

# Appendix A

---

CalEEMod Results

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**Murphy Reservoirs Project -AQ  
South Coast AQMD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.40	Acre	5.40	235,224.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	390.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

Project Characteristics -

Land Use - provided by client

Construction Phase - Based on Client construction timeline

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Provided by client

Off-road Equipment - Provided by client

Off-road Equipment - Equipment provided by client.

Off-road Equipment - Provided by Client

Demolition - Client provided information that approximately 800 CY would be demolished. 1 CY of concrete = 2.03 tons.

Grading - Material exported provided by client

Architectural Coating - SCAQMD Rule 1113

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Area Mitigation - SCAQMD Rule 1113

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - User Defined -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	49.00
tblGrading	MaterialExported	0.00	4,000.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

**2.0 Emissions Summary**

---

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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					
2022	0.1118	1.0278	0.9769	2.4500e-003	0.1241	0.0449	0.1690	0.0474	0.0418	0.0892	0.0000	219.7899	219.7899	0.0484	6.2800e-003	222.8739
2023	0.0483	0.1339	0.1978	3.5000e-004	5.1700e-003	6.6100e-003	0.0118	1.3800e-003	6.1600e-003	7.5400e-003	0.0000	30.6550	30.6550	7.6500e-003	2.0000e-004	30.9058
<b>Maximum</b>	<b>0.1118</b>	<b>1.0278</b>	<b>0.9769</b>	<b>2.4500e-003</b>	<b>0.1241</b>	<b>0.0449</b>	<b>0.1690</b>	<b>0.0474</b>	<b>0.0418</b>	<b>0.0892</b>	<b>0.0000</b>	<b>219.7899</b>	<b>219.7899</b>	<b>0.0484</b>	<b>6.2800e-003</b>	<b>222.8739</b>

**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					
2022	0.1118	1.0278	0.9769	2.4500e-003	0.0784	0.0449	0.1233	0.0274	0.0418	0.0692	0.0000	219.7897	219.7897	0.0484	6.2800e-003	222.8737
2023	0.0483	0.1339	0.1978	3.5000e-004	5.1700e-003	6.6100e-003	0.0118	1.3800e-003	6.1600e-003	7.5400e-003	0.0000	30.6549	30.6549	7.6500e-003	2.0000e-004	30.9058
<b>Maximum</b>	<b>0.1118</b>	<b>1.0278</b>	<b>0.9769</b>	<b>2.4500e-003</b>	<b>0.0784</b>	<b>0.0449</b>	<b>0.1233</b>	<b>0.0274</b>	<b>0.0418</b>	<b>0.0692</b>	<b>0.0000</b>	<b>219.7897</b>	<b>219.7897</b>	<b>0.0484</b>	<b>6.2800e-003</b>	<b>222.8737</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	35.38	0.00	25.29	40.98	0.00	20.66	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2022	11-30-2022	0.8903	0.8903
2	12-1-2022	2-28-2023	0.4336	0.4336
		Highest	0.8903	0.8903

**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	0.0185	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-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
<b>Total</b>	<b>0.0185</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.4000e-004</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0185	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-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
<b>Total</b>	<b>0.0185</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.4000e-004</b>

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Demolition	9/1/2022	9/28/2022	5	20	
2	Grading	Grading	9/29/2022	10/26/2022	5	20	
3	Reservoir Construction	Building Construction	10/27/2022	1/3/2023	5	49	

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

4	Site Restoration	Paving	1/4/2023	1/31/2023	5	20
5	Access Road	Architectural Coating	1/4/2023	1/31/2023	5	20

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

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 5.4**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 14,113 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	3	8.00	158	0.38
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Reservoir Construction	Aerial Lifts	1	8.00	63	0.31
Reservoir Construction	Air Compressors	1	6.00	78	0.48
Reservoir Construction	Cranes	1	7.00	231	0.29
Reservoir Construction	Forklifts	3	8.00	89	0.20
Reservoir Construction	Generator Sets	1	8.00	84	0.74
Reservoir Construction	Off-Highway Trucks	1	8.00	402	0.38
Reservoir Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Reservoir Construction	Welders	0	8.00	46	0.45

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Site Restoration	Pavers	2	8.00	130	0.42
Site Restoration	Paving Equipment	2	8.00	132	0.36
Site Restoration	Rollers	2	8.00	80	0.38
Access Road	Air Compressors	1	6.00	78	0.48
Reservoir Construction	Other Material Handling Equipment	1	8.00	168	0.40

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	161.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Reservoir Construction	9	99.00	39.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Road	1	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0174	0.0000	0.0174	2.6300e-003	0.0000	2.6300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0298	0.2861	0.2253	4.9000e-004		0.0133	0.0133		0.0122	0.0122	0.0000	42.9492	42.9492	0.0139	0.0000	43.2965
<b>Total</b>	<b>0.0298</b>	<b>0.2861</b>	<b>0.2253</b>	<b>4.9000e-004</b>	<b>0.0174</b>	<b>0.0133</b>	<b>0.0307</b>	<b>2.6300e-003</b>	<b>0.0122</b>	<b>0.0149</b>	<b>0.0000</b>	<b>42.9492</b>	<b>42.9492</b>	<b>0.0139</b>	<b>0.0000</b>	<b>43.2965</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4000e-004	0.0132	3.0200e-003	5.0000e-005	1.3900e-003	1.1000e-004	1.4900e-003	3.8000e-004	1.0000e-004	4.8000e-004	0.0000	4.8487	4.8487	2.6000e-004	7.7000e-004	5.0846
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.9000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6071	1.6071	4.0000e-005	4.0000e-005	1.6210
<b>Total</b>	<b>9.4000e-004</b>	<b>0.0137</b>	<b>9.4100e-003</b>	<b>7.0000e-005</b>	<b>3.3600e-003</b>	<b>1.2000e-004</b>	<b>3.4800e-003</b>	<b>9.0000e-004</b>	<b>1.1000e-004</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>6.4558</b>	<b>6.4558</b>	<b>3.0000e-004</b>	<b>8.1000e-004</b>	<b>6.7056</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.8200e-003	0.0000	7.8200e-003	1.1800e-003	0.0000	1.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0298	0.2861	0.2253	4.9000e-004		0.0133	0.0133		0.0122	0.0122	0.0000	42.9492	42.9492	0.0139	0.0000	43.2964
<b>Total</b>	<b>0.0298</b>	<b>0.2861</b>	<b>0.2253</b>	<b>4.9000e-004</b>	<b>7.8200e-003</b>	<b>0.0133</b>	<b>0.0211</b>	<b>1.1800e-003</b>	<b>0.0122</b>	<b>0.0134</b>	<b>0.0000</b>	<b>42.9492</b>	<b>42.9492</b>	<b>0.0139</b>	<b>0.0000</b>	<b>43.2964</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4000e-004	0.0132	3.0200e-003	5.0000e-005	1.3900e-003	1.1000e-004	1.4900e-003	3.8000e-004	1.0000e-004	4.8000e-004	0.0000	4.8487	4.8487	2.6000e-004	7.7000e-004	5.0846
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.9000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6071	1.6071	4.0000e-005	4.0000e-005	1.6210
<b>Total</b>	<b>9.4000e-004</b>	<b>0.0137</b>	<b>9.4100e-003</b>	<b>7.0000e-005</b>	<b>3.3600e-003</b>	<b>1.2000e-004</b>	<b>3.4800e-003</b>	<b>9.0000e-004</b>	<b>1.1000e-004</b>	<b>1.0200e-003</b>	<b>0.0000</b>	<b>6.4558</b>	<b>6.4558</b>	<b>3.0000e-004</b>	<b>8.1000e-004</b>	<b>6.7056</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0658	0.0000	0.0658	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.2134	0.1877	3.9000e-004		0.0102	0.0102		9.3800e-003	9.3800e-003	0.0000	34.1451	34.1451	0.0110	0.0000	34.4212
<b>Total</b>	<b>0.0223</b>	<b>0.2134</b>	<b>0.1877</b>	<b>3.9000e-004</b>	<b>0.0658</b>	<b>0.0102</b>	<b>0.0759</b>	<b>0.0337</b>	<b>9.3800e-003</b>	<b>0.0431</b>	<b>0.0000</b>	<b>34.1451</b>	<b>34.1451</b>	<b>0.0110</b>	<b>0.0000</b>	<b>34.4212</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0400e-003	0.0411	9.3900e-003	1.5000e-004	4.3000e-003	3.3000e-004	4.6300e-003	1.1800e-003	3.1000e-004	1.4900e-003	0.0000	15.0580	15.0580	8.1000e-004	2.3900e-003	15.7906
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.9000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6071	1.6071	4.0000e-005	4.0000e-005	1.6210
<b>Total</b>	<b>1.6400e-003</b>	<b>0.0416</b>	<b>0.0158</b>	<b>1.7000e-004</b>	<b>6.2700e-003</b>	<b>3.4000e-004</b>	<b>6.6200e-003</b>	<b>1.7000e-003</b>	<b>3.2000e-004</b>	<b>2.0300e-003</b>	<b>0.0000</b>	<b>16.6651</b>	<b>16.6651</b>	<b>8.5000e-004</b>	<b>2.4300e-003</b>	<b>17.4116</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0296	0.0000	0.0296	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0223	0.2134	0.1877	3.9000e-004		0.0102	0.0102		9.3800e-003	9.3800e-003	0.0000	34.1451	34.1451	0.0110	0.0000	34.4212
<b>Total</b>	<b>0.0223</b>	<b>0.2134</b>	<b>0.1877</b>	<b>3.9000e-004</b>	<b>0.0296</b>	<b>0.0102</b>	<b>0.0398</b>	<b>0.0152</b>	<b>9.3800e-003</b>	<b>0.0246</b>	<b>0.0000</b>	<b>34.1451</b>	<b>34.1451</b>	<b>0.0110</b>	<b>0.0000</b>	<b>34.4212</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0400e-003	0.0411	9.3900e-003	1.5000e-004	4.3000e-003	3.3000e-004	4.6300e-003	1.1800e-003	3.1000e-004	1.4900e-003	0.0000	15.0580	15.0580	8.1000e-004	2.3900e-003	15.7906
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	4.9000e-004	6.3900e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.6071	1.6071	4.0000e-005	4.0000e-005	1.6210
<b>Total</b>	<b>1.6400e-003</b>	<b>0.0416</b>	<b>0.0158</b>	<b>1.7000e-004</b>	<b>6.2700e-003</b>	<b>3.4000e-004</b>	<b>6.6200e-003</b>	<b>1.7000e-003</b>	<b>3.2000e-004</b>	<b>2.0300e-003</b>	<b>0.0000</b>	<b>16.6651</b>	<b>16.6651</b>	<b>8.5000e-004</b>	<b>2.4300e-003</b>	<b>17.4116</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0477	0.4219	0.4413	9.4000e-004		0.0204	0.0204		0.0192	0.0192	0.0000	81.6993	81.6993	0.0212	0.0000	82.2295
<b>Total</b>	<b>0.0477</b>	<b>0.4219</b>	<b>0.4413</b>	<b>9.4000e-004</b>		<b>0.0204</b>	<b>0.0204</b>		<b>0.0192</b>	<b>0.0192</b>	<b>0.0000</b>	<b>81.6993</b>	<b>81.6993</b>	<b>0.0212</b>	<b>0.0000</b>	<b>82.2295</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6500e-003	0.0448	0.0149	1.8000e-004	5.7800e-003	4.5000e-004	6.2300e-003	1.6700e-003	4.3000e-004	2.1000e-003	0.0000	17.1037	17.1037	5.7000e-004	2.4800e-003	17.8576
Worker	7.8100e-003	6.3100e-003	0.0825	2.3000e-004	0.0255	1.6000e-004	0.0257	6.7800e-003	1.4000e-004	6.9200e-003	0.0000	20.7718	20.7718	5.7000e-004	5.6000e-004	20.9519
<b>Total</b>	<b>9.4600e-003</b>	<b>0.0511</b>	<b>0.0974</b>	<b>4.1000e-004</b>	<b>0.0313</b>	<b>6.1000e-004</b>	<b>0.0319</b>	<b>8.4500e-003</b>	<b>5.7000e-004</b>	<b>9.0200e-003</b>	<b>0.0000</b>	<b>37.8755</b>	<b>37.8755</b>	<b>1.1400e-003</b>	<b>3.0400e-003</b>	<b>38.8095</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0477	0.4219	0.4413	9.4000e-004		0.0204	0.0204		0.0192	0.0192	0.0000	81.6992	81.6992	0.0212	0.0000	82.2294
<b>Total</b>	<b>0.0477</b>	<b>0.4219</b>	<b>0.4413</b>	<b>9.4000e-004</b>		<b>0.0204</b>	<b>0.0204</b>		<b>0.0192</b>	<b>0.0192</b>	<b>0.0000</b>	<b>81.6992</b>	<b>81.6992</b>	<b>0.0212</b>	<b>0.0000</b>	<b>82.2294</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6500e-003	0.0448	0.0149	1.8000e-004	5.7800e-003	4.5000e-004	6.2300e-003	1.6700e-003	4.3000e-004	2.1000e-003	0.0000	17.1037	17.1037	5.7000e-004	2.4800e-003	17.8576
Worker	7.8100e-003	6.3100e-003	0.0825	2.3000e-004	0.0255	1.6000e-004	0.0257	6.7800e-003	1.4000e-004	6.9200e-003	0.0000	20.7718	20.7718	5.7000e-004	5.6000e-004	20.9519
<b>Total</b>	<b>9.4600e-003</b>	<b>0.0511</b>	<b>0.0974</b>	<b>4.1000e-004</b>	<b>0.0313</b>	<b>6.1000e-004</b>	<b>0.0319</b>	<b>8.4500e-003</b>	<b>5.7000e-004</b>	<b>9.0200e-003</b>	<b>0.0000</b>	<b>37.8755</b>	<b>37.8755</b>	<b>1.1400e-003</b>	<b>3.0400e-003</b>	<b>38.8095</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0164	0.0186	4.0000e-005		7.7000e-004	7.7000e-004		7.2000e-004	7.2000e-004	0.0000	3.4774	3.4774	9.0000e-004	0.0000	3.4999
<b>Total</b>	<b>1.9100e-003</b>	<b>0.0164</b>	<b>0.0186</b>	<b>4.0000e-005</b>		<b>7.7000e-004</b>	<b>7.7000e-004</b>		<b>7.2000e-004</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>3.4774</b>	<b>3.4774</b>	<b>9.0000e-004</b>	<b>0.0000</b>	<b>3.4999</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4900e-003	5.7000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.6941	0.6941	2.0000e-005	1.0000e-004	0.7246
Worker	3.1000e-004	2.4000e-004	3.2400e-003	1.0000e-005	1.0900e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8607	0.8607	2.0000e-005	2.0000e-005	0.8677
<b>Total</b>	<b>3.5000e-004</b>	<b>1.7300e-003</b>	<b>3.8100e-003</b>	<b>2.0000e-005</b>	<b>1.3400e-003</b>	<b>2.0000e-005</b>	<b>1.3400e-003</b>	<b>3.6000e-004</b>	<b>2.0000e-005</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>1.5548</b>	<b>1.5548</b>	<b>4.0000e-005</b>	<b>1.2000e-004</b>	<b>1.5924</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0164	0.0186	4.0000e-005		7.7000e-004	7.7000e-004		7.2000e-004	7.2000e-004	0.0000	3.4774	3.4774	9.0000e-004	0.0000	3.4999
<b>Total</b>	<b>1.9100e-003</b>	<b>0.0164</b>	<b>0.0186</b>	<b>4.0000e-005</b>		<b>7.7000e-004</b>	<b>7.7000e-004</b>		<b>7.2000e-004</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>3.4774</b>	<b>3.4774</b>	<b>9.0000e-004</b>	<b>0.0000</b>	<b>3.4999</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4900e-003	5.7000e-004	1.0000e-005	2.5000e-004	1.0000e-005	2.5000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.6941	0.6941	2.0000e-005	1.0000e-004	0.7246
Worker	3.1000e-004	2.4000e-004	3.2400e-003	1.0000e-005	1.0900e-003	1.0000e-005	1.0900e-003	2.9000e-004	1.0000e-005	2.9000e-004	0.0000	0.8607	0.8607	2.0000e-005	2.0000e-005	0.8677
<b>Total</b>	<b>3.5000e-004</b>	<b>1.7300e-003</b>	<b>3.8100e-003</b>	<b>2.0000e-005</b>	<b>1.3400e-003</b>	<b>2.0000e-005</b>	<b>1.3400e-003</b>	<b>3.6000e-004</b>	<b>2.0000e-005</b>	<b>3.7000e-004</b>	<b>0.0000</b>	<b>1.5548</b>	<b>1.5548</b>	<b>4.0000e-005</b>	<b>1.2000e-004</b>	<b>1.5924</b>



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Site Restoration - 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	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0103</b>	<b>0.1019</b>	<b>0.1458</b>	<b>2.3000e-004</b>		<b>5.1000e-003</b>	<b>5.1000e-003</b>		<b>4.6900e-003</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>20.0269</b>	<b>20.0269</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1888</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.6000e-004	4.9100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3040	1.3040	3.0000e-005	3.0000e-005	1.3147
<b>Total</b>	<b>4.7000e-004</b>	<b>3.6000e-004</b>	<b>4.9100e-003</b>	<b>1.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.3040</b>	<b>1.3040</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.3147</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Site Restoration - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0103</b>	<b>0.1019</b>	<b>0.1458</b>	<b>2.3000e-004</b>		<b>5.1000e-003</b>	<b>5.1000e-003</b>		<b>4.6900e-003</b>	<b>4.6900e-003</b>	<b>0.0000</b>	<b>20.0268</b>	<b>20.0268</b>	<b>6.4800e-003</b>	<b>0.0000</b>	<b>20.1888</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.6000e-004	4.9100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3040	1.3040	3.0000e-005	3.0000e-005	1.3147
<b>Total</b>	<b>4.7000e-004</b>	<b>3.6000e-004</b>	<b>4.9100e-003</b>	<b>1.0000e-005</b>	<b>1.6500e-003</b>	<b>1.0000e-005</b>	<b>1.6600e-003</b>	<b>4.4000e-004</b>	<b>1.0000e-005</b>	<b>4.5000e-004</b>	<b>0.0000</b>	<b>1.3040</b>	<b>1.3040</b>	<b>3.0000e-005</b>	<b>3.0000e-005</b>	<b>1.3147</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Access Road - 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					
Archit. Coating	0.0327					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
<b>Total</b>	<b>0.0346</b>	<b>0.0130</b>	<b>0.0181</b>	<b>3.0000e-005</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>2.5571</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	4.8000e-004	6.5400e-003	2.0000e-005	2.1900e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7387	1.7387	4.0000e-005	4.0000e-005	1.7530
<b>Total</b>	<b>6.2000e-004</b>	<b>4.8000e-004</b>	<b>6.5400e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>2.2100e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.7387</b>	<b>1.7387</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.7530</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Access Road - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0327					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
<b>Total</b>	<b>0.0346</b>	<b>0.0130</b>	<b>0.0181</b>	<b>3.0000e-005</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>		<b>7.1000e-004</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>2.5571</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	4.8000e-004	6.5400e-003	2.0000e-005	2.1900e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7387	1.7387	4.0000e-005	4.0000e-005	1.7530
<b>Total</b>	<b>6.2000e-004</b>	<b>4.8000e-004</b>	<b>6.5400e-003</b>	<b>2.0000e-005</b>	<b>2.1900e-003</b>	<b>1.0000e-005</b>	<b>2.2100e-003</b>	<b>5.8000e-004</b>	<b>1.0000e-005</b>	<b>5.9000e-004</b>	<b>0.0000</b>	<b>1.7387</b>	<b>1.7387</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.7530</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

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

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.543139	0.060749	0.184760	0.130258	0.023830	0.006353	0.011718	0.009137	0.000812	0.000509	0.024193	0.000750	0.003791





Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

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

**Mitigated**

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

**6.0 Area Detail**

**6.1 Mitigation Measures Area**



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Mitigated	0.0185	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Unmitigated	0.0185	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0152					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	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
<b>Total</b>	<b>0.0185</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.4000e-004</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.2700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0152					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	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
<b>Total</b>	<b>0.0185</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.4000e-004</b>

**7.0 Water Detail**

---

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

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

**7.2 Water by Land Use**

**Unmitigated**

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

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**7.2 Water by Land Use**

**Mitigated**

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

**8.0 Waste Detail**

---

**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

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**8.2 Waste by Land Use**

**Unmitigated**

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

**Mitigated**

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

**9.0 Operational Offroad**

---

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

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**10.0 Stationary Equipment**

---

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

---

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**Murphy Reservoirs Project -AQ  
South Coast AQMD Air District, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.40	Acre	5.40	235,224.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	390.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

Project Characteristics -

Land Use - provided by client

Construction Phase - Based on Client construction timeline

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Provided by client

Off-road Equipment - Provided by client

Off-road Equipment - Equipment provided by client.

Off-road Equipment - Provided by Client

Demolition - Client provided information that approximately 800 CY would be demolished. 1 CY of concrete = 2.03 tons.

Grading - Material exported provided by client

Architectural Coating - SCAQMD Rule 1113

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Area Mitigation - SCAQMD Rule 1113

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - User Defined -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	49.00
tblGrading	MaterialExported	0.00	4,000.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

**2.0 Emissions Summary**

---



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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					
2022	3.0706	29.9072	23.5133	0.0573	7.2134	1.3403	8.2663	3.5441	1.2334	4.5140	0.0000	5,653.2235	5,653.2235	1.5647	0.2679	5,721.3090
2023	4.6069	18.0372	22.6537	0.0566	1.3563	0.7814	2.1378	0.3654	0.7352	1.1005	0.0000	5,589.6506	5,589.6506	1.0409	0.1331	5,655.3231
<b>Maximum</b>	<b>4.6069</b>	<b>29.9072</b>	<b>23.5133</b>	<b>0.0573</b>	<b>7.2134</b>	<b>1.3403</b>	<b>8.2663</b>	<b>3.5441</b>	<b>1.2334</b>	<b>4.5140</b>	<b>0.0000</b>	<b>5,653.2235</b>	<b>5,653.2235</b>	<b>1.5647</b>	<b>0.2679</b>	<b>5,721.3090</b>

**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					
2022	3.0706	29.9072	23.5133	0.0573	3.5972	1.3403	4.6501	1.6901	1.2334	2.6600	0.0000	5,653.2235	5,653.2235	1.5647	0.2679	5,721.3090
2023	4.6069	18.0372	22.6537	0.0566	1.3563	0.7814	2.1378	0.3654	0.7352	1.1005	0.0000	5,589.6506	5,589.6506	1.0409	0.1331	5,655.3231
<b>Maximum</b>	<b>4.6069</b>	<b>29.9072</b>	<b>23.5133</b>	<b>0.0573</b>	<b>3.5972</b>	<b>1.3403</b>	<b>4.6501</b>	<b>1.6901</b>	<b>1.2334</b>	<b>2.6600</b>	<b>0.0000</b>	<b>5,653.2235</b>	<b>5,653.2235</b>	<b>1.5647</b>	<b>0.2679</b>	<b>5,721.3090</b>

## Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	42.20	0.00	34.76	47.42	0.00	33.02	0.00	0.00	0.00	0.00	0.00	0.00

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Area	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-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
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2600e-003</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-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
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2600e-003</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Demolition	9/1/2022	9/28/2022	5	20	
2	Grading	Grading	9/29/2022	10/26/2022	5	20	
3	Reservoir Construction	Building Construction	10/27/2022	1/3/2023	5	49	
4	Site Restoration	Paving	1/4/2023	1/31/2023	5	20	
5	Access Road	Architectural Coating	1/4/2023	1/31/2023	5	20	

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

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 5.4**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 14,113 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	3	8.00	158	0.38
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Reservoir Construction	Aerial Lifts	1	8.00	63	0.31
Reservoir Construction	Air Compressors	1	6.00	78	0.48
Reservoir Construction	Cranes	1	7.00	231	0.29
Reservoir Construction	Forklifts	3	8.00	89	0.20
Reservoir Construction	Generator Sets	1	8.00	84	0.74
Reservoir Construction	Off-Highway Trucks	1	8.00	402	0.38
Reservoir Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Reservoir Construction	Welders	0	8.00	46	0.45
Site Restoration	Pavers	2	8.00	130	0.42
Site Restoration	Paving Equipment	2	8.00	132	0.36
Site Restoration	Rollers	2	8.00	80	0.38
Access Road	Air Compressors	1	6.00	78	0.48
Reservoir Construction	Other Material Handling Equipment	1	8.00	168	0.40

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	161.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Reservoir Construction	9	99.00	39.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Road	1	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7376	0.0000	1.7376	0.2631	0.0000	0.2631			0.0000			0.0000
Off-Road	2.9746	28.6076	22.5261	0.0489		1.3286	1.3286		1.2223	1.2223		4,734.3408	4,734.3408	1.5312		4,772.6203
<b>Total</b>	<b>2.9746</b>	<b>28.6076</b>	<b>22.5261</b>	<b>0.0489</b>	<b>1.7376</b>	<b>1.3286</b>	<b>3.0662</b>	<b>0.2631</b>	<b>1.2223</b>	<b>1.4854</b>		<b>4,734.3408</b>	<b>4,734.3408</b>	<b>1.5312</b>		<b>4,772.6203</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0340	1.2560	0.3002	4.8700e-003	0.1408	0.0105	0.1513	0.0386	0.0101	0.0486		534.3918	534.3918	0.0287	0.0848	560.3897
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	0.0620	0.0436	0.6871	1.8200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		185.2465	185.2465	4.8100e-003	4.4000e-003	186.6790
<b>Total</b>	<b>0.0960</b>	<b>1.2996</b>	<b>0.9872</b>	<b>6.6900e-003</b>	<b>0.3420</b>	<b>0.0117</b>	<b>0.3537</b>	<b>0.0920</b>	<b>0.0112</b>	<b>0.1031</b>		<b>719.6383</b>	<b>719.6383</b>	<b>0.0335</b>	<b>0.0892</b>	<b>747.0687</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7819	0.0000	0.7819	0.1184	0.0000	0.1184			0.0000			0.0000
Off-Road	2.9746	28.6076	22.5261	0.0489		1.3286	1.3286		1.2223	1.2223	0.0000	4,734.3408	4,734.3408	1.5312		4,772.6203
<b>Total</b>	<b>2.9746</b>	<b>28.6076</b>	<b>22.5261</b>	<b>0.0489</b>	<b>0.7819</b>	<b>1.3286</b>	<b>2.1105</b>	<b>0.1184</b>	<b>1.2223</b>	<b>1.3407</b>	<b>0.0000</b>	<b>4,734.3408</b>	<b>4,734.3408</b>	<b>1.5312</b>		<b>4,772.6203</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0340	1.2560	0.3002	4.8700e-003	0.1408	0.0105	0.1513	0.0386	0.0101	0.0486		534.3918	534.3918	0.0287	0.0848	560.3897
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	0.0620	0.0436	0.6871	1.8200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		185.2465	185.2465	4.8100e-003	4.4000e-003	186.6790
<b>Total</b>	<b>0.0960</b>	<b>1.2996</b>	<b>0.9872</b>	<b>6.6900e-003</b>	<b>0.3420</b>	<b>0.0117</b>	<b>0.3537</b>	<b>0.0920</b>	<b>0.0112</b>	<b>0.1031</b>		<b>719.6383</b>	<b>719.6383</b>	<b>0.0335</b>	<b>0.0892</b>	<b>747.0687</b>

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5750	0.0000	6.5750	3.3709	0.0000	3.3709			0.0000			0.0000
Off-Road	2.2284	21.3372	18.7700	0.0389		1.0191	1.0191		0.9375	0.9375		3,763.8566	3,763.8566	1.2173		3,794.2893
<b>Total</b>	<b>2.2284</b>	<b>21.3372</b>	<b>18.7700</b>	<b>0.0389</b>	<b>6.5750</b>	<b>1.0191</b>	<b>7.5940</b>	<b>3.3709</b>	<b>0.9375</b>	<b>4.3084</b>		<b>3,763.8566</b>	<b>3,763.8566</b>	<b>1.2173</b>		<b>3,794.2893</b>



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1056	3.9005	0.9322	0.0151	0.4373	0.0326	0.4699	0.1199	0.0312	0.1511		1,659.6018	1,659.6018	0.0891	0.2635	1,740.3407
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	0.0620	0.0436	0.6871	1.8200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		185.2465	185.2465	4.8100e-003	4.4000e-003	186.6790
<b>Total</b>	<b>0.1676</b>	<b>3.9442</b>	<b>1.6192</b>	<b>0.0170</b>	<b>0.6385</b>	<b>0.0338</b>	<b>0.6723</b>	<b>0.1732</b>	<b>0.0323</b>	<b>0.2055</b>		<b>1,844.8483</b>	<b>1,844.8483</b>	<b>0.0940</b>	<b>0.2679</b>	<b>1,927.0197</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9587	0.0000	2.9587	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	2.2284	21.3372	18.7700	0.0389		1.0191	1.0191		0.9375	0.9375	0.0000	3,763.8566	3,763.8566	1.2173		3,794.2893
<b>Total</b>	<b>2.2284</b>	<b>21.3372</b>	<b>18.7700</b>	<b>0.0389</b>	<b>2.9587</b>	<b>1.0191</b>	<b>3.9778</b>	<b>1.5169</b>	<b>0.9375</b>	<b>2.4544</b>	<b>0.0000</b>	<b>3,763.8566</b>	<b>3,763.8566</b>	<b>1.2173</b>		<b>3,794.2893</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1056	3.9005	0.9322	0.0151	0.4373	0.0326	0.4699	0.1199	0.0312	0.1511		1,659.6018	1,659.6018	0.0891	0.2635	1,740.3407
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	0.0620	0.0436	0.6871	1.8200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		185.2465	185.2465	4.8100e-003	4.4000e-003	186.6790
<b>Total</b>	<b>0.1676</b>	<b>3.9442</b>	<b>1.6192</b>	<b>0.0170</b>	<b>0.6385</b>	<b>0.0338</b>	<b>0.6723</b>	<b>0.1732</b>	<b>0.0323</b>	<b>0.2055</b>		<b>1,844.8483</b>	<b>1,844.8483</b>	<b>0.0940</b>	<b>0.2679</b>	<b>1,927.0197</b>

**3.4 Reservoir Construction - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0304	17.9549	18.7793	0.0398		0.8670	0.8670		0.8159	0.8159		3,832.2574	3,832.2574	0.9948		3,857.1280
<b>Total</b>	<b>2.0304</b>	<b>17.9549</b>	<b>18.7793</b>	<b>0.0398</b>		<b>0.8670</b>	<b>0.8670</b>		<b>0.8159</b>	<b>0.8159</b>		<b>3,832.2574</b>	<b>3,832.2574</b>	<b>0.9948</b>		<b>3,857.1280</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0711	1.8147	0.6222	7.4600e-003	0.2497	0.0190	0.2687	0.0719	0.0182	0.0901		802.1105	802.1105	0.0269	0.1163	837.4366
Worker	0.3410	0.2399	3.7789	0.0100	1.1066	6.6100e-003	1.1132	0.2935	6.0900e-003	0.2996		1,018.8557	1,018.8557	0.0265	0.0242	1,026.7346
<b>Total</b>	<b>0.4121</b>	<b>2.0546</b>	<b>4.4010</b>	<b>0.0175</b>	<b>1.3563</b>	<b>0.0256</b>	<b>1.3819</b>	<b>0.3654</b>	<b>0.0242</b>	<b>0.3896</b>		<b>1,820.9661</b>	<b>1,820.9661</b>	<b>0.0533</b>	<b>0.1405</b>	<b>1,864.1712</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0304	17.9549	18.7793	0.0398		0.8670	0.8670		0.8159	0.8159	0.0000	3,832.2573	3,832.2573	0.9948		3,857.1280
<b>Total</b>	<b>2.0304</b>	<b>17.9549</b>	<b>18.7793</b>	<b>0.0398</b>		<b>0.8670</b>	<b>0.8670</b>		<b>0.8159</b>	<b>0.8159</b>	<b>0.0000</b>	<b>3,832.2573</b>	<b>3,832.2573</b>	<b>0.9948</b>		<b>3,857.1280</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0711	1.8147	0.6222	7.4600e-003	0.2497	0.0190	0.2687	0.0719	0.0182	0.0901		802.1105	802.1105	0.0269	0.1163	837.4366
Worker	0.3410	0.2399	3.7789	0.0100	1.1066	6.6100e-003	1.1132	0.2935	6.0900e-003	0.2996		1,018.8557	1,018.8557	0.0265	0.0242	1,026.7346
<b>Total</b>	<b>0.4121</b>	<b>2.0546</b>	<b>4.4010</b>	<b>0.0175</b>	<b>1.3563</b>	<b>0.0256</b>	<b>1.3819</b>	<b>0.3654</b>	<b>0.0242</b>	<b>0.3896</b>		<b>1,820.9661</b>	<b>1,820.9661</b>	<b>0.0533</b>	<b>0.1405</b>	<b>1,864.1712</b>

**3.4 Reservoir Construction - 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	1.9052	16.4093	18.6142	0.0398		0.7670	0.7670		0.7215	0.7215		3,833.1508	3,833.1508	0.9914		3,857.9368
<b>Total</b>	<b>1.9052</b>	<b>16.4093</b>	<b>18.6142</b>	<b>0.0398</b>		<b>0.7670</b>	<b>0.7670</b>		<b>0.7215</b>	<b>0.7215</b>		<b>3,833.1508</b>	<b>3,833.1508</b>	<b>0.9914</b>		<b>3,857.9368</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0431	1.4157	0.5574	7.1000e-003	0.2497	8.2400e-003	0.2580	0.0719	7.8900e-003	0.0798		764.5206	764.5206	0.0257	0.1107	798.1453
Worker	0.3163	0.2123	3.4822	9.6900e-003	1.1066	6.2300e-003	1.1128	0.2935	5.7400e-003	0.2992		991.9792	991.9792	0.0238	0.0224	999.2411
<b>Total</b>	<b>0.3594</b>	<b>1.6280</b>	<b>4.0395</b>	<b>0.0168</b>	<b>1.3563</b>	<b>0.0145</b>	<b>1.3708</b>	<b>0.3654</b>	<b>0.0136</b>	<b>0.3790</b>		<b>1,756.4998</b>	<b>1,756.4998</b>	<b>0.0495</b>	<b>0.1331</b>	<b>1,797.3864</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9052	16.4093	18.6142	0.0398		0.7670	0.7670		0.7215	0.7215	0.0000	3,833.1508	3,833.1508	0.9914		3,857.9368
<b>Total</b>	<b>1.9052</b>	<b>16.4093</b>	<b>18.6142</b>	<b>0.0398</b>		<b>0.7670</b>	<b>0.7670</b>		<b>0.7215</b>	<b>0.7215</b>	<b>0.0000</b>	<b>3,833.1508</b>	<b>3,833.1508</b>	<b>0.9914</b>		<b>3,857.9368</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2023**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0431	1.4157	0.5574	7.1000e-003	0.2497	8.2400e-003	0.2580	0.0719	7.8900e-003	0.0798		764.5206	764.5206	0.0257	0.1107	798.1453
Worker	0.3163	0.2123	3.4822	9.6900e-003	1.1066	6.2300e-003	1.1128	0.2935	5.7400e-003	0.2992		991.9792	991.9792	0.0238	0.0224	999.2411
<b>Total</b>	<b>0.3594</b>	<b>1.6280</b>	<b>4.0395</b>	<b>0.0168</b>	<b>1.3563</b>	<b>0.0145</b>	<b>1.3708</b>	<b>0.3654</b>	<b>0.0136</b>	<b>0.3790</b>		<b>1,756.4998</b>	<b>1,756.4998</b>	<b>0.0495</b>	<b>0.1331</b>	<b>1,797.3864</b>

**3.5 Site Restoration - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Site Restoration - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0479	0.0322	0.5276	1.4700e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		150.2999	150.2999	3.6000e-003	3.3900e-003	151.4002
<b>Total</b>	<b>0.0479</b>	<b>0.0322</b>	<b>0.5276</b>	<b>1.4700e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>150.2999</b>	<b>150.2999</b>	<b>3.6000e-003</b>	<b>3.3900e-003</b>	<b>151.4002</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>	<b>0.0000</b>	<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Site Restoration - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0479	0.0322	0.5276	1.4700e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		150.2999	150.2999	3.6000e-003	3.3900e-003	151.4002
<b>Total</b>	<b>0.0479</b>	<b>0.0322</b>	<b>0.5276</b>	<b>1.4700e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>150.2999</b>	<b>150.2999</b>	<b>3.6000e-003</b>	<b>3.3900e-003</b>	<b>151.4002</b>

**3.6 Access Road - 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					
Archit. Coating	3.2707					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>3.4624</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Access Road - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0639	0.0429	0.7035	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.3998	200.3998	4.8000e-003	4.5200e-003	201.8669
<b>Total</b>	<b>0.0639</b>	<b>0.0429</b>	<b>0.7035</b>	<b>1.9600e-003</b>	<b>0.2236</b>	<b>1.2600e-003</b>	<b>0.2248</b>	<b>0.0593</b>	<b>1.1600e-003</b>	<b>0.0605</b>		<b>200.3998</b>	<b>200.3998</b>	<b>4.8000e-003</b>	<b>4.5200e-003</b>	<b>201.8669</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.2707					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>3.4624</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Access Road - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0639	0.0429	0.7035	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.3998	200.3998	4.8000e-003	4.5200e-003	201.8669
<b>Total</b>	<b>0.0639</b>	<b>0.0429</b>	<b>0.7035</b>	<b>1.9600e-003</b>	<b>0.2236</b>	<b>1.2600e-003</b>	<b>0.2248</b>	<b>0.0593</b>	<b>1.1600e-003</b>	<b>0.0605</b>		<b>200.3998</b>	<b>200.3998</b>	<b>4.8000e-003</b>	<b>4.5200e-003</b>	<b>201.8669</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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**

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

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.543139	0.060749	0.184760	0.130258	0.023830	0.006353	0.011718	0.009137	0.000812	0.000509	0.024193	0.000750	0.003791

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

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

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.2 Energy by Land Use - NaturalGas**

Mitigated

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

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Unmitigated	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	0.0179					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>		<b>1.2600e-003</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0179					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>		<b>1.2600e-003</b>

**7.0 Water Detail**

---

**7.1 Mitigation Measures Water**

- Apply Water Conservation Strategy
- Use Water Efficient Irrigation System

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**8.0 Waste Detail**

---

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

---

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

**10.0 Stationary Equipment**

---

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

---



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**Murphy Reservoirs Project -AQ**

**South Coast AQMD Air District, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	5.40	Acre	5.40	235,224.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	9			<b>Operational Year</b>	2023
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	390.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

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

Project Characteristics -

Land Use - provided by client

Construction Phase - Based on Client construction timeline

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Provided by client

Off-road Equipment - Provided by client

Off-road Equipment - Equipment provided by client.

Off-road Equipment - Provided by Client

Demolition - Client provided information that approximately 800 CY would be demolished. 1 CY of concrete = 2.03 tons.

Grading - Material exported provided by client

Architectural Coating - SCAQMD Rule 1113

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Area Coating - SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Area Mitigation - SCAQMD Rule 1113

Water Mitigation -

Stationary Sources - Emergency Generators and Fire Pumps -

Stationary Sources - User Defined -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	49.00
tblGrading	MaterialExported	0.00	4,000.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

**2.0 Emissions Summary**

---

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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					
2022	3.0729	29.9665	23.4530	0.0567	7.2134	1.3403	8.2664	3.5441	1.2334	4.5140	0.0000	5,598.5447	5,598.5447	1.5647	0.2682	5,711.2572
2023	4.6131	18.1273	22.3408	0.0560	1.3563	0.7815	2.1378	0.3654	0.7352	1.1006	0.0000	5,533.4642	5,533.4642	1.0411	0.1347	5,599.6350
<b>Maximum</b>	<b>4.6131</b>	<b>29.9665</b>	<b>23.4530</b>	<b>0.0567</b>	<b>7.2134</b>	<b>1.3403</b>	<b>8.2664</b>	<b>3.5441</b>	<b>1.2334</b>	<b>4.5140</b>	<b>0.0000</b>	<b>5,598.5447</b>	<b>5,598.5447</b>	<b>1.5647</b>	<b>0.2682</b>	<b>5,711.2572</b>

**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					
2022	3.0729	29.9665	23.4530	0.0567	3.5972	1.3403	4.6502	1.6901	1.2334	2.6600	0.0000	5,598.5447	5,598.5447	1.5647	0.2682	5,711.2572
2023	4.6131	18.1273	22.3408	0.0560	1.3563	0.7815	2.1378	0.3654	0.7352	1.1006	0.0000	5,533.4642	5,533.4642	1.0411	0.1347	5,599.6350
<b>Maximum</b>	<b>4.6131</b>	<b>29.9665</b>	<b>23.4530</b>	<b>0.0567</b>	<b>3.5972</b>	<b>1.3403</b>	<b>4.6502</b>	<b>1.6901</b>	<b>1.2334</b>	<b>2.6600</b>	<b>0.0000</b>	<b>5,598.5447</b>	<b>5,598.5447</b>	<b>1.5647</b>	<b>0.2682</b>	<b>5,711.2572</b>

## Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	42.20	0.00	34.76	47.42	0.00	33.02	0.00	0.00	0.00	0.00	0.00	0.00

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Area	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-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
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2600e-003</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-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
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.2600e-003</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Demolition	9/1/2022	9/28/2022	5	20	
2	Grading	Grading	9/29/2022	10/26/2022	5	20	
3	Reservoir Construction	Building Construction	10/27/2022	1/3/2023	5	49	
4	Site Restoration	Paving	1/4/2023	1/31/2023	5	20	
5	Access Road	Architectural Coating	1/4/2023	1/31/2023	5	20	

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

**Acres of Grading (Grading Phase): 10**

**Acres of Paving: 5.4**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 14,113 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	3	8.00	158	0.38
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Reservoir Construction	Aerial Lifts	1	8.00	63	0.31
Reservoir Construction	Air Compressors	1	6.00	78	0.48
Reservoir Construction	Cranes	1	7.00	231	0.29
Reservoir Construction	Forklifts	3	8.00	89	0.20
Reservoir Construction	Generator Sets	1	8.00	84	0.74
Reservoir Construction	Off-Highway Trucks	1	8.00	402	0.38
Reservoir Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Reservoir Construction	Welders	0	8.00	46	0.45
Site Restoration	Pavers	2	8.00	130	0.42
Site Restoration	Paving Equipment	2	8.00	132	0.36
Site Restoration	Rollers	2	8.00	80	0.38
Access Road	Air Compressors	1	6.00	78	0.48
Reservoir Construction	Other Material Handling Equipment	1	8.00	168	0.40

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	161.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Reservoir Construction	9	99.00	39.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Access Road	1	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**3.2 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.7376	0.0000	1.7376	0.2631	0.0000	0.2631			0.0000			0.0000
Off-Road	2.9746	28.6076	22.5261	0.0489		1.3286	1.3286		1.2223	1.2223		4,734.3408	4,734.3408	1.5312		4,772.6203
<b>Total</b>	<b>2.9746</b>	<b>28.6076</b>	<b>22.5261</b>	<b>0.0489</b>	<b>1.7376</b>	<b>1.3286</b>	<b>3.0662</b>	<b>0.2631</b>	<b>1.2223</b>	<b>1.4854</b>		<b>4,734.3408</b>	<b>4,734.3408</b>	<b>1.5312</b>		<b>4,772.6203</b>



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0331	1.3112	0.3058	4.8700e-003	0.1408	0.0105	0.1513	0.0386	0.0101	0.0487		534.5886	534.5886	0.0287	0.0849	560.5952
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	0.0652	0.0477	0.6211	1.7200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		174.4750	174.4750	4.8700e-003	4.6700e-003	175.9891
<b>Total</b>	<b>0.0983</b>	<b>1.3589</b>	<b>0.9269</b>	<b>6.5900e-003</b>	<b>0.3420</b>	<b>0.0117</b>	<b>0.3537</b>	<b>0.0920</b>	<b>0.0112</b>	<b>0.1031</b>		<b>709.0636</b>	<b>709.0636</b>	<b>0.0335</b>	<b>0.0895</b>	<b>736.5843</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7819	0.0000	0.7819	0.1184	0.0000	0.1184			0.0000			0.0000
Off-Road	2.9746	28.6076	22.5261	0.0489		1.3286	1.3286		1.2223	1.2223	0.0000	4,734.3408	4,734.3408	1.5312		4,772.6203
<b>Total</b>	<b>2.9746</b>	<b>28.6076</b>	<b>22.5261</b>	<b>0.0489</b>	<b>0.7819</b>	<b>1.3286</b>	<b>2.1105</b>	<b>0.1184</b>	<b>1.2223</b>	<b>1.3407</b>	<b>0.0000</b>	<b>4,734.3408</b>	<b>4,734.3408</b>	<b>1.5312</b>		<b>4,772.6203</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.2 Site Preparation - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0331	1.3112	0.3058	4.8700e-003	0.1408	0.0105	0.1513	0.0386	0.0101	0.0487		534.5886	534.5886	0.0287	0.0849	560.5952
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	0.0652	0.0477	0.6211	1.7200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		174.4750	174.4750	4.8700e-003	4.6700e-003	175.9891
<b>Total</b>	<b>0.0983</b>	<b>1.3589</b>	<b>0.9269</b>	<b>6.5900e-003</b>	<b>0.3420</b>	<b>0.0117</b>	<b>0.3537</b>	<b>0.0920</b>	<b>0.0112</b>	<b>0.1031</b>		<b>709.0636</b>	<b>709.0636</b>	<b>0.0335</b>	<b>0.0895</b>	<b>736.5843</b>

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5750	0.0000	6.5750	3.3709	0.0000	3.3709			0.0000			0.0000
Off-Road	2.2284	21.3372	18.7700	0.0389		1.0191	1.0191		0.9375	0.9375		3,763.8566	3,763.8566	1.2173		3,794.2893
<b>Total</b>	<b>2.2284</b>	<b>21.3372</b>	<b>18.7700</b>	<b>0.0389</b>	<b>6.5750</b>	<b>1.0191</b>	<b>7.5940</b>	<b>3.3709</b>	<b>0.9375</b>	<b>4.3084</b>		<b>3,763.8566</b>	<b>3,763.8566</b>	<b>1.2173</b>		<b>3,794.2893</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1027	4.0719	0.9497	0.0151	0.4373	0.0327	0.4700	0.1199	0.0313	0.1511		1,660.213 1	1,660.213 1	0.0890	0.2636	1,740.978 8
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	0.0652	0.0477	0.6211	1.7200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		174.4750	174.4750	4.8700e-003	4.6700e-003	175.9891
<b>Total</b>	<b>0.1679</b>	<b>4.1196</b>	<b>1.5708</b>	<b>0.0169</b>	<b>0.6385</b>	<b>0.0339</b>	<b>0.6724</b>	<b>0.1732</b>	<b>0.0324</b>	<b>0.2056</b>		<b>1,834.688 1</b>	<b>1,834.688 1</b>	<b>0.0939</b>	<b>0.2682</b>	<b>1,916.967 9</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9587	0.0000	2.9587	1.5169	0.0000	1.5169			0.0000			0.0000
Off-Road	2.2284	21.3372	18.7700	0.0389		1.0191	1.0191		0.9375	0.9375	0.0000	3,763.856 6	3,763.856 6	1.2173		3,794.289 3
<b>Total</b>	<b>2.2284</b>	<b>21.3372</b>	<b>18.7700</b>	<b>0.0389</b>	<b>2.9587</b>	<b>1.0191</b>	<b>3.9778</b>	<b>1.5169</b>	<b>0.9375</b>	<b>2.4544</b>	<b>0.0000</b>	<b>3,763.856 6</b>	<b>3,763.856 6</b>	<b>1.2173</b>		<b>3,794.289 3</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.3 Grading - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1027	4.0719	0.9497	0.0151	0.4373	0.0327	0.4700	0.1199	0.0313	0.1511		1,660.213 1	1,660.213 1	0.0890	0.2636	1,740.978 8
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	0.0652	0.0477	0.6211	1.7200e-003	0.2012	1.2000e-003	0.2024	0.0534	1.1100e-003	0.0545		174.4750	174.4750	4.8700e-003	4.6700e-003	175.9891
<b>Total</b>	<b>0.1679</b>	<b>4.1196</b>	<b>1.5708</b>	<b>0.0169</b>	<b>0.6385</b>	<b>0.0339</b>	<b>0.6724</b>	<b>0.1732</b>	<b>0.0324</b>	<b>0.2056</b>		<b>1,834.688 1</b>	<b>1,834.688 1</b>	<b>0.0939</b>	<b>0.2682</b>	<b>1,916.967 9</b>

**3.4 Reservoir Construction - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0304	17.9549	18.7793	0.0398		0.8670	0.8670		0.8159	0.8159		3,832.257 4	3,832.257 4	0.9948		3,857.128 0
<b>Total</b>	<b>2.0304</b>	<b>17.9549</b>	<b>18.7793</b>	<b>0.0398</b>		<b>0.8670</b>	<b>0.8670</b>		<b>0.8159</b>	<b>0.8159</b>		<b>3,832.257 4</b>	<b>3,832.257 4</b>	<b>0.9948</b>		<b>3,857.128 0</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2022**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0698	1.8939	0.6446	7.4600e-003	0.2497	0.0190	0.2688	0.0719	0.0182	0.0901		802.5120	802.5120	0.0268	0.1164	837.8809
Worker	0.3587	0.2624	3.4161	9.4300e-003	1.1066	6.6100e-003	1.1132	0.2935	6.0900e-003	0.2996		959.6123	959.6123	0.0268	0.0257	967.9402
<b>Total</b>	<b>0.4286</b>	<b>2.1563</b>	<b>4.0606</b>	<b>0.0169</b>	<b>1.3563</b>	<b>0.0257</b>	<b>1.3820</b>	<b>0.3654</b>	<b>0.0243</b>	<b>0.3897</b>		<b>1,762.1244</b>	<b>1,762.1244</b>	<b>0.0536</b>	<b>0.1421</b>	<b>1,805.8211</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0304	17.9549	18.7793	0.0398		0.8670	0.8670		0.8159	0.8159	0.0000	3,832.2573	3,832.2573	0.9948		3,857.1280
<b>Total</b>	<b>2.0304</b>	<b>17.9549</b>	<b>18.7793</b>	<b>0.0398</b>		<b>0.8670</b>	<b>0.8670</b>		<b>0.8159</b>	<b>0.8159</b>	<b>0.0000</b>	<b>3,832.2573</b>	<b>3,832.2573</b>	<b>0.9948</b>		<b>3,857.1280</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2022**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0698	1.8939	0.6446	7.4600e-003	0.2497	0.0190	0.2688	0.0719	0.0182	0.0901		802.5120	802.5120	0.0268	0.1164	837.8809
Worker	0.3587	0.2624	3.4161	9.4300e-003	1.1066	6.6100e-003	1.1132	0.2935	6.0900e-003	0.2996		959.6123	959.6123	0.0268	0.0257	967.9402
<b>Total</b>	<b>0.4286</b>	<b>2.1563</b>	<b>4.0606</b>	<b>0.0169</b>	<b>1.3563</b>	<b>0.0257</b>	<b>1.3820</b>	<b>0.3654</b>	<b>0.0243</b>	<b>0.3897</b>		<b>1,762.1244</b>	<b>1,762.1244</b>	<b>0.0536</b>	<b>0.1421</b>	<b>1,805.8211</b>

**3.4 Reservoir Construction - 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	1.9052	16.4093	18.6142	0.0398		0.7670	0.7670		0.7215	0.7215		3,833.1508	3,833.1508	0.9914		3,857.9368
<b>Total</b>	<b>1.9052</b>	<b>16.4093</b>	<b>18.6142</b>	<b>0.0398</b>		<b>0.7670</b>	<b>0.7670</b>		<b>0.7215</b>	<b>0.7215</b>		<b>3,833.1508</b>	<b>3,833.1508</b>	<b>0.9914</b>		<b>3,857.9368</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0413	1.4859	0.5753	7.1100e-003	0.2497	8.2900e-003	0.2580	0.0719	7.9300e-003	0.0798		765.9029	765.9029	0.0256	0.1110	799.6129
Worker	0.3338	0.2321	3.1513	9.1300e-003	1.1066	6.2300e-003	1.1128	0.2935	5.7400e-003	0.2992		934.4105	934.4105	0.0241	0.0237	942.0853
<b>Total</b>	<b>0.3751</b>	<b>1.7180</b>	<b>3.7266</b>	<b>0.0162</b>	<b>1.3563</b>	<b>0.0145</b>	<b>1.3708</b>	<b>0.3654</b>	<b>0.0137</b>	<b>0.3790</b>		<b>1,700.3134</b>	<b>1,700.3134</b>	<b>0.0497</b>	<b>0.1347</b>	<b>1,741.6983</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9052	16.4093	18.6142	0.0398		0.7670	0.7670		0.7215	0.7215	0.0000	3,833.1508	3,833.1508	0.9914		3,857.9368
<b>Total</b>	<b>1.9052</b>	<b>16.4093</b>	<b>18.6142</b>	<b>0.0398</b>		<b>0.7670</b>	<b>0.7670</b>		<b>0.7215</b>	<b>0.7215</b>	<b>0.0000</b>	<b>3,833.1508</b>	<b>3,833.1508</b>	<b>0.9914</b>		<b>3,857.9368</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.4 Reservoir Construction - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0413	1.4859	0.5753	7.1100e-003	0.2497	8.2900e-003	0.2580	0.0719	7.9300e-003	0.0798		765.9029	765.9029	0.0256	0.1110	799.6129
Worker	0.3338	0.2321	3.1513	9.1300e-003	1.1066	6.2300e-003	1.1128	0.2935	5.7400e-003	0.2992		934.4105	934.4105	0.0241	0.0237	942.0853
<b>Total</b>	<b>0.3751</b>	<b>1.7180</b>	<b>3.7266</b>	<b>0.0162</b>	<b>1.3563</b>	<b>0.0145</b>	<b>1.3708</b>	<b>0.3654</b>	<b>0.0137</b>	<b>0.3790</b>		<b>1,700.3134</b>	<b>1,700.3134</b>	<b>0.0497</b>	<b>0.1347</b>	<b>1,741.6983</b>

**3.5 Site Restoration - 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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>		<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Site Restoration - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0506	0.0352	0.4775	1.3800e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		141.5774	141.5774	3.6500e-003	3.6000e-003	142.7402
<b>Total</b>	<b>0.0506</b>	<b>0.0352</b>	<b>0.4775</b>	<b>1.3800e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>141.5774</b>	<b>141.5774</b>	<b>3.6500e-003</b>	<b>3.6000e-003</b>	<b>142.7402</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>1.0327</b>	<b>10.1917</b>	<b>14.5842</b>	<b>0.0228</b>		<b>0.5102</b>	<b>0.5102</b>		<b>0.4694</b>	<b>0.4694</b>	<b>0.0000</b>	<b>2,207.5841</b>	<b>2,207.5841</b>	<b>0.7140</b>		<b>2,225.4336</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.5 Site Restoration - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0506	0.0352	0.4775	1.3800e-003	0.1677	9.4000e-004	0.1686	0.0445	8.7000e-004	0.0453		141.5774	141.5774	3.6500e-003	3.6000e-003	142.7402
<b>Total</b>	<b>0.0506</b>	<b>0.0352</b>	<b>0.4775</b>	<b>1.3800e-003</b>	<b>0.1677</b>	<b>9.4000e-004</b>	<b>0.1686</b>	<b>0.0445</b>	<b>8.7000e-004</b>	<b>0.0453</b>		<b>141.5774</b>	<b>141.5774</b>	<b>3.6500e-003</b>	<b>3.6000e-003</b>	<b>142.7402</b>

**3.6 Access Road - 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					
Archit. Coating	3.2707					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>3.4624</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Access Road - 2023**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0674	0.0469	0.6366	1.8400e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.7698	188.7698	4.8600e-003	4.7900e-003	190.3203
<b>Total</b>	<b>0.0674</b>	<b>0.0469</b>	<b>0.6366</b>	<b>1.8400e-003</b>	<b>0.2236</b>	<b>1.2600e-003</b>	<b>0.2248</b>	<b>0.0593</b>	<b>1.1600e-003</b>	<b>0.0605</b>		<b>188.7698</b>	<b>188.7698</b>	<b>4.8600e-003</b>	<b>4.7900e-003</b>	<b>190.3203</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.2707					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>3.4624</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**3.6 Access Road - 2023**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0674	0.0469	0.6366	1.8400e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.7698	188.7698	4.8600e-003	4.7900e-003	190.3203
<b>Total</b>	<b>0.0674</b>	<b>0.0469</b>	<b>0.6366</b>	<b>1.8400e-003</b>	<b>0.2236</b>	<b>1.2600e-003</b>	<b>0.2248</b>	<b>0.0593</b>	<b>1.1600e-003</b>	<b>0.0605</b>		<b>188.7698</b>	<b>188.7698</b>	<b>4.8600e-003</b>	<b>4.7900e-003</b>	<b>190.3203</b>

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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**

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

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.543139	0.060749	0.184760	0.130258	0.023830	0.006353	0.011718	0.009137	0.000812	0.000509	0.024193	0.000750	0.003791

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

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

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**5.2 Energy by Land Use - NaturalGas**

Mitigated

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

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Unmitigated	0.1013	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**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	0.0179					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>		<b>1.2600e-003</b>



Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0179					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0833					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
<b>Total</b>	<b>0.1013</b>	<b>1.0000e-005</b>	<b>5.5000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>1.1800e-003</b>	<b>1.1800e-003</b>	<b>0.0000</b>		<b>1.2600e-003</b>

**7.0 Water Detail**

---

**7.1 Mitigation Measures Water**

- Apply Water Conservation Strategy
- Use Water Efficient Irrigation System

Murphy Reservoirs Project -AQ - South Coast AQMD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

**8.0 Waste Detail**

---

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

---

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

**10.0 Stationary Equipment**

---

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

---