

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	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Energy	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	3,749.1953	3,749.1953	0.1611	0.0597	3,771.0046
Mobile	3.7396	15.8921	48.3514	0.1959	20.4118	0.1461	20.5579	5.4710	0.1358	5.6068	0.0000	18,162.5439	18,162.5439	0.8637	0.0000	18,184.1369
Waste						0.0000	0.0000		0.0000	0.0000	321.9437	0.0000	321.9437	19.0263	0.0000	797.6018
Water						0.0000	0.0000		0.0000	0.0000	49.6566	782.3474	832.0040	5.1517	0.1311	999.8537
Total	25.6711	17.6067	60.3891	0.2066	20.4118	0.3370	20.7488	5.4710	0.3267	5.7977	371.6003	22,712.6500	23,084.2503	25.2206	0.1907	23,771.6052

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	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Energy	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	3,749.1953	3,749.1953	0.1611	0.0597	3,771.0046
Mobile	3.7396	15.8921	48.3514	0.1959	20.4118	0.1461	20.5579	5.4710	0.1358	5.6068	0.0000	18,162.5439	18,162.5439	0.8637	0.0000	18,184.1369
Waste						0.0000	0.0000		0.0000	0.0000	321.9437	0.0000	321.9437	19.0263	0.0000	797.6018
Water						0.0000	0.0000		0.0000	0.0000	49.6566	782.3474	832.0040	5.1517	0.1311	999.8537
Total	25.6711	17.6067	60.3891	0.2066	20.4118	0.3370	20.7488	5.4710	0.3267	5.7977	371.6003	22,712.6500	23,084.2503	25.2206	0.1907	23,771.6052

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

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	9/1/2019	9/2/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.9

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Tractors/Loaders/Backhoes	1	0.00	0	0.00
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

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	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827
Total	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Off-Road	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827
Total	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.7396	15.8921	48.3514	0.1959	20.4118	0.1461	20.5579	5.4710	0.1358	5.6068	0.0000	18,162.5439	18,162.5439	0.8637	0.0000	18,184.1369

Unmitigated	3.7396	15.8921	48.3514	0.1959	20.4118	0.1461	20.5579	5.4710	0.1358	5.6068	0.0000	18,162.54 39	18,162.54 39	0.8637	0.0000	18,184.13 69
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4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	168.00	0.00	0.00	424,133	424,133
City Park	65.50	788.49	580.20	856,439	856,439
Condo/Townhouse	821.64	801.96	683.88	2,824,543	2,824,543
Elementary School	720.00	0.00	0.00	1,817,712	1,817,712
Industrial Park	15.98	5.85	1.73	44,155	44,155
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,650.00	1,930.95	975.30	5,633,014	5,633,014
Single Family Housing	12,367.53	12,874.05	11199.72	43,378,394	43,378,394
Total	15,808.65	16,401.30	13,440.82	54,978,390	54,978,390

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
City Park	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Condo/Townhouse	9.71	9.71	9.71	100.00	0.00	0.00	100	0	0
Elementary School	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Industrial Park	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Parking Lot	9.71	9.71	9.71	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Single Family Housing	9.71	9.71	9.71	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870
Industrial Park	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870
Parking Lot	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870
Arena	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870
City Park	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870
Condo/Townhouse	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870

Single Family Housing	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870
Regional Shopping Center	0.613162	0.038013	0.177872	0.099323	0.012979	0.005313	0.017297	0.024998	0.001928	0.001754	0.005717	0.000774	0.000870

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,916.6795	1,916.6795	0.1260	0.0261	1,927.5990
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,916.6795	1,916.6795	0.1260	0.0261	1,927.5990
NaturalGas Mitigated	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056
NaturalGas Unmitigated	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	117625	6.3000e-004	5.7700e-003	4.8400e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2769	6.2769	1.2000e-004	1.2000e-004	6.3142
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.5867e+006	8.5600e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6724	84.6724	1.6200e-003	1.5500e-003	85.1755

Elementary School	256800	1.3800e-003	0.0126	0.0106	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.7038	13.7038	2.6000e-004	2.5000e-004	13.7853
Industrial Park	129975	7.0000e-004	6.3700e-003	5.3500e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.9360	6.9360	1.3000e-004	1.3000e-004	6.9772
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	28650	1.5000e-004	1.4000e-003	1.1800e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5289	1.5289	3.0000e-005	3.0000e-005	1.5380
Single Family Housing	3.22203e+007	0.1737	1.4847	0.6318	9.4800e-003		0.1200	0.1200		0.1200	0.1200	0.0000	1,719.3979	1,719.3979	0.0330	0.0315	1,729.6154
Total		0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	117625	6.3000e-004	5.7700e-003	4.8400e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2769	6.2769	1.2000e-004	1.2000e-004	6.3142
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.5867e+006	8.5600e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6724	84.6724	1.6200e-003	1.5500e-003	85.1755
Elementary School	256800	1.3800e-003	0.0126	0.0106	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.7038	13.7038	2.6000e-004	2.5000e-004	13.7853
Industrial Park	129975	7.0000e-004	6.3700e-003	5.3500e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.9360	6.9360	1.3000e-004	1.3000e-004	6.9772
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	28650	1.5000e-004	1.4000e-003	1.1800e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5289	1.5289	3.0000e-005	3.0000e-005	1.5380
Single Family Housing	3.22203e+007	0.1737	1.4847	0.6318	9.4800e-003		0.1200	0.1200		0.1200	0.1200	0.0000	1,719.3979	1,719.3979	0.0330	0.0315	1,729.6154
Total		0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	90375	18.0822	1.1900e-003	2.5000e-004	18.1852
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	602946	120.6372	7.9300e-003	1.6400e-003	121.3245
Elementary School	276600	55.3420	3.6400e-003	7.5000e-004	55.6573
Industrial Park	88200	17.6470	1.1600e-003	2.4000e-004	17.7476
Parking Lot	192750	38.5653	2.5400e-003	5.2000e-004	38.7851
Regional Shopping Center	165300	33.0732	2.1700e-003	4.5000e-004	33.2616
Single Family Housing	8.16341e+006	1,633.3326	0.1074	0.0222	1,642.6379
Total		1,916.6795	0.1260	0.0261	1,927.5991

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	90375	18.0822	1.1900e-003	2.5000e-004	18.1852
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	602946	120.6372	7.9300e-003	1.6400e-003	121.3245
Elementary School	276600	55.3420	3.6400e-003	7.5000e-004	55.6573
Industrial Park	88200	17.6470	1.1600e-003	2.4000e-004	17.7476

Parking Lot	192750	38.5653	2.5400e-003	5.2000e-004	38.7851
Regional Shopping Center	165300	33.0732	2.1700e-003	4.5000e-004	33.2616
Single Family Housing	8.16341e+006	1,633.3326	0.1074	0.0222	1,642.6379
Total		1,916.6795	0.1260	0.0261	1,927.5991

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Unmitigated	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081

6.2 Area by SubCategory

Unmitigated

[illegible]

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3411	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Total	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081

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	4.1325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.2728					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3411	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Total	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	832.0040	5.1517	0.1311	999.8537
Unmitigated	832.0040	5.1517	0.1311	999.8537

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	5.99421 / 17.9826	57.4914	0.1990	5.3700e-003	64.0655
Condo/Townhouse	2.86707 / 2.86707	14.7522	0.0943	2.3900e-003	17.8240
Elementary School	0.749162 / 0.749162	3.8547	0.0247	6.3000e-004	4.6574
Industrial Park	4.4895 / 4.4895	23.1002	0.1477	3.7500e-003	27.9103
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17256 / 1.17256	6.0333	0.0386	9.8000e-004	7.2896
Single Family Housing	141.248 / 141.248	726.7723	4.6474	0.1180	878.1071
Total		832.0040	5.1517	0.1311	999.8537

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	5.99421 / 17.9826	57.4914	0.1990	5.3700e-003	64.0655

Condo/Townhouse	2.86707 / 2.86707	14.7522	0.0943	2.3900e-003	17.8240
Elementary School	0.749162 / 0.749162	3.8547	0.0247	6.3000e-004	4.6574
Industrial Park	4.4895 / 4.4895	23.1002	0.1477	3.7500e-003	27.9103
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17256 / 1.17256	6.0333	0.0386	9.8000e-004	7.2896
Single Family Housing	141.248 / 141.248	726.7723	4.6474	0.1180	878.1071
Total		832.0040	5.1517	0.1311	999.8537

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	321.9437	19.0263	0.0000	797.6018
Unmitigated	321.9437	19.0263	0.0000	797.6018

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1586	321.9437	19.0263	0.0000	797.6018
Total		321.9437	19.0263	0.0000	797.6018

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000

Single Family Housing	1586	321.9437	19.0263	0.0000	797.6018
Total		321.9437	19.0263	0.0000	797.6018

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

Proctor Valley EIR Operational LEA San Diego County, Mitigation Report

Construction Mitigation Summary

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

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Cranes	Diesel	No Change	0	1	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	4	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Cranes	2.20000E-004	2.63000E-003	1.00000E-003	0.00000E+000	1.10000E-004	1.00000E-004	0.00000E+000	2.26710E-001	2.26710E-001	7.00000E-005	0.00000E+000	2.28500E-001
Forklifts	2.40000E-004	2.14000E-003	1.79000E-003	0.00000E+000	1.70000E-004	1.50000E-004	0.00000E+000	2.05910E-001	2.05910E-001	7.00000E-005	0.00000E+000	2.07540E-001
Generator Sets	2.20000E-004	1.89000E-003	1.86000E-003	0.00000E+000	1.10000E-004	1.10000E-004	0.00000E+000	2.82600E-001	2.82600E-001	2.00000E-005	0.00000E+000	2.83050E-001
Tractors/Loaders/Backhoes	3.10000E-004	3.07000E-003	3.02000E-003	0.00000E+000	2.00000E-004	1.90000E-004	0.00000E+000	3.66180E-001	3.66180E-001	1.20000E-004	0.00000E+000	3.69080E-001

Welders	1.90000E-004	8.10000E-004	9.00000E-004	0.00000E+000	5.00000E-005	5.00000E-005	0.00000E+000	9.41100E-002	9.41100E-002	2.00000E-005	0.00000E+000	9.45000E-002
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Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Cranes	2.20000E-004	2.63000E-003	1.00000E-003	0.00000E+000	1.10000E-004	1.00000E-004	0.00000E+000	2.26710E-001	2.26710E-001	7.00000E-005	0.00000E+000	2.28500E-001
Forklifts	2.40000E-004	2.14000E-003	1.79000E-003	0.00000E+000	1.70000E-004	1.50000E-004	0.00000E+000	2.05910E-001	2.05910E-001	7.00000E-005	0.00000E+000	2.07540E-001
Generator Sets	2.20000E-004	1.89000E-003	1.86000E-003	0.00000E+000	1.10000E-004	1.10000E-004	0.00000E+000	2.82600E-001	2.82600E-001	2.00000E-005	0.00000E+000	2.83050E-001
Tractors/Loaders/Bac khoes	3.10000E-004	3.07000E-003	3.02000E-003	0.00000E+000	2.00000E-004	1.90000E-004	0.00000E+000	3.66180E-001	3.66180E-001	1.20000E-004	0.00000E+000	3.69080E-001
Welders	1.90000E-004	8.10000E-004	9.00000E-004	0.00000E+000	5.00000E-005	5.00000E-005	0.00000E+000	9.41100E-002	9.41100E-002	2.00000E-005	0.00000E+000	9.45000E-002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Bac khoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input	Mitigation Input	Mitigation Input
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	PM2.5 Reduction	
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	PM2.5 Reduction	
No	Water Exposed Area	PM10 Reduction	PM2.5 Reduction	Frequency (per day)
No	Unpaved Road Mitigation	Moisture Content %	Vehicle Speed (mph)	

No	Clean Paved Road	% PM Reduction	0.00				
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		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.03	0.20		
No	Land Use	Improve Walkability Design	0.00			

No	Land Use	Improve Destination Accessibility	0.00		
No	Land Use	Increase Transit Accessibility	0.25		
No	Land Use	Integrate Below Market Rate Housing	0.00		
	Land Use	Land Use SubTotal	0.00		
No	Neighborhood Enhancements	Improve Pedestrian Network			
No	Neighborhood Enhancements	Provide Traffic Calming Measures			
No	Neighborhood Enhancements	Implement NEV Network	0.00		
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00		
No	Parking Policy Pricing	Limit Parking Supply	0.00		
No	Parking Policy Pricing	Unbundle Parking Costs	0.00		
No	Parking Policy Pricing	On-street Market Pricing	0.00		
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00		
No	Transit Improvements	Provide BRT System	0.00		
No	Transit Improvements	Expand Transit Network	0.00		
No	Transit Improvements	Increase Transit Frequency	0.00		
	Transit Improvements	Transit Improvements Subtotal	0.00		
		Land Use and Site Enhancement Subtotal	0.00		
No	Commute	Implement Trip Reduction Program			
No	Commute	Transit Subsidy			
No	Commute	Implement Employee Parking "Cash Out"			
No	Commute	Workplace Parking Charge			
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00		
No	Commute	Market Commute Trip Reduction Option	0.00		
No	Commute	Employee Vanpool/Shuttle	0.00		2.00
No	Commute	Provide Ride Sharing Program			

	Commute	Commute Subtotal	0.00		
No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.00		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	150.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	250.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00

Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Proctor Valley EIR Operational LEA - San Diego County, Annual

Proctor Valley EIR Operational LEA

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	60.00	1000sqft	8.80	60,000.00	0
Industrial Park	7.50	1000sqft	2.30	7,500.00	0
Parking Lot	257.00	1000sqft	5.90	257,000.00	0
Arena	5.60	Acre	5.60	12,500.00	0
City Park	13.10	Acre	13.10	1,680.00	0
Condo/Townhouse	123.00	Dwelling Unit	8.20	216,000.00	352
Single Family Housing	1,407.00	Dwelling Unit	502.00	4,105,750.00	4024
Regional Shopping Center	15.00	1000sqft	1.50	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	64
Climate Zone	13			Operational Year	2028
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWahr)	427.49	CH4 Intensity (lb/MWahr)	0.029	N2O Intensity (lb/MWahr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS

Land Use - Refer to CalEEMod Input Matrix Table 4

Construction Phase - No Construction

Off-road Equipment - No construction

Trips and VMT - No Construction

Vehicle Trips - Refer to CalEEMod Input Matrix Table 5

Woodstoves - Refer to CalEEMod Input Matrix Tables 10 and 11

Consumer Products -

Area Coating - Refer to CalEEMod Input Matrix Table 13

Energy Use - Refer to CalEEMod Input Matrix Table 15

Water And Wastewater - Refer to CalEEMod Input Matrix Table 16

Solid Waste - Refer to CalEEMod Input Matrix Table 18

Area Mitigation - --

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblConstructionPhase	NumDays	9,300.00	1.00
tblEnergyUse	LightingElect	2.91	2.49
tblEnergyUse	LightingElect	1,001.10	469.50
tblEnergyUse	LightingElect	2.61	2.23
tblEnergyUse	LightingElect	3.91	3.34
tblEnergyUse	LightingElect	0.88	0.75
tblEnergyUse	LightingElect	6.39	5.46
tblEnergyUse	LightingElect	1,608.84	764.00
tblEnergyUse	NT24E	4.27	3.65
tblEnergyUse	NT24E	4,109.59	3,639.25
tblEnergyUse	NT24E	1.18	1.01
tblEnergyUse	NT24E	4.97	4.25
tblEnergyUse	NT24E	3.16	2.70
tblEnergyUse	NT24E	6,680.41	3,936.00
tblEnergyUse	NT24NG	7.25	5.99
tblEnergyUse	NT24NG	4,180.00	1,400.00
tblEnergyUse	NT24NG	0.48	0.00

tblEnergyUse	NT24NG	4.20	3.59
tblEnergyUse	NT24NG	1.09	0.93
tblEnergyUse	NT24NG	4,180.00	5,200.00
tblEnergyUse	T24E	1.27	1.09
tblEnergyUse	T24E	257.33	793.25
tblEnergyUse	T24E	1.60	1.37
tblEnergyUse	T24E	4.88	4.17
tblEnergyUse	T24E	3.34	2.86
tblEnergyUse	T24E	374.93	1,102.00
tblEnergyUse	T24NG	4.34	3.42
tblEnergyUse	T24NG	12,915.01	11,500.00
tblEnergyUse	T24NG	5.46	4.28
tblEnergyUse	T24NG	16.07	13.74
tblEnergyUse	T24NG	1.15	0.98
tblEnergyUse	T24NG	24,312.55	17,700.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	67.65	0.00
tblFireplaces	NumberGas	773.85	0.00
tblFireplaces	NumberNoFireplace	12.30	0.00
tblFireplaces	NumberNoFireplace	140.70	0.00
tblFireplaces	NumberWood	43.05	0.00
tblFireplaces	NumberWood	492.45	0.00
tblLandUse	BuildingSpaceSquareFeet	243,936.00	12,500.00
tblLandUse	BuildingSpaceSquareFeet	0.00	1,680.00
tblLandUse	BuildingSpaceSquareFeet	123,000.00	216,000.00
tblLandUse	BuildingSpaceSquareFeet	2,532,600.00	4,105,750.00
tblLandUse	GreenSpaceSquareFeet	570,636.00	0.00

tblLandUse	LandUseSquareFeet	243,936.00	12,500.00
tblLandUse	LandUseSquareFeet	570,636.00	1,680.00
tblLandUse	LandUseSquareFeet	123,000.00	216,000.00
tblLandUse	LandUseSquareFeet	2,532,600.00	4,105,750.00
tblLandUse	LotAcreage	1.38	8.80
tblLandUse	LotAcreage	0.17	2.30
tblLandUse	LotAcreage	7.69	8.20
tblLandUse	LotAcreage	456.82	502.00
tblLandUse	LotAcreage	0.34	1.50
tblProjectCharacteristics	CO2IntensityFactor	720.49	427.49
tblProjectCharacteristics	OperationalYear	2018	2028
tblProjectCharacteristics	PrecipitationFrequency	40	64
tblSolidWaste	SolidWasteGenerationRate	0.48	0.00
tblSolidWaste	SolidWasteGenerationRate	1.13	0.00
tblSolidWaste	SolidWasteGenerationRate	56.58	0.00
tblSolidWaste	SolidWasteGenerationRate	78.00	0.00
tblSolidWaste	SolidWasteGenerationRate	9.30	0.00
tblSolidWaste	SolidWasteGenerationRate	15.75	0.00
tblSolidWaste	SolidWasteGenerationRate	1,649.84	1,586.00
tblTripsAndVMT	VendorTripNumber	222.00	0.00
tblTripsAndVMT	WorkerTripNumber	742.00	0.00
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TTP	81.00	100.00
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	30.00	100.00
tblVehicleTrips	CC_TTP	28.00	100.00
tblVehicleTrips	CC_TTP	64.70	100.00

tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	65.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	9.71
tblVehicleTrips	HO_TL	7.50	9.71
tblVehicleTrips	HO_TTP	39.60	0.00
tblVehicleTrips	HO_TTP	39.60	0.00

tblVehicleTrips	HS_TL	7.30	9.71
tblVehicleTrips	HS_TL	7.30	9.71
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HW_TL	10.80	9.71
tblVehicleTrips	HW_TL	10.80	9.71
tblVehicleTrips	HW_TTP	41.60	100.00
tblVehicleTrips	HW_TTP	41.60	100.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	79.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	60.19
tblVehicleTrips	ST_TR	5.67	6.52
tblVehicleTrips	ST_TR	2.49	0.78
tblVehicleTrips	ST_TR	49.97	128.73
tblVehicleTrips	ST_TR	9.91	9.15
tblVehicleTrips	SU_TR	16.74	44.29
tblVehicleTrips	SU_TR	4.84	5.56
tblVehicleTrips	SU_TR	0.73	0.23
tblVehicleTrips	SU_TR	25.24	65.02
tblVehicleTrips	SU_TR	8.62	7.96

tblVehicleTrips	WD_TR	33.33	30.00
tblVehicleTrips	WD_TR	1.89	5.00
tblVehicleTrips	WD_TR	5.81	6.68
tblVehicleTrips	WD_TR	15.43	12.00
tblVehicleTrips	WD_TR	6.83	2.13
tblVehicleTrips	WD_TR	42.70	110.00
tblVehicleTrips	WD_TR	9.52	8.79
tblWater	IndoorWaterUseRate	7,538,477.06	0.00
tblWater	IndoorWaterUseRate	0.00	5,994,212.50
tblWater	IndoorWaterUseRate	8,013,945.15	2,867,075.00
tblWater	IndoorWaterUseRate	1,739,815.03	749,162.50
tblWater	IndoorWaterUseRate	1,734,375.00	4,489,500.00
tblWater	IndoorWaterUseRate	1,111,087.82	1,172,562.50
tblWater	IndoorWaterUseRate	91,671,714.05	141,247,700.00
tblWater	OutdoorWaterUseRate	481,179.39	0.00
tblWater	OutdoorWaterUseRate	15,608,405.68	17,982,637.50
tblWater	OutdoorWaterUseRate	5,052,269.77	2,867,075.00
tblWater	OutdoorWaterUseRate	4,473,810.08	749,162.50
tblWater	OutdoorWaterUseRate	0.00	4,489,500.00
tblWater	OutdoorWaterUseRate	680,989.31	1,172,562.50
tblWater	OutdoorWaterUseRate	57,793,037.12	141,247,700.00
tblWoodstoves	NumberCatalytic	6.15	0.00
tblWoodstoves	NumberCatalytic	70.35	0.00
tblWoodstoves	NumberNoncatalytic	6.15	0.00
tblWoodstoves	NumberNoncatalytic	70.35	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	1.1800e-003	0.0105	8.5800e-003	1.0000e-005	0.0000	6.4000e-004	6.4000e-004	0.0000	6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827
Maximum	1.1800e-003	0.0105	8.5800e-003	1.0000e-005	0.0000	6.4000e-004	6.4000e-004	0.0000	6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827

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					
2019	1.1800e-003	0.0105	8.5800e-003	1.0000e-005	0.0000	6.4000e-004	6.4000e-004	0.0000	6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827
Maximum	1.1800e-003	0.0105	8.5800e-003	1.0000e-005	0.0000	6.4000e-004	6.4000e-004	0.0000	6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2019	9-30-2019	0.0167	0.0167
		Highest	0.0167	0.0167

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	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Energy	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	3,690.0568	3,690.0568	0.1611	0.0597	3,711.8661
Mobile	3.5991	15.3714	46.4953	0.1911	20.4099	0.1349	20.5448	5.4701	0.1254	5.5955	0.0000	17,726.3132	17,726.3132	0.8410	0.0000	17,747.3385
Waste						0.0000	0.0000		0.0000	0.0000	321.9437	0.0000	321.9437	19.0263	0.0000	797.6018
Water						0.0000	0.0000		0.0000	0.0000	49.6566	758.2083	807.8649	5.1517	0.1311	975.7147
Total	25.5306	17.0861	58.5331	0.2018	20.4099	0.3258	20.7357	5.4701	0.3163	5.7864	371.6003	22,193.1417	22,564.7420	25.1979	0.1907	23,251.5292

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	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Energy	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	3,690.0568	3,690.0568	0.1611	0.0597	3,711.8661
Mobile	3.5991	15.3714	46.4953	0.1911	20.4099	0.1349	20.5448	5.4701	0.1254	5.5955	0.0000	17,726.3132	17,726.3132	0.8410	0.0000	17,747.3385
Waste						0.0000	0.0000		0.0000	0.0000	321.9437	0.0000	321.9437	19.0263	0.0000	797.6018
Water						0.0000	0.0000		0.0000	0.0000	49.6566	758.2083	807.8649	5.1517	0.1311	975.7147
Total	25.5306	17.0861	58.5331	0.2018	20.4099	0.3258	20.7357	5.4701	0.3163	5.7864	371.6003	22,193.1417	22,564.7420	25.1979	0.1907	23,251.5292

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

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	9/1/2019	9/2/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.9

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Tractors/Loaders/Backhoes	1	0.00	0	0.00
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

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	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827
Total	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

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

Off-Road	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827
Total	1.1800e-003	0.0105	8.5800e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.1000e-004	6.1000e-004	0.0000	1.1755	1.1755	2.9000e-004	0.0000	1.1827

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.5991	15.3714	46.4953	0.1911	20.4099	0.1349	20.5448	5.4701	0.1254	5.5955	0.0000	17,726.3132	17,726.3132	0.8410	0.0000	17,747.3385

Unmitigated	3.5991	15.3714	46.4953	0.1911	20.4099	0.1349	20.5448	5.4701	0.1254	5.5955	0.0000	17,726.31 32	17,726.31 32	0.8410	0.0000	17,747.33 85
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4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	168.00	0.00	0.00	424,133	424,133
City Park	65.50	788.49	580.20	856,439	856,439
Condo/Townhouse	821.64	801.96	683.88	2,824,543	2,824,543
Elementary School	720.00	0.00	0.00	1,817,712	1,817,712
Industrial Park	15.98	5.85	1.73	44,155	44,155
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,650.00	1,930.95	975.30	5,633,014	5,633,014
Single Family Housing	12,367.53	12,874.05	11199.72	43,378,394	43,378,394
Total	15,808.65	16,401.30	13,440.82	54,978,390	54,978,390

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
City Park	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Condo/Townhouse	9.71	9.71	9.71	100.00	0.00	0.00	100	0	0
Elementary School	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Industrial Park	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Parking Lot	9.71	9.71	9.71	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Single Family Housing	9.71	9.71	9.71	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Industrial Park	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Parking Lot	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Arena	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
City Park	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Condo/Townhouse	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837

Single Family Housing	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Regional Shopping Center	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,857.5410	1,857.5410	0.1260	0.0261	1,868.4605
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,857.5410	1,857.5410	0.1260	0.0261	1,868.4605
NaturalGas Mitigated	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056
NaturalGas Unmitigated	0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	117625	6.3000e-004	5.7700e-003	4.8400e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2769	6.2769	1.2000e-004	1.2000e-004	6.3142
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.5867e+006	8.5600e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6724	84.6724	1.6200e-003	1.5500e-003	85.1755

Elementary School	256800	1.3800e-003	0.0126	0.0106	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.7038	13.7038	2.6000e-004	2.5000e-004	13.7853
Industrial Park	129975	7.0000e-004	6.3700e-003	5.3500e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.9360	6.9360	1.3000e-004	1.3000e-004	6.9772
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	28650	1.5000e-004	1.4000e-003	1.1800e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5289	1.5289	3.0000e-005	3.0000e-005	1.5380
Single Family Housing	3.22203e+007	0.1737	1.4847	0.6318	9.4800e-003		0.1200	0.1200		0.1200	0.1200	0.0000	1,719.3979	1,719.3979	0.0330	0.0315	1,729.6154
Total		0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Arena	117625	6.3000e-004	5.7700e-003	4.8400e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2769	6.2769	1.2000e-004	1.2000e-004	6.3142
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.5867e+006	8.5600e-003	0.0731	0.0311	4.7000e-004		5.9100e-003	5.9100e-003		5.9100e-003	5.9100e-003	0.0000	84.6724	84.6724	1.6200e-003	1.5500e-003	85.1755
Elementary School	256800	1.3800e-003	0.0126	0.0106	8.0000e-005		9.6000e-004	9.6000e-004		9.6000e-004	9.6000e-004	0.0000	13.7038	13.7038	2.6000e-004	2.5000e-004	13.7853
Industrial Park	129975	7.0000e-004	6.3700e-003	5.3500e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.9360	6.9360	1.3000e-004	1.3000e-004	6.9772
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	28650	1.5000e-004	1.4000e-003	1.1800e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5289	1.5289	3.0000e-005	3.0000e-005	1.5380
Single Family Housing	3.22203e+007	0.1737	1.4847	0.6318	9.4800e-003		0.1200	0.1200		0.1200	0.1200	0.0000	1,719.3979	1,719.3979	0.0330	0.0315	1,729.6154
Total		0.1852	1.5839	0.6848	0.0101		0.1279	0.1279		0.1279	0.1279	0.0000	1,832.5158	1,832.5158	0.0351	0.0336	1,843.4056

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	90375	17.5243	1.1900e-003	2.5000e-004	17.6273
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	602946	116.9150	7.9300e-003	1.6400e-003	117.6023
Elementary School	276600	53.6345	3.6400e-003	7.5000e-004	53.9498
Industrial Park	88200	17.1025	1.1600e-003	2.4000e-004	17.2031
Parking Lot	192750	37.3754	2.5400e-003	5.2000e-004	37.5951
Regional Shopping Center	165300	32.0527	2.1700e-003	4.5000e-004	32.2411
Single Family Housing	8.16341e+006	1,582.9366	0.1074	0.0222	1,592.2419
Total		1,857.5410	0.1260	0.0261	1,868.4605

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	90375	17.5243	1.1900e-003	2.5000e-004	17.6273
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	602946	116.9150	7.9300e-003	1.6400e-003	117.6023
Elementary School	276600	53.6345	3.6400e-003	7.5000e-004	53.9498
Industrial Park	88200	17.1025	1.1600e-003	2.4000e-004	17.2031

Parking Lot	192750	37.3754	2.5400e-003	5.2000e-004	37.5951
Regional Shopping Center	165300	32.0527	2.1700e-003	4.5000e-004	32.2411
Single Family Housing	8.16341e+006	1,582.9366	0.1074	0.0222	1,592.2419
Total		1,857.5410	0.1260	0.0261	1,868.4605

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Unmitigated	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081

6.2 Area by SubCategory

Unmitigated

[illegible]

Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3411	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Total	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081

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	4.1325					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	17.2728					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3411	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081
Total	21.7464	0.1308	11.3529	6.0000e-004		0.0630	0.0630		0.0630	0.0630	0.0000	18.5635	18.5635	0.0178	0.0000	19.0081

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	807.8649	5.1517	0.1311	975.7147
Unmitigated	807.8649	5.1517	0.1311	975.7147

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	5.99421 / 17.9826	55.7762	0.1990	5.3700e-003	62.3503
Condo/Townhouse	2.86707 / 2.86707	14.3251	0.0943	2.3900e-003	17.3969
Elementary School	0.749162 / 0.749162	3.7431	0.0247	6.3000e-004	4.5458
Industrial Park	4.4895 / 4.4895	22.4314	0.1477	3.7500e-003	27.2415
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17256 / 1.17256	5.8586	0.0386	9.8000e-004	7.1149
Single Family Housing	141.248 / 141.248	705.7306	4.6474	0.1180	857.0654
Total		807.8649	5.1517	0.1311	975.7147

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	0 / 0	0.0000	0.0000	0.0000	0.0000
City Park	5.99421 / 17.9826	55.7762	0.1990	5.3700e-003	62.3503

Condo/Townhouse	2.86707 / 2.86707	14.3251	0.0943	2.3900e-003	17.3969
Elementary School	0.749162 / 0.749162	3.7431	0.0247	6.3000e-004	4.5458
Industrial Park	4.4895 / 4.4895	22.4314	0.1477	3.7500e-003	27.2415
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.17256 / 1.17256	5.8586	0.0386	9.8000e-004	7.1149
Single Family Housing	141.248 / 141.248	705.7306	4.6474	0.1180	857.0654
Total		807.8649	5.1517	0.1311	975.7147

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	321.9437	19.0263	0.0000	797.6018
Unmitigated	321.9437	19.0263	0.0000	797.6018

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1586	321.9437	19.0263	0.0000	797.6018
Total		321.9437	19.0263	0.0000	797.6018

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0	0.0000	0.0000	0.0000	0.0000
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000
Elementary School	0	0.0000	0.0000	0.0000	0.0000
Industrial Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000

Single Family Housing	1586	321.9437	19.0263	0.0000	797.6018
Total		321.9437	19.0263	0.0000	797.6018

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

Proctor Valley EIR Operational LEA - San Diego County, Winter

Proctor Valley EIR Operational LEA

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	60.00	1000sqft	8.80	60,000.00	0
Industrial Park	7.50	1000sqft	2.30	7,500.00	0
Parking Lot	257.00	1000sqft	5.90	257,000.00	0
Arena	5.60	Acre	5.60	12,500.00	0
City Park	13.10	Acre	13.10	1,680.00	0
Condo/Townhouse	123.00	Dwelling Unit	8.20	216,000.00	352
Single Family Housing	1,407.00	Dwelling Unit	502.00	4,105,750.00	4024
Regional Shopping Center	15.00	1000sqft	1.50	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	64
Climate Zone	13			Operational Year	2028
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	427.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS

Land Use - Refer to CalEEMod Input Matrix Table 4

Construction Phase - No Construction

Off-road Equipment - No construction

Trips and VMT - No Construction

Vehicle Trips - Refer to CalEEMod Input Matrix Table 5

Woodstoves - Refer to CalEEMod Input Matrix Tables 10 and 11

Consumer Products -

Area Coating - Refer to CalEEMod Input Matrix Table 13

Energy Use - Refer to CalEEMod Input Matrix Table 15

Water And Wastewater - Refer to CalEEMod Input Matrix Table 16

Solid Waste - Refer to CalEEMod Input Matrix Table 18

Area Mitigation - --

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblConstructionPhase	NumDays	9,300.00	1.00
tblEnergyUse	LightingElect	2.91	2.49
tblEnergyUse	LightingElect	1,001.10	469.50
tblEnergyUse	LightingElect	2.61	2.23
tblEnergyUse	LightingElect	3.91	3.34
tblEnergyUse	LightingElect	0.88	0.75
tblEnergyUse	LightingElect	6.39	5.46
tblEnergyUse	LightingElect	1,608.84	764.00
tblEnergyUse	NT24E	4.27	3.65
tblEnergyUse	NT24E	4,109.59	3,639.25
tblEnergyUse	NT24E	1.18	1.01
tblEnergyUse	NT24E	4.97	4.25
tblEnergyUse	NT24E	3.16	2.70
tblEnergyUse	NT24E	6,680.41	3,936.00
tblEnergyUse	NT24NG	7.25	5.99
tblEnergyUse	NT24NG	4,180.00	1,400.00
tblEnergyUse	NT24NG	0.48	0.00

tblEnergyUse	NT24NG	4.20	3.59
tblEnergyUse	NT24NG	1.09	0.93
tblEnergyUse	NT24NG	4,180.00	5,200.00
tblEnergyUse	T24E	1.27	1.09
tblEnergyUse	T24E	257.33	793.25
tblEnergyUse	T24E	1.60	1.37
tblEnergyUse	T24E	4.88	4.17
tblEnergyUse	T24E	3.34	2.86
tblEnergyUse	T24E	374.93	1,102.00
tblEnergyUse	T24NG	4.34	3.42
tblEnergyUse	T24NG	12,915.01	11,500.00
tblEnergyUse	T24NG	5.46	4.28
tblEnergyUse	T24NG	16.07	13.74
tblEnergyUse	T24NG	1.15	0.98
tblEnergyUse	T24NG	24,312.55	17,700.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	67.65	0.00
tblFireplaces	NumberGas	773.85	0.00
tblFireplaces	NumberNoFireplace	12.30	0.00
tblFireplaces	NumberNoFireplace	140.70	0.00
tblFireplaces	NumberWood	43.05	0.00
tblFireplaces	NumberWood	492.45	0.00
tblLandUse	BuildingSpaceSquareFeet	243,936.00	12,500.00
tblLandUse	BuildingSpaceSquareFeet	0.00	1,680.00
tblLandUse	BuildingSpaceSquareFeet	123,000.00	216,000.00
tblLandUse	BuildingSpaceSquareFeet	2,532,600.00	4,105,750.00
tblLandUse	GreenSpaceSquareFeet	570,636.00	0.00

tblLandUse	LandUseSquareFeet	243,936.00	12,500.00
tblLandUse	LandUseSquareFeet	570,636.00	1,680.00
tblLandUse	LandUseSquareFeet	123,000.00	216,000.00
tblLandUse	LandUseSquareFeet	2,532,600.00	4,105,750.00
tblLandUse	LotAcreage	1.38	8.80
tblLandUse	LotAcreage	0.17	2.30
tblLandUse	LotAcreage	7.69	8.20
tblLandUse	LotAcreage	456.82	502.00
tblLandUse	LotAcreage	0.34	1.50
tblProjectCharacteristics	CO2IntensityFactor	720.49	427.49
tblProjectCharacteristics	OperationalYear	2018	2028
tblProjectCharacteristics	PrecipitationFrequency	40	64
tblSolidWaste	SolidWasteGenerationRate	0.48	0.00
tblSolidWaste	SolidWasteGenerationRate	1.13	0.00
tblSolidWaste	SolidWasteGenerationRate	56.58	0.00
tblSolidWaste	SolidWasteGenerationRate	78.00	0.00
tblSolidWaste	SolidWasteGenerationRate	9.30	0.00
tblSolidWaste	SolidWasteGenerationRate	15.75	0.00
tblSolidWaste	SolidWasteGenerationRate	1,649.84	1,586.00
tblTripsAndVMT	VendorTripNumber	222.00	0.00
tblTripsAndVMT	WorkerTripNumber	742.00	0.00
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TL	7.30	9.71
tblVehicleTrips	CC_TTP	81.00	100.00
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	30.00	100.00
tblVehicleTrips	CC_TTP	28.00	100.00
tblVehicleTrips	CC_TTP	64.70	100.00

tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TL	7.30	9.71
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	13.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TL	9.50	9.71
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	65.00	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	25.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	7.50	9.71
tblVehicleTrips	HO_TL	7.50	9.71
tblVehicleTrips	HO_TTP	39.60	0.00
tblVehicleTrips	HO_TTP	39.60	0.00

tblVehicleTrips	HS_TL	7.30	9.71
tblVehicleTrips	HS_TL	7.30	9.71
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HS_TTP	18.80	0.00
tblVehicleTrips	HW_TL	10.80	9.71
tblVehicleTrips	HW_TL	10.80	9.71
tblVehicleTrips	HW_TTP	41.60	100.00
tblVehicleTrips	HW_TTP	41.60	100.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	12.00	0.00
tblVehicleTrips	PB_TP	2.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	66.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	63.00	100.00
tblVehicleTrips	PR_TP	79.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	22.75	60.19
tblVehicleTrips	ST_TR	5.67	6.52
tblVehicleTrips	ST_TR	2.49	0.78
tblVehicleTrips	ST_TR	49.97	128.73
tblVehicleTrips	ST_TR	9.91	9.15
tblVehicleTrips	SU_TR	16.74	44.29
tblVehicleTrips	SU_TR	4.84	5.56
tblVehicleTrips	SU_TR	0.73	0.23
tblVehicleTrips	SU_TR	25.24	65.02
tblVehicleTrips	SU_TR	8.62	7.96

tblVehicleTrips	WD_TR	33.33	30.00
tblVehicleTrips	WD_TR	1.89	5.00
tblVehicleTrips	WD_TR	5.81	6.68
tblVehicleTrips	WD_TR	15.43	12.00
tblVehicleTrips	WD_TR	6.83	2.13
tblVehicleTrips	WD_TR	42.70	110.00
tblVehicleTrips	WD_TR	9.52	8.79
tblWater	IndoorWaterUseRate	7,538,477.06	0.00
tblWater	IndoorWaterUseRate	0.00	5,994,212.50
tblWater	IndoorWaterUseRate	8,013,945.15	2,867,075.00
tblWater	IndoorWaterUseRate	1,739,815.03	749,162.50
tblWater	IndoorWaterUseRate	1,734,375.00	4,489,500.00
tblWater	IndoorWaterUseRate	1,111,087.82	1,172,562.50
tblWater	IndoorWaterUseRate	91,671,714.05	141,247,700.00
tblWater	OutdoorWaterUseRate	481,179.39	0.00
tblWater	OutdoorWaterUseRate	15,608,405.68	17,982,637.50
tblWater	OutdoorWaterUseRate	5,052,269.77	2,867,075.00
tblWater	OutdoorWaterUseRate	4,473,810.08	749,162.50
tblWater	OutdoorWaterUseRate	0.00	4,489,500.00
tblWater	OutdoorWaterUseRate	680,989.31	1,172,562.50
tblWater	OutdoorWaterUseRate	57,793,037.12	141,247,700.00
tblWoodstoves	NumberCatalytic	6.15	0.00
tblWoodstoves	NumberCatalytic	70.35	0.00
tblWoodstoves	NumberNoncatalytic	6.15	0.00
tblWoodstoves	NumberNoncatalytic	70.35	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.3612	21.0788	17.1638	0.0269	0.0000	1.2899	1.2899	0.0000	1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313	0.0000	2,607.3635
Maximum	2.3612	21.0788	17.1638	0.0269	0.0000	1.2899	1.2899	0.0000	1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313	0.0000	2,607.3635

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					
2019	2.3612	21.0788	17.1638	0.0269	0.0000	1.2899	1.2899	0.0000	1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313	0.0000	2,607.3635
Maximum	2.3612	21.0788	17.1638	0.0269	0.0000	1.2899	1.2899	0.0000	1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313	0.0000	2,607.3635

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	121.0789	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999	0.0000	227.3634	227.3634	0.2179	0.0000	232.8098
Energy	1.0146	8.6789	3.7525	0.0553		0.7010	0.7010		0.7010	0.7010		11,068.5093	11,068.5093	0.2122	0.2029	11,134.2839
Mobile	22.4800	93.8231	286.2327	1.1586	129.7329	0.8277	130.5605	34.6603	0.7692	35.4295		118,486.8584	118,486.8584	5.7156		118,629.7481
Total	144.5736	103.9550	416.1290	1.2207	129.7329	2.2285	131.9614	34.6603	2.1700	36.8304	0.0000	129,782.7311	129,782.7311	6.1456	0.2029	129,996.8418

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	121.0789	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999	0.0000	227.3634	227.3634	0.2179	0.0000	232.8098
Energy	1.0146	8.6789	3.7525	0.0553		0.7010	0.7010		0.7010	0.7010		11,068.5093	11,068.5093	0.2122	0.2029	11,134.2839
Mobile	22.4800	93.8231	286.2327	1.1586	129.7329	0.8277	130.5605	34.6603	0.7692	35.4295		118,486.8584	118,486.8584	5.7156		118,629.7481
Total	144.5736	103.9550	416.1290	1.2207	129.7329	2.2285	131.9614	34.6603	2.1700	36.8304	0.0000	129,782.7311	129,782.7311	6.1456	0.2029	129,996.8418

	ROG	NOx	CO	SO2	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	Building Construction	Building Construction	9/1/2019	9/2/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 5.9

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Tractors/Loaders/Backhoes	1	0.00	0	0.00
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	9	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Unmitigated Construction Off-Site

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

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Mitigated Construction Off-Site

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

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	22.4800	93.8231	286.2327	1.1586	129.7329	0.8277	130.5605	34.6603	0.7692	35.4295		118,486.8584	118,486.8584	5.7156		118,629.7481
Unmitigated	22.4800	93.8231	286.2327	1.1586	129.7329	0.8277	130.5605	34.6603	0.7692	35.4295		118,486.8584	118,486.8584	5.7156		118,629.7481

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	168.00	0.00	0.00	424,133	424,133
City Park	65.50	788.49	580.20	856,439	856,439
Condo/Townhouse	821.64	801.96	683.88	2,824,543	2,824,543
Elementary School	720.00	0.00	0.00	1,817,712	1,817,712
Industrial Park	15.98	5.85	1.73	44,155	44,155

Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,650.00	1,930.95	975.30	5,633,014	5,633,014
Single Family Housing	12,367.53	12,874.05	11199.72	43,378,394	43,378,394
Total	15,808.65	16,401.30	13,440.82	54,978,390	54,978,390

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
City Park	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Condo/Townhouse	9.71	9.71	9.71	100.00	0.00	0.00	100	0	0
Elementary School	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Industrial Park	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Parking Lot	9.71	9.71	9.71	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.71	9.71	9.71	0.00	100.00	0.00	100	0	0
Single Family Housing	9.71	9.71	9.71	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Elementary School	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Industrial Park	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Parking Lot	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Arena	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
City Park	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Condo/Townhouse	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Single Family Housing	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837
Regional Shopping Center	0.614571	0.037691	0.177673	0.098627	0.012633	0.005296	0.017422	0.025155	0.001929	0.001711	0.005676	0.000778	0.000837

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	1.0146	8.6789	3.7525	0.0553		0.7010	0.7010		0.7010	0.7010		11,068.5093	11,068.5093	0.2122	0.2029	11,134.2839
NaturalGas Unmitigated	1.0146	8.6789	3.7525	0.0553		0.7010	0.7010		0.7010	0.7010		11,068.5093	11,068.5093	0.2122	0.2029	11,134.2839

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					
Arena	322.26	3.4800e-003	0.0316	0.0265	1.9000e-004		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003		37.9130	37.9130	7.3000e-004	7.0000e-004	38.1383
City Park	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
Condo/Townhouse	4347.12	0.0469	0.4006	0.1705	2.5600e-003		0.0324	0.0324		0.0324	0.0324		511.4263	511.4263	9.8000e-003	9.3800e-003	514.4654
Elementary School	703.562	7.5900e-003	0.0690	0.0579	4.1000e-004		5.2400e-003	5.2400e-003		5.2400e-003	5.2400e-003		82.7720	82.7720	1.5900e-003	1.5200e-003	83.2638
Industrial Park	356.096	3.8400e-003	0.0349	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003		41.8936	41.8936	8.0000e-004	7.7000e-004	42.1426
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	78.4932	8.5000e-004	7.7000e-003	6.4600e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2345	9.2345	1.8000e-004	1.7000e-004	9.2894
Single Family Housing	88274.8	0.9520	8.1351	3.4618	0.0519		0.6577	0.6577		0.6577	0.6577		10,385.2699	10,385.2699	0.1991	0.1904	10,446.9844
Total		1.0146	8.6789	3.7525	0.0554		0.7010	0.7010		0.7010	0.7010		11,068.5093	11,068.5093	0.2122	0.2029	11,134.2839

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					
Arena	0.32226	3.4800e-003	0.0316	0.0265	1.9000e-004		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003		37.9130	37.9130	7.3000e-004	7.0000e-004	38.1383
City Park	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
Condo/Townhouse	4.34712	0.0469	0.4006	0.1705	2.5600e-003		0.0324	0.0324		0.0324	0.0324		511.4263	511.4263	9.8000e-003	9.3800e-003	514.4654
Elementary School	0.703562	7.5900e-003	0.0690	0.0579	4.1000e-004		5.2400e-003	5.2400e-003		5.2400e-003	5.2400e-003		82.7720	82.7720	1.5900e-003	1.5200e-003	83.2638
Industrial Park	0.356096	3.8400e-003	0.0349	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003		41.8936	41.8936	8.0000e-004	7.7000e-004	42.1426
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0784932	8.5000e-004	7.7000e-003	6.4600e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.2345	9.2345	1.8000e-004	1.7000e-004	9.2894
Single Family Housing	88.2748	0.9520	8.1351	3.4618	0.0519		0.6577	0.6577		0.6577	0.6577		10,385.2699	10,385.2699	0.1991	0.1904	10,446.9844
Total		1.0146	8.6789	3.7525	0.0554		0.7010	0.7010		0.7010	0.7010		11,068.5093	11,068.5093	0.2122	0.2029	11,134.2839

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	121.0789	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999	0.0000	227.3634	227.3634	0.2179	0.0000	232.8098
Unmitigated	121.0789	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999	0.0000	227.3634	227.3634	0.2179	0.0000	232.8098

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	22.6438					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	94.6454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.7897	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999		227.3634	227.3634	0.2179		232.8098
Total	121.0789	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999	0.0000	227.3634	227.3634	0.2179	0.0000	232.8098

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	22.6438					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	94.6454					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.7897	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999		227.3634	227.3634	0.2179		232.8098
Total	121.0789	1.4529	126.1438	6.6700e-003		0.6999	0.6999		0.6999	0.6999	0.0000	227.3634	227.3634	0.2179	0.0000	232.8098

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Pool Energy Demand - Proctor Valley

Average Pool Size in SCE Study (gallons)	Hours of Operation per Day	Average Heater Size from SCE Study (kBtu/hr)	hour/year	kBtu/year	kBtu/year (efficiency)	kBtu/gal/ year	MMBtu/gal/ year
28,210	12	410	4,380	1,795,800	1,580,304	56.02	0.056

Total Potential CO₂e Emissions from Pool Energy Demand

Facility Name	Pool Volume (gal)	MMBtu/gal/year	MMBtu/year	lb. CO2e/ MMBtu	lb. CO2e/ year	MT/CO2e/ year
PP2	180,956	0.056	10,137	118.35	1,199,717	545.33
PP4	81,861		4,586		542,729	246.69
PP1	157,260		8,810		1,042,615	473.92
Total						1,265.94

Total Potential Energy Demand

Facility Name	Pool Volume (gal)	MMBtu/gal/year	MMBtu/year
All pools	420,077	0.056	23,532

Notes: Pool hours of operation assume 12 hours daily.

89-95% efficiency (US Department of Energy). Heaters in the Proposed Project were assumed to use 90% efficient heaters.

Polutant Emissions from Pool Heating

Polutant	lb./MMBtu	MMBtu/day	lb./day
ROG	0.010784314	64.47	0.70
SO ₂	0.000588235		0.04
NO _x	0.092156863		5.94
PM ₁₀	0.00745098		0.48
PM _{2.5}	0.00745098		0.48
CO	0.039215686		2.53

Pool Filter Energy Demand - Proctor Valley

Pollutant	Energy Demand from Filter		SDG&E CO ₂ E			GWP	CO ₂ E/year
	kwh annual	mWh annual	lb./MWh	lb./ year	MT /year		
CO2	21769.72	21.77	427.49	9306.34	4.22	1.00	4.22
CH4	21769.72	21.77	0.02	0.39	0.00	25.00	0.00
N2O	21769.72	21.77	0.00	0.08	0.00	298.00	0.01
Total							4.24

Source: SCE 2016

**San Diego Gas Electric
RPS Calculations**

2020

**San Diego Gas and Electric
Effect of 20% RPS
Based on 2009 Baseline Data**

2009 Emission Factor ¹	720.49 lb CO ₂ /MWh
2009 Renewables ²	10%
Without RPS	800.54 lb CO ₂ /MWh
Future Renewables ³	20.0%
With 20% RPS	640.44 lb CO ₂ /MWh
Reduction	11.1%

All renewable energy is assumed to be carbon neutral (i.e. no emissions from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. SDG&E. 2009 Power Content Label (Actual)
3. 20% RPS

**San Diego Gas and Electric
Effect of 33% RPS
Based on 2009 Baseline Data**

2009 Emission Factor ¹	720.49 lb CO ₂ /MWh
2009 Renewables ²	10%
Without RPS	800.54 lb CO ₂ /MWh
Future Renewables ³	33.0%
With 33% RPS	536.36 lb CO ₂ /MWh
Reduction	25.6%

All renewable energy is assumed to be carbon neutral (i.e. no emissions from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. SDG&E. 2009 Power Content Label (Actual)
3. 43.1% RPS under contract
http://www.cpuc.ca.gov/RPS_Homepage/

**San Diego Gas Electric
RPS Calculations**

2027
San Diego Gas and Electric
Effect of 33% RPS
Based on 2009 Baseline Data

2009 Emission Factor ¹	720.49 lb CO2/MWh
2009 Renewables ²	10%
Without RPS	800.54 lb CO2/MWh
Future Renewables ³	44.9%
With 44.9% RPS	441.10 lb CO2/MWh
Reduction	38.8%

All renewable energy is assumed to be carbon neutral (i.e. no emissions from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. SDG&E. 2009 Power Content Label (Actual)
3. RPS at 43% (SDG&E achieved 43% by 2016)
http://www.cpuc.ca.gov/RPS_Homepage/

2028
San Diego Gas and Electric
Effect of 46.6% RPS
Based on 2009 Baseline Data

2009 Emission Factor ¹	720.49 lb CO2/MWh
2009 Renewables ²	10%
Without RPS	800.54 lb CO2/MWh
Future Renewables ³	46.6%
With 46.6% RPS	427.49 lb CO2/MWh
Reduction	40.7%

All renewable energy is assumed to be carbon neutral (i.e. no emissions from biogenic sources).

1. CalEEMod User's Guide, Appendix D, Table 1.2
2. SDG&E. 2009 Power Content Label (Actual)
3. 2030 RPS at 50%; 46.6% at 2028

Otay Ranch Village 14 and Planning Areas 16/19 Land Exchange Alternative

Vegetation

Land Use Change - Loss of Sequestered Carbon

A development which changes land use type results in changes in CO₂ sequestration from the atmosphere which would not have been captured had there been no land-type change.

Equation:

$$\text{Sequestered CO}_2 \text{ (MT CO}_2\text{)} = \sum_f (\text{SeqCO}_2)_f \times (\text{area})_f - \sum_i (\text{SeqCO}_2)_i \times (\text{area})_i$$

Where:

SeqCO₂ = mass of sequestered CO₂ per unit area (MT CO₂/acre)

area = area of land for specific land use type (acre)

f = index for final land use type

i = index for initial land use type

Default CalEEMod Factors

The mass of sequestered CO₂ per unit area (MT CO₂/acre) is dependent on the specific land use type. The program uses default CO₂ sequestration values from the California Climate Action Registry for each land use that will be preserved or created:

Vegetation Land Use Type	Vegetation Land Use Subtype	Biogenic CO ₂ Emissions (MT CO ₂ /Acre)
Cropland	Cropland	6.2
Forest Land	Scrub	14.3
Forest Land	Trees	111
Grassland	Grassland	4.31
Wetlands	Wetlands	0
Others	Others	0

Notes:

Based on values indicated in IPCC Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at <http://www.ipcc-nggip.iges.or.jp/public/2006gl/>

Reference:

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation, pages 50-52)

Otay Ranch Village 14 and Planning Areas 16/19 Land Exchange Alternative

Calculations:

Project Vegetation Land Use	Vegetation Land Use Category	Vegetation Land Use Category Subtype	Net Loss (acres)	Biogenic CO ₂ Emissions (MT CO ₂ /Acre)	Sequestered CO ₂ (MT CO ₂)
Chaparral and Scrub (various)	Forest Land	Scrub	571.96	14.3	8,179.03
Southern Coast Live Oak Riparian Forest;					
Eucalyptus Woodland	Forest Land	Trees	3.11	111	345.21
Non-Native Grassland	Grassland	Grassland	50.10	4.3	215.93
Marsh (various)	Wetlands	Wetlands	0.70	0.0	0.00
Disturbed Land	Others	Others		0	0.00
Total			625.87		8,740.17

Notes:

The default annual CO₂ is calculated by multiplying total biomass (MT dry matter/acre) from IPCC data by the carbon fraction in plant material (0.47), then using the ratio of molecular weights (44/12) to convert from MT of carbon (C) to MT of carbon dioxide (CO₂).

Vegetation Type

Vegetation types are defined by IPCC as follows:

Forest Land

This category includes all land with woody vegetation consistent with thresholds used to define Forest Land in the national greenhouse gas inventory. It also includes systems with a vegetation structure that currently fall below, but *in situ* could potentially reach the threshold values used by a country to define the Forest Land category.

Cropland

This category includes cropped land, including rice fields, and agro-forestry systems where the vegetation structure falls below the thresholds used for the Forest Land category.

Grassland

This category includes rangelands and pasture land that are not considered Cropland. It also includes systems with woody vegetation and other non-grass vegetation such as herbs and brushes that fall below the threshold values used in the Forest Land category. The category also includes all grassland from wild lands to recreational areas as well as agricultural and silvi-pastoral systems, consistent with national definitions.

Wetlands

This category includes areas of peat extraction and land that is covered or saturated by water for all or part of the year (e.g., peatlands) and that does not fall into the Forest Land, Cropland, Grassland or Settlements categories. It includes reservoirs as a managed sub-division and natural rivers and lakes as unmanaged sub-divisions.

Area

The user must specify area of land in acres for specific final and initial land use types. These area changes include not only the area of land that will be converted to buildings, but also areas disrupted by the construction of utility corridors, water tank sites, and associated borrow and grading areas. Areas temporarily disturbed that will eventually recover to become vegetated will not be counted as vegetation removed as there is no net change in vegetation or land use.

This assumption facilitates the calculation as a yearly growth rate and CO₂ removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years.

Otay Ranch Village 14 and Planning Areas 16/19 Land Exchange Alternative

Vegetation

Land Use Change - Gain of Sequestered Carbon

Planting trees will sequester CO₂ and is considered to result in a one-time carbon-stock change. Trees sequester CO₂ while they are actively growing. The amount of CO₂ sequestered depends on the type of tree.

Equation:

Total Sequestered CO₂ (MT CO₂) = (Growing Period x $\sum t$ (Sequestration t x Trees t))

Where:

Growing Period = growing period for all trees, expressed in years (20 years is the default)

Sequestration t = default annual CO₂ accumulation per tree for broad species class t

Trees t = number of net new trees of broad species class t

Total Sequestered CO₂ is the growing period for all trees multiplied by the summation of annual CO₂ accumulation multiplied by the number of new trees per broad species class.

Default CalEEMod Factors

The program uses default annual CO₂ accumulation per tree for broad species class as follows:

Species	CO ₂ Sequestered (MT/tree/year)
Aspen	0.0352
Soft Maple	0.0433
Mixed Hardwood	0.0367
Hardwood Maple	0.0521
Juniper	0.0121
Cedar/Larch	0.0264
Douglas Fir	0.0447
True Fir/Hemlock	0.0381
Pine	0.0319
Spruce	0.0337
Miscellaneous	0.0354

Notes:

"CO₂ Sequestered" is based on IPCC's carbon (C) values converted to carbon dioxide (CO₂) using ratio of molecular weights (44/12).

Miscellaneous is the average of all other broad species classes. To be assumed if tree type is not known.

Reference:

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation, pages 50-53)

Otay Ranch Village 14 and Planning Areas 16/19 Land Exchange Alternative

Calculations:

Project Tree Category/Species	Tree Category	Growing Period (year)	Number of Trees (trees)	Tree CO ₂ Sequestered Factor (MT CO ₂ /Tree/Year)	Sequestered CO ₂ (MT CO ₂)
Unknown	Miscellaneous	20	8,000.00	0.0354	5,664.00
Total					5,664.00

Notes:

Growing Period

The program assumes the IPCC active growing period of 20 years. Thereafter, the accumulation of carbon in biomass slows with age, and will be completely offset by losses from clipping, pruning, and occasional death. Actual active growing periods are subject to, among other things, species, climate regime, and planting density. Note that trees may also be replaced at the end of the 20-year cycle, which would result in additional years of carbon sequestration. However, this would be offset by the potential net release of carbon from the removal of the replaced tree.

Onsite Impacts to Vegetation Communities and Land Cover Types within the Village 14 Development Footprint and Preserve Areas (Acres)

Greenhouse Gas Vegetation Category	Habitat Types/Vegetation Communities	Existing Acreage within Village 14	Otay Ranch Village 14 Development			Jackson Pendo Preserve	
			Development Footprint	Fuel Modification Zone	Total Impacts	Village 14	Planning Areas 16 and 19
Forest/Scrub	Granitic chamise chaparral	515.3	305.8	109.6	415.5	99.8	0
	Granitic chamise chaparral (disturbed)	0.8	0.7	0.1	0.8	0	0
	Granitic southern mixed chaparral	0	0	0	0	0	82.3
	Diegan coastal sage scrub	338.6	49.9	24.2	74.2	264.4	159.0
	Diegan coastal sage scrub (disturbed)	77.2	29.9	8.8	38.7	38.5	1.5
	Mulefat scrub	0.2	0	0	0	0.2	0.1
Grassland	Non-native grassland	40.5	26	11.3	37.3	3.2	27.3
Wetland	Cismontane alkali marsh (including disturbed)	1.2	0.1	0	0.1	1.1	4.3
Forest/Trees	Southern coast live oak riparian forest	0.7	0	0	0	0.7	0
	Eucalyptus woodland	3.0	2.8	0.2	3.0	0	2.1
Other	Urban/developed	4.6	3.9	0.6	4.5	0.1	0
	Disturbed habitat	20.5	13.1	2.9	16.1	4.4	1.4

Offsite Impacts to Vegetation Communities and Land Cover Types within the Village 14 Development Footprint and Preserve Areas (Acres)

Greenhouse Gas Vegetation Category	Habitat Types/Vegetation Communities	Permanent Impacts	Temporary Impacts	Total Impacts
Forest/Scrub	Diegan Coastal Sage Scrub	3.5	3.8	7.5
	disturbed Coastal Sage Scrub	4.3	4.9	9.6
	Diegan Coastal Sage Scrub - Baccharis- dominated	0.1	0.5	0.6
	disturbed Diegan Coastal Sage Scrub - Baccharis- dominated	0.3	0.3	0.6
	Mulefat Scrub	0.1	0.2	0.3
	Southern Mixed Chaparral	1.7	1.5	3.2
	Diegan Coastal Sage Scrub	1.9	2.1	4.0
	Mulefat Scrub	<0.01	0.01	0.01
	Diegan Coastal Sage Scrub	3.1	—	3.8
	disturbed Diegan Coastal Sage Scrub	0.8	—	0.8
	Granitic chamise chaparral	3.1	—	7.3
	Mulefat scrub	0.1	—	0.1
	Southern willow scrub	0.05	—	0.05
	Granitic chamise chaparral	4.2		
	Diegan Coastal Sage Scrub	0.7		
Forest/Trees	Eucalyptus Woodland	—	<0.01	<0.01
	Eucalyptus Woodland	—	<0.1	<0.1
Grassland	Non-Native Grassland	3.8	6.0	9.8
	Non-Native Grassland	3.0	—	3.0
Wetlands	Coastal and Valley Freshwater Marsh	0.1	0.3	0.4
	Cismontane alkali marsh (including disturbed)	0.2	—	0.2
Other	Developed	0.4	0.2	0.6
	Disturbed Habitat	0.7	1.1	1.8
	Unvegetated Channel	0.02	<0.1	0.1
	Developed	0.5	0.4	0.8
	Disturbed habitat	0.4	—	0.4
	Developed	3.3	—	3.3