6 Bore and Jack - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402		4,224.9674	4,224.9674	1.1924		4,254.7761
Total	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402		4,224.9674	4,224.9674	1.1924		4,254.7761

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	0.0749	0.3135	0.6238	2.3400e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		240.7908	240.7908	4.9200e-003	0.0214	247.2779

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	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402	0.0000	4,224.9674	4,224.9674	1.1924		4,254.7761
Total	1.2316	10.4240	15.2434	0.0438		0.4673	0.4673		0.4402	0.4402	0.0000	4,224.9674	4,224.9674	1.1924		4,254.7761

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0600e-003	0.2562	0.0671	1.0000e-003	0.0281	2.0700e-003	0.0301	7.7000e-003	1.9800e-003	9.6800e-003		105.5837	105.5837	2.4000e-004	0.0166	110.5350
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
Worker	0.0698	0.0574	0.5567	1.3400e-003	0.1597	9.0000e-004	0.1606	0.0424	8.3000e-004	0.0432		135.2072	135.2072	4.6800e-003	4.7600e-003	136.7428
Total	0.0749	0.3135	0.6238	2.3400e-003	0.1878	2.9700e-003	0.1907	0.0501	2.8100e-003	0.0529		240.7908	240.7908	4.9200e-003	0.0214	247.2779

3.7 Asphalt Replacement - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1694	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657		2,175.3266	2,175.3266	0.6960		2,192.7259

Unmitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
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
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	0.1254	0.3462	1.0139	3.3800e-003	0.3246	3.6300e-003	0.3283	0.0863	3.4200e-003	0.0898		346.5019	346.5019	8.0300e-003	0.0244	353.9722

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	0.9096	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259
Paving	0.2598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1694	8.2676	13.5076	0.0226		0.3967	0.3967		0.3657	0.3657	0.0000	2,175.3266	2,175.3266	0.6960		2,192.7259

Mitigated Construction Off-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.0200e-003	0.2522	0.0671	9.8000e-004	0.0281	2.0600e-003	0.0301	7.7000e-003	1.9700e-003	9.6700e-003		103.5242	103.5242	2.3000e-004	0.0163	108.3790
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
Worker	0.1204	0.0940	0.9468	2.4000e-003	0.2965	1.5700e-003	0.2981	0.0786	1.4500e-003	0.0801		242.9777	242.9777	7.8000e-003	8.1200e-003	245.5932
Total	0.1254	0.3462	1.0139	3.3800e-003	0.3246	3.6300e-003	0.3283	0.0863	3.4200e-003	0.0898		346.5019	346.5019	8.0300e-003	0.0244	353.9722

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	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

4.2 Trip Summary Information

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.493657	0.054963	0.187598	0.144453	0.043526	0.008501	0.010722	0.015710	0.000733	0.000410	0.033593	0.001127	0.005006

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Unmitigated	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0918					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003
Total	0.1215	1.0000e-005	6.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.3000e-003	1.3000e-003	0.0000		1.3900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

CalEEMod Version: CalEEMod.2020.4.0

Page 1 of 1

Date: 4/21/2022 4:06 PM

Paradise - Export Pipeline System - Butte County AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

**Paradise - Export Pipeline System
Butte County AQMD Air District, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	5.95	Acre	5.95	259,182.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	71
Climate Zone	3			Operational Year	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MW hr)	203.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - from project description
- Construction Phase - from project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Off-road Equipment - based on project description
- Trips and VMT - from notes and project description
- Grading - from project description

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblGrading	AcresOfGrading	0.00	5.95
tblGrading	MaterialExported	0.00	60,800.00
tblGrading	MaterialImported	0.00	22,900.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	158.00	165.00
tblOffRoadEquipment	HorsePower	402.00	510.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	9.00	425.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	HorsePower	158.00	310.00
tblOffRoadEquipment	HorsePower	80.00	20.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	221.00	650.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	110.00
tblOffRoadEquipment	HorsePower	130.00	75.00
tblOffRoadEquipment	HorsePower	80.00	170.00
tblOffRoadEquipment	HorsePower	65.00	80.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	97.00	170.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripLength	20.00	12.00
tblTripsAndVMT	HaulingTripNumber	10,463.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	640.00
tblTripsAndVMT	HaulingTripNumber	0.00	107.00

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripLength	7.30	15.00
tblTripsAndVMT	WorkerTripNumber	13.00	14.00
tblTripsAndVMT	WorkerTripNumber	38.00	66.00
tblTripsAndVMT	WorkerTripNumber	18.00	24.00
tblTripsAndVMT	WorkerTripNumber	13.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	26.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2898	2.2667	3.1007	7.4100e-003	0.0555	0.0975	0.1530	0.0138	0.0911	0.1048	0.0000	650.3021	650.3021	0.1760	3.2900e-003	655.6809
2024	0.4299	3.1545	4.1334	8.9600e-003	0.0748	0.1318	0.2066	0.0199	0.1215	0.1414	0.0000	786.5617	786.5617	0.2320	3.4500e-003	793.3901

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Maximum	0.4299	3.1545	4.1334	8.9600e-003	0.0748	0.1318	0.2066	0.0199	0.1215	0.1414	0.0000	786.5617	786.5617	0.2320	3.4500e-003	793.3901
---------	--------	--------	--------	-------------	--------	--------	--------	--------	--------	--------	--------	----------	----------	--------	-------------	----------

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2898	2.2667	3.1007	7.4100e-003	0.0555	0.0975	0.1530	0.0138	0.0911	0.1048	0.0000	650.3014	650.3014	0.1760	3.2900e-003	655.6802
2024	0.4299	3.1545	4.1334	8.9600e-003	0.0748	0.1318	0.2066	0.0199	0.1215	0.1414	0.0000	786.5609	786.5609	0.2320	3.4500e-003	793.3893
Maximum	0.4299	3.1545	4.1334	8.9600e-003	0.0748	0.1318	0.2066	0.0199	0.1215	0.1414	0.0000	786.5609	786.5609	0.2320	3.4500e-003	793.3893

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2023	10-31-2023	1.1089	1.1089
2	11-1-2023	1-31-2024	1.8684	1.8684
3	2-1-2024	4-30-2024	1.2090	1.2090
4	5-1-2024	7-31-2024	1.4188	1.4188
5	8-1-2024	9-30-2024	0.5087	0.5087
		Highest	1.8684	1.8684

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0222	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-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	tons/yr										MT/yr					
Area	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.0222	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004	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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Removal	Site Preparation	8/1/2023	10/23/2023	5	60	
2	Pipe Installation	Trenching	10/1/2023	8/30/2024	5	240	
3	Structure Installation	Trenching	10/1/2023	11/24/2023	5	40	
4	HDD	Trenching	10/1/2023	12/22/2023	5	60	
5	Bore and Jack	Trenching	10/1/2023	12/22/2023	5	60	
6	Asphalt Replacement	Paving	6/10/2024	8/30/2024	5	60	

Acres of Grading (Site Preparation Phase): 5.95

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.95

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
------------	------------------------	--------	-------------	-------------	-------------

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Asphalt Removal	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Removal	Excavators	1	8.00	165	0.38
Asphalt Removal	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Removal	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Removal	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Removal	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Pipe Installation	Excavators	3	8.00	165	0.38
Pipe Installation	Graders	0	8.00	187	0.41
Pipe Installation	Off-Highway Trucks	3	8.00	510	0.38
Pipe Installation	Plate Compactors	3	8.00	8	0.43
Pipe Installation	Rollers	3	8.00	20	0.38
Pipe Installation	Rubber Tired Dozers	0	8.00	247	0.40
Pipe Installation	Tractors/Loaders/Backhoes	3	8.00	170	0.37
Structure Installation	Cement and Mortar Mixers	1	8.00	425	0.56
Structure Installation	Cranes	0	7.00	231	0.29
Structure Installation	Excavators	2	8.00	310	0.38
Structure Installation	Forklifts	0	8.00	89	0.20
Structure Installation	Generator Sets	0	8.00	84	0.74
Structure Installation	Plate Compactors	1	8.00	8	0.43
Structure Installation	Rollers	1	8.00	20	0.38
Structure Installation	Tractors/Loaders/Backhoes	2	8.00	170	0.37
Structure Installation	Welders	0	8.00	46	0.45
HDD	Air Compressors	0	6.00	78	0.48
HDD	Bore/Drill Rigs	1	8.00	650	0.50
HDD	Generator Sets	1	8.00	84	0.74
HDD	Other Material Handling Equipment	1	8.00	168	0.40
HDD	Pumps	1	8.00	84	0.74
HDD	Tractors/Loaders/Backhoes	1	8.00	95	0.37

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Bore and Jack	Bore/Drill Rigs	1	8.00	650	0.50
Bore and Jack	Generator Sets	1	8.00	84	0.74
Bore and Jack	Other Material Handling Equipment	1	8.00	168	0.40
Bore and Jack	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Off-Highway Trucks	1	2.00	350	0.38
Asphalt Replacement	Off-Highway Trucks	1	8.00	110	0.38
Asphalt Replacement	Pavers	1	8.00	75	0.42
Asphalt Replacement	Paving Equipment	0	8.00	132	0.36
Asphalt Replacement	Plate Compactors	1	8.00	8	0.43
Asphalt Replacement	Rollers	1	8.00	170	0.38
Asphalt Replacement	Skid Steer Loaders	1	8.00	80	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	95	0.37
Asphalt Replacement	Tractors/Loaders/Backhoes	1	8.00	170	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
Asphalt Removal	5	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Pipe Installation	15	66.00	0.00	640.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Structure Installation	7	24.00	0.00	107.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
HDD	5	18.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Bore and Jack	4	14.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT
Asphalt Replacement	8	26.00	0.00	160.00	15.00	6.00	12.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Asphalt Removal - 2023

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8900e-003	0.0000	7.8900e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0261	0.2264	0.3500	6.0000e-004		0.0104	0.0104		9.8500e-003	9.8500e-003	0.0000	52.6790	52.6790	0.0126	0.0000	52.9944
Total	0.0261	0.2264	0.3500	6.0000e-004	7.8900e-003	0.0104	0.0183	1.0600e-003	9.8500e-003	0.0109	0.0000	52.6790	52.6790	0.0126	0.0000	52.9944

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	2.1600e-003	9.0100e-003	0.0190	7.0000e-005	5.4000e-003	9.0000e-005	5.4800e-003	1.4400e-003	8.0000e-005	1.5300e-003	0.0000	6.6600	6.6600	1.3000e-004	5.7000e-004	6.8333

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8900e-003	0.0000	7.8900e-003	1.0600e-003	0.0000	1.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0261	0.2264	0.3500	6.0000e-004		0.0104	0.0104		9.8500e-003	9.8500e-003	0.0000	52.6789	52.6789	0.0126	0.0000	52.9943
Total	0.0261	0.2264	0.3500	6.0000e-004	7.8900e-003	0.0104	0.0183	1.0600e-003	9.8500e-003	0.0109	0.0000	52.6789	52.6789	0.0126	0.0000	52.9943

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	2.1600e-003	9.0100e-003	0.0190	7.0000e-005	5.4000e-003	9.0000e-005	5.4800e-003	1.4400e-003	8.0000e-005	1.5300e-003	0.0000	6.6600	6.6600	1.3000e-004	5.7000e-004	6.8333

3.3 Pipe Installation - 2023

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1393	1.1250	1.3136	2.8000e-003		0.0478	0.0478		0.0441	0.0441	0.0000	244.7142	244.7142	0.0785	0.0000	246.6761
Total	0.1393	1.1250	1.3136	2.8000e-003		0.0478	0.0478		0.0441	0.0441	0.0000	244.7142	244.7142	0.0785	0.0000	246.6761

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	8.1000e-003	2.1500e-003	3.0000e-005	8.8000e-004	7.0000e-005	9.5000e-004	2.4000e-004	6.0000e-005	3.1000e-004	0.0000	3.1090	3.1090	1.0000e-005	4.9000e-004	3.2548
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	0.0102	7.8200e-003	0.0867	2.1000e-004	0.0234	1.4000e-004	0.0236	6.2300e-003	1.3000e-004	6.3600e-003	0.0000	19.3571	19.3571	6.1000e-004	6.1000e-004	19.5548
Total	0.0104	0.0159	0.0888	2.4000e-004	0.0243	2.1000e-004	0.0245	6.4700e-003	1.9000e-004	6.6700e-003	0.0000	22.4661	22.4661	6.2000e-004	1.1000e-003	22.8095

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1393	1.1250	1.3136	2.8000e-003		0.0478	0.0478		0.0441	0.0441	0.0000	244.7139	244.7139	0.0785	0.0000	246.6758
Total	0.1393	1.1250	1.3136	2.8000e-003		0.0478	0.0478		0.0441	0.0441	0.0000	244.7139	244.7139	0.0785	0.0000	246.6758

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7000e-004	8.1000e-003	2.1500e-003	3.0000e-005	8.8000e-004	7.0000e-005	9.5000e-004	2.4000e-004	6.0000e-005	3.1000e-004	0.0000	3.1090	3.1090	1.0000e-005	4.9000e-004	3.2548
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	0.0102	7.8200e-003	0.0867	2.1000e-004	0.0234	1.4000e-004	0.0236	6.2300e-003	1.3000e-004	6.3600e-003	0.0000	19.3571	19.3571	6.1000e-004	6.1000e-004	19.5548
Total	0.0104	0.0159	0.0888	2.4000e-004	0.0243	2.1000e-004	0.0245	6.4700e-003	1.9000e-004	6.6700e-003	0.0000	22.4661	22.4661	6.2000e-004	1.1000e-003	22.8095

3.3 Pipe Installation - 2024

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3653	2.8565	3.4782	7.5400e-003		0.1193	0.1193		0.1099	0.1099	0.0000	659.1017	659.1017	0.2114	0.0000	664.3858
Total	0.3653	2.8565	3.4782	7.5400e-003		0.1193	0.1193		0.1099	0.1099	0.0000	659.1017	659.1017	0.2114	0.0000	664.3858

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6000e-004	0.0215	5.7900e-003	9.0000e-005	2.3700e-003	1.8000e-004	2.5500e-003	6.5000e-004	1.7000e-004	8.2000e-004	0.0000	8.2069	8.2069	2.0000e-005	1.2900e-003	8.5918
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	0.0255	0.0186	0.2133	5.5000e-004	0.0631	3.5000e-004	0.0634	0.0168	3.2000e-004	0.0171	0.0000	50.4259	50.4259	1.4800e-003	1.5100e-003	50.9140
Total	0.0260	0.0401	0.2191	6.4000e-004	0.0655	5.3000e-004	0.0660	0.0174	4.9000e-004	0.0179	0.0000	58.6328	58.6328	1.5000e-003	2.8000e-003	59.5057

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.3653	2.8565	3.4782	7.5400e-003		0.1193	0.1193		0.1099	0.1099	0.0000	659.1009	659.1009	0.2114	0.0000	664.3850
Total	0.3653	2.8565	3.4782	7.5400e-003		0.1193	0.1193		0.1099	0.1099	0.0000	659.1009	659.1009	0.2114	0.0000	664.3850

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.6000e-004	0.0215	5.7900e-003	9.0000e-005	2.3700e-003	1.8000e-004	2.5500e-003	6.5000e-004	1.7000e-004	8.2000e-004	0.0000	8.2069	8.2069	2.0000e-005	1.2900e-003	8.5918
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	0.0255	0.0186	0.2133	5.5000e-004	0.0631	3.5000e-004	0.0634	0.0168	3.2000e-004	0.0171	0.0000	50.4259	50.4259	1.4800e-003	1.5100e-003	50.9140
Total	0.0260	0.0401	0.2191	6.4000e-004	0.0655	5.3000e-004	0.0660	0.0174	4.9000e-004	0.0179	0.0000	58.6328	58.6328	1.5000e-003	2.8000e-003	59.5057

3.4 Structure Installation - 2023

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0209	0.1573	0.2395	6.4000e-004		6.6700e-003	6.6700e-003		6.1500e-003	6.1500e-003	0.0000	56.2032	56.2032	0.0180	0.0000	56.6542
Total	0.0209	0.1573	0.2395	6.4000e-004		6.6700e-003	6.6700e-003		6.1500e-003	6.1500e-003	0.0000	56.2032	56.2032	0.0180	0.0000	56.6542

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	5.0000e-003	1.3300e-003	2.0000e-005	5.4000e-004	4.0000e-005	5.8000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.9192	1.9192	0.0000	3.0000e-004	2.0092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7500e-003	0.0194	5.0000e-005	5.2400e-003	3.0000e-005	5.2700e-003	1.4000e-003	3.0000e-005	1.4200e-003	0.0000	4.3317	4.3317	1.4000e-004	1.4000e-004	4.3759
Total	2.4000e-003	6.7500e-003	0.0207	7.0000e-005	5.7800e-003	7.0000e-005	5.8500e-003	1.5500e-003	7.0000e-005	1.6100e-003	0.0000	6.2509	6.2509	1.4000e-004	4.4000e-004	6.3851

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0209	0.1573	0.2395	6.4000e-004		6.6700e-003	6.6700e-003		6.1500e-003	6.1500e-003	0.0000	56.2032	56.2032	0.0180	0.0000	56.6542
Total	0.0209	0.1573	0.2395	6.4000e-004		6.6700e-003	6.6700e-003		6.1500e-003	6.1500e-003	0.0000	56.2032	56.2032	0.0180	0.0000	56.6542

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.1000e-004	5.0000e-003	1.3300e-003	2.0000e-005	5.4000e-004	4.0000e-005	5.8000e-004	1.5000e-004	4.0000e-005	1.9000e-004	0.0000	1.9192	1.9192	0.0000	3.0000e-004	2.0092
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2900e-003	1.7500e-003	0.0194	5.0000e-005	5.2400e-003	3.0000e-005	5.2700e-003	1.4000e-003	3.0000e-005	1.4200e-003	0.0000	4.3317	4.3317	1.4000e-004	1.4000e-004	4.3759
Total	2.4000e-003	6.7500e-003	0.0207	7.0000e-005	5.7800e-003	7.0000e-005	5.8500e-003	1.5500e-003	7.0000e-005	1.6100e-003	0.0000	6.2509	6.2509	1.4000e-004	4.4000e-004	6.3851

3.5 HDD - 2023

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0468	0.3953	0.5691	1.5100e-003		0.0181	0.0181		0.0173	0.0173	0.0000	131.9410	131.9410	0.0332	0.0000	132.7717
Total	0.0468	0.3953	0.5691	1.5100e-003		0.0181	0.0181		0.0173	0.0173	0.0000	131.9410	131.9410	0.0332	0.0000	132.7717

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5700e-003	1.9700e-003	0.0218	5.0000e-005	5.9000e-003	3.0000e-005	5.9300e-003	1.5700e-003	3.0000e-005	1.6000e-003	0.0000	4.8731	4.8731	1.5000e-004	1.5000e-004	4.9229
Total	2.7300e-003	9.4500e-003	0.0238	8.0000e-005	6.7100e-003	9.0000e-005	6.8000e-003	1.7900e-003	9.0000e-005	1.8800e-003	0.0000	7.7429	7.7429	1.6000e-004	6.0000e-004	7.9273

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0468	0.3953	0.5691	1.5100e-003		0.0181	0.0181		0.0173	0.0173	0.0000	131.9409	131.9409	0.0332	0.0000	132.7715
Total	0.0468	0.3953	0.5691	1.5100e-003		0.0181	0.0181		0.0173	0.0173	0.0000	131.9409	131.9409	0.0332	0.0000	132.7715

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5700e-003	1.9700e-003	0.0218	5.0000e-005	5.9000e-003	3.0000e-005	5.9300e-003	1.5700e-003	3.0000e-005	1.6000e-003	0.0000	4.8731	4.8731	1.5000e-004	1.5000e-004	4.9229
Total	2.7300e-003	9.4500e-003	0.0238	8.0000e-005	6.7100e-003	9.0000e-005	6.8000e-003	1.7900e-003	9.0000e-005	1.8800e-003	0.0000	7.7429	7.7429	1.6000e-004	6.0000e-004	7.9273

3.6 Bore and Jack - 2023

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0370	0.3127	0.4573	1.3100e-003		0.0140	0.0140		0.0132	0.0132	0.0000	114.9848	114.9848	0.0325	0.0000	115.7960
Total	0.0370	0.3127	0.4573	1.3100e-003		0.0140	0.0140		0.0132	0.0132	0.0000	114.9848	114.9848	0.0325	0.0000	115.7960

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	2.1600e-003	9.0100e-003	0.0190	7.0000e-005	5.4000e-003	9.0000e-005	5.4800e-003	1.4400e-003	8.0000e-005	1.5300e-003	0.0000	6.6600	6.6600	1.3000e-004	5.7000e-004	6.8333

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0370	0.3127	0.4573	1.3100e-003		0.0140	0.0140		0.0132	0.0132	0.0000	114.9846	114.9846	0.0325	0.0000	115.7959
Total	0.0370	0.3127	0.4573	1.3100e-003		0.0140	0.0140		0.0132	0.0132	0.0000	114.9846	114.9846	0.0325	0.0000	115.7959

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.4800e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8698	2.8698	1.0000e-005	4.5000e-004	3.0044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	1.5300e-003	0.0170	4.0000e-005	4.5900e-003	3.0000e-005	4.6100e-003	1.2200e-003	2.0000e-005	1.2500e-003	0.0000	3.7902	3.7902	1.2000e-004	1.2000e-004	3.8289
Total	2.1600e-003	9.0100e-003	0.0190	7.0000e-005	5.4000e-003	9.0000e-005	5.4800e-003	1.4400e-003	8.0000e-005	1.5300e-003	0.0000	6.6600	6.6600	1.3000e-004	5.7000e-004	6.8333

3.7 Asphalt Replacement - 2024

Unmitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0273	0.2480	0.4052	6.8000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	59.2027	59.2027	0.0189	0.0000	59.6762
Paving	7.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0351	0.2480	0.4052	6.8000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	59.2027	59.2027	0.0189	0.0000	59.6762

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.3600e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8138	2.8138	1.0000e-005	4.4000e-004	2.9458
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4500e-003	2.5100e-003	0.0288	7.0000e-005	8.5200e-003	5.0000e-005	8.5700e-003	2.2700e-003	4.0000e-005	2.3100e-003	0.0000	6.8108	6.8108	2.0000e-004	2.0000e-004	6.8767
Total	3.6100e-003	9.8700e-003	0.0308	1.0000e-004	9.3300e-003	1.1000e-004	9.4400e-003	2.4900e-003	1.0000e-004	2.5900e-003	0.0000	9.6246	9.6246	2.1000e-004	6.4000e-004	9.8224

Mitigated Construction On-Site

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0273	0.2480	0.4052	6.8000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	59.2026	59.2026	0.0189	0.0000	59.6762
Paving	7.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0351	0.2480	0.4052	6.8000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	59.2026	59.2026	0.0189	0.0000	59.6762

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	7.3600e-003	1.9800e-003	3.0000e-005	8.1000e-004	6.0000e-005	8.7000e-004	2.2000e-004	6.0000e-005	2.8000e-004	0.0000	2.8138	2.8138	1.0000e-005	4.4000e-004	2.9458
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4500e-003	2.5100e-003	0.0288	7.0000e-005	8.5200e-003	5.0000e-005	8.5700e-003	2.2700e-003	4.0000e-005	2.3100e-003	0.0000	6.8108	6.8108	2.0000e-004	2.0000e-004	6.8767
Total	3.6100e-003	9.8700e-003	0.0308	1.0000e-004	9.3300e-003	1.1000e-004	9.4400e-003	2.4900e-003	1.0000e-004	2.5900e-003	0.0000	9.6246	9.6246	2.1000e-004	6.4000e-004	9.8224

4.0 Operational Detail - Mobile

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	6.00	6.00	6.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.493657	0.054963	0.187598	0.144453	0.043526	0.008501	0.010722	0.015710	0.000733	0.000410	0.033593	0.001127	0.005006

5.0 Energy Detail

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Unmitigated	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004

6.2 Area by SubCategory

Unmitigated

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Total	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-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	tons/yr										MT/yr					
Architectural Coating	5.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0168					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004
Total	0.0222	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.1000e-004

7.0 Water Detail

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use Mgal	MT/yr			
Other Asphalt Surfaces 0 / 0	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

Mitigated

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Indoor/Outdoor Use		Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

10.0 Stationary Equipment

CalEEMod Version: CalEEMod.2020.4.0

Page 1 of 1

Date: 4/21/2022 4:04 PM

Paradise - Export Pipeline System - Butte County AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation
