

Westward Ho Syphon - Riverside-Salton Sea County, Summer

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

Westward Ho Syphon
Riverside-Salton Sea County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	20.00	1000sqft	0.46	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	15			Operational Year	2022
Utility Company	Glendale Water and Power				
CO2 Intensity (lb/MW hr)	948.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - One day construction duration assumed to estimate daily emissions
- Off-road Equipment -
- Grading -
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	PhaseEndDate	10/19/2022	10/18/2022
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs

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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	0.5552	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6700e-003
Energy	0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511
Mobile	0.3320	0.4728	3.1648	6.9900e-003	0.6641	6.4800e-003	0.6706	0.1772	6.0900e-003	0.1833		711.6108	711.6108	0.0358	0.0340	722.6384
Total	0.9063	0.6465	3.3128	8.0300e-003	0.6641	0.0197	0.6838	0.1772	0.0193	0.1965		920.0278	920.0278	0.0398	0.0378	932.2941

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	0.5552	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6700e-003
Energy	0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511
Mobile	0.3320	0.4728	3.1648	6.9900e-003	0.6641	6.4800e-003	0.6706	0.1772	6.0900e-003	0.1833		711.6108	711.6108	0.0358	0.0340	722.6384
Total	0.9063	0.6465	3.3128	8.0300e-003	0.6641	0.0197	0.6838	0.1772	0.0193	0.1965		920.0278	920.0278	0.0398	0.0378	932.2941

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	10/18/2022	10/18/2022	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.38

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	8.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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Water Exposed Area

3.2 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					4.9196	0.0000	4.9196	2.5262	0.0000	2.5262			0.0000			0.0000
Off-Road	0.9972	10.3392	6.6961	0.0186		0.4650	0.4650		0.4278	0.4278		1,801.989 2	1,801.989 2	0.5828		1,816.559 2
Total	0.9972	10.3392	6.6961	0.0186	4.9196	0.4650	5.3845	2.5262	0.4278	2.9540		1,801.989 2	1,801.989 2	0.5828		1,816.559 2

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3.2 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	0.0000	0.0000	0.0000	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	0.0271	0.0163	0.2477	6.1000e-004	0.0669	3.4000e-004	0.0673	0.0178	3.2000e-004	0.0181		61.8757	61.8757	1.7700e-003	1.6500e-003	62.4105
Total	0.0271	0.0163	0.2477	6.1000e-004	0.0669	3.4000e-004	0.0673	0.0178	3.2000e-004	0.0181		61.8757	61.8757	1.7700e-003	1.6500e-003	62.4105

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					2.2138	0.0000	2.2138	1.1368	0.0000	1.1368			0.0000			0.0000
Off-Road	0.9972	10.3392	6.6961	0.0186		0.4650	0.4650		0.4278	0.4278	0.0000	1,801.9892	1,801.9892	0.5828		1,816.5592
Total	0.9972	10.3392	6.6961	0.0186	2.2138	0.4650	2.6788	1.1368	0.4278	1.5646	0.0000	1,801.9892	1,801.9892	0.5828		1,816.5592

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3.2 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	0.0000	0.0000	0.0000	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	0.0271	0.0163	0.2477	6.1000e-004	0.0669	3.4000e-004	0.0673	0.0178	3.2000e-004	0.0181		61.8757	61.8757	1.7700e-003	1.6500e-003	62.4105
Total	0.0271	0.0163	0.2477	6.1000e-004	0.0669	3.4000e-004	0.0673	0.0178	3.2000e-004	0.0181		61.8757	61.8757	1.7700e-003	1.6500e-003	62.4105

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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	0.3320	0.4728	3.1648	6.9900e-003	0.6641	6.4800e-003	0.6706	0.1772	6.0900e-003	0.1833		711.6108	711.6108	0.0358	0.0340	722.6384
Unmitigated	0.3320	0.4728	3.1648	6.9900e-003	0.6641	6.4800e-003	0.6706	0.1772	6.0900e-003	0.1833		711.6108	711.6108	0.0358	0.0340	722.6384

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	99.20	39.80	100.00	285,369	285,369
Total	99.20	39.80	100.00	285,369	285,369

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	12.50	4.20	5.40	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.531022	0.055789	0.171983	0.143721	0.027315	0.007422	0.011813	0.018850	0.000630	0.000321	0.024273	0.001102	0.005759

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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	0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511
NaturalGas Unmitigated	0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1771.51	0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511
Total		0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511

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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					
General Light Industry	1.77151	0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511
Total		0.0191	0.1737	0.1459	1.0400e-003		0.0132	0.0132		0.0132	0.0132		208.4126	208.4126	3.9900e-003	3.8200e-003	209.6511

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	0.5552	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6700e-003
Unmitigated	0.5552	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.3800e-003	4.3800e-003	1.0000e-005		4.6700e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1270					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4280					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			4.3800e-003	4.3800e-003	1.0000e-005	4.6700e-003
Total	0.5552	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			4.3800e-003	4.3800e-003	1.0000e-005	4.6700e-003

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1270					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4280					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.9000e-004	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			4.3800e-003	4.3800e-003	1.0000e-005	4.6700e-003
Total	0.5552	2.0000e-005	2.0500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			4.3800e-003	4.3800e-003	1.0000e-005	4.6700e-003

7.0 Water Detail

7.1 Mitigation Measures Water

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8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
