

APPENDIX

AIR QUALITY AND GHG MODELING RESULTS

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

Sand Creek (As Approved)
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3,537.00	Dwelling Unit	1,148.38	6,366,600.00	10116
Apartments Low Rise	433.00	Dwelling Unit	27.06	433,000.00	1238
Office Park	2,600.00	1000sqft	59.69	2,600,000.00	0
Regional Shopping Center	1,240.00	1000sqft	28.47	1,240,000.00	0
Golf Course	18.00	Hole	125.66	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	322.63	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblConstructionPhase	PhaseEndDate	11/28/2078	11/30/2055
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	7.64	7.26
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	21.14	20.08
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	BuildingSpaceSquareFeet	0.00	35,000.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	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)
		Highest		

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	71.2303	0.8194	61.1747	0.0668		4.7317	4.7317		4.7317	4.7317	469.3319	166.7177	636.0496	0.9275	0.0270	667.2810
Energy	0.8328	7.2790	4.2195	0.0454		0.5754	0.5754		0.5754	0.5754	0.0000	22,410.3001	22,410.3001	1.4315	0.4146	22,569.6370
Mobile	18.6019	91.6986	198.9345	0.8388	85.5588	0.6222	86.1809	22.9533	0.5794	23.5327	0.0000	77,376.7650	77,376.7650	2.5552	0.0000	77,440.6439
Waste						0.0000	0.0000		0.0000	0.0000	1,658.4971	0.0000	1,658.4971	98.0144	0.0000	4,108.8563
Water						0.0000	0.0000		0.0000	0.0000	257.8066	977.5939	1,235.4005	26.5671	0.6434	2,091.3142
Total	90.6650	99.7971	264.3287	0.9510	85.5588	5.9292	91.4880	22.9533	5.8865	28.8398	2,385.6355	100,931.3768	103,317.0123	129.4956	1.0850	106,877.7324

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	49.4163	0.6138	29.6018	3.3100e-003		0.1857	0.1857		0.1857	0.1857	0.0000	365.7765	365.7765	0.0524	5.8200e-003	368.8208
Energy	0.8328	7.2790	4.2195	0.0454		0.5754	0.5754		0.5754	0.5754	0.0000	22,410.3001	22,410.3001	1.4315	0.4146	22,569.6370
Mobile	17.8351	87.4098	181.8485	0.7485	75.4628	0.5601	76.0229	20.2448	0.5215	20.7663	0.0000	69,058.6142	69,058.6142	2.3404	0.0000	69,117.1232
Waste						0.0000	0.0000		0.0000	0.0000	1,658.4971	0.0000	1,658.4971	98.0144	0.0000	4,108.8563
Water						0.0000	0.0000		0.0000	0.0000	257.8066	977.5939	1,235.4005	26.5671	0.6434	2,091.3142
Total	68.0842	95.3025	215.6698	0.7972	75.4628	1.3212	76.7840	20.2448	1.2826	21.5274	1,916.3036	92,812.2847	94,728.5884	128.4057	1.0638	98,255.7515

	ROG	NOx	CO	SO2	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	24.91	4.50	18.41	16.17	11.80	77.72	16.07	11.80	78.21	25.36	19.67	8.04	8.31	0.84	1.95	8.07

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/30/2055	11/30/2055	5	1	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

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
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Site Preparation - 2055

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	17.8351	87.4098	181.8485	0.7485	75.4628	0.5601	76.0229	20.2448	0.5215	20.7663	0.0000	69,058.61 42	69,058.61 42	2.3404	0.0000	69,117.12 32
Unmitigated	18.6019	91.6986	198.9345	0.8388	85.5588	0.6222	86.1809	22.9533	0.5794	23.5327	0.0000	77,376.76 50	77,376.76 50	2.5552	0.0000	77,440.64 39

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,853.47	3,100.28	2628.31	6,597,538	5,819,029
Golf Course	643.32	731.34	711.54	1,202,998	1,061,044
Office Park	29,692.00	4,264.00	1976.00	55,388,067	48,852,275
Regional Shopping Center	52,948.00	61,962.80	31297.60	89,669,118	79,088,162
Single Family Housing	33,672.24	35,051.67	30488.94	77,174,475	68,067,887
Total	119,809.03	105,110.09	67,102.39	230,032,197	202,888,398

4.3 Trip Type Information

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Office Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Golf Course	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	14,168.5140	14,168.5140	1.2736	0.2635	14,278.8741
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	14,168.5140	14,168.5140	1.2736	0.2635	14,278.8741
NaturalGas Mitigated	0.8328	7.2790	4.2195	0.0454			0.5754	0.5754		0.5754	0.0000	8,241.7862	8,241.7862	0.1580	0.1511	8,290.7630
NaturalGas Unmitigated	0.8328	7.2790	4.2195	0.0454			0.5754	0.5754		0.5754	0.0000	8,241.7862	8,241.7862	0.1580	0.1511	8,290.7630

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

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					
Apartments Low Rise	4.53493e+006	0.0245	0.2090	0.0889	1.3300e-003		0.0169	0.0169		0.0169	0.0169	0.0000	242.0014	242.0014	4.6400e-003	4.4400e-003	243.4395
Golf Course	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
Office Park	5.24238e+007	0.2827	2.5698	2.1586	0.0154		0.1953	0.1953		0.1953	0.1953	0.0000	2,797.5336	2,797.5336	0.0536	0.0513	2,814.1580
Regional Shopping Center	2.80364e+006	0.0151	0.1374	0.1154	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.6129	149.6129	2.8700e-003	2.7400e-003	150.5020
Single Family Housing	9.46829e+007	0.5105	4.3628	1.8565	0.0279		0.3527	0.3527		0.3527	0.3527	0.0000	5,052.6383	5,052.6383	0.0968	0.0926	5,082.6636
Total		0.8328	7.2790	4.2195	0.0454		0.5754	0.5754		0.5754	0.5754	0.0000	8,241.7862	8,241.7862	0.1580	0.1511	8,290.7630

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	4.53493e+006	0.0245	0.2090	0.0889	1.3300e-003		0.0169	0.0169		0.0169	0.0169	0.0000	242.0014	242.0014	4.6400e-003	4.4400e-003	243.4395
Golf Course	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
Office Park	5.24238e+007	0.2827	2.5698	2.1586	0.0154		0.1953	0.1953		0.1953	0.1953	0.0000	2,797.5336	2,797.5336	0.0536	0.0513	2,814.1580
Regional Shopping Center	2.80364e+006	0.0151	0.1374	0.1154	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	149.6129	149.6129	2.8700e-003	2.7400e-003	150.5020
Single Family Housing	9.46829e+007	0.5105	4.3628	1.8565	0.0279		0.3527	0.3527		0.3527	0.3527	0.0000	5,052.6383	5,052.6383	0.0968	0.0926	5,082.6636
Total		0.8328	7.2790	4.2195	0.0454		0.5754	0.5754		0.5754	0.5754	0.0000	8,241.7862	8,241.7862	0.1580	0.1511	8,290.7630

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.96547e+006	287.6323	0.0259	5.3500e-003	289.8727
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Office Park	5.10328e+007	7,468.2679	0.6713	0.1389	7,526.4390
Regional Shopping Center	1.35606e+007	1,984.4981	0.1784	0.0369	1,999.9555
Single Family Housing	3.02586e+007	4,428.1157	0.3980	0.0824	4,462.6068
Total		14,168.5140	1.2736	0.2635	14,278.8741

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.96547e+006	287.6323	0.0259	5.3500e-003	289.8727
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Office Park	5.10328e+007	7,468.2679	0.6713	0.1389	7,526.4390
Regional Shopping Center	1.35606e+007	1,984.4981	0.1784	0.0369	1,999.9555
Single Family Housing	3.02586e+007	4,428.1157	0.3980	0.0824	4,462.6068
Total		14,168.5140	1.2736	0.2635	14,278.8741

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	49.4163	0.6138	29.6018	3.3100e-003		0.1857	0.1857		0.1857	0.1857	0.0000	365.7765	365.7765	0.0524	5.8200e-003	368.8208
Unmitigated	71.2303	0.8194	61.1747	0.0668		4.7317	4.7317		4.7317	4.7317	469.3319	166.7177	636.0496	0.9275	0.0270	667.2810

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.8071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	41.6897					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	21.8461	0.4799	31.6896	0.0652		4.5681	4.5681		4.5681	4.5681	469.3319	118.4975	587.8293	0.8812	0.0270	617.9035
Landscaping	0.8875	0.3396	29.4851	1.5600e-003		0.1635	0.1635		0.1635	0.1635	0.0000	48.2203	48.2203	0.0463	0.0000	49.3775
Total	71.2303	0.8194	61.1747	0.0668		4.7317	4.7317		4.7317	4.7317	469.3319	166.7177	636.0496	0.9275	0.0270	667.2810

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.8071					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	41.6897					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0321	0.2742	0.1167	1.7500e-003		0.0222	0.0222		0.0222	0.0222	0.0000	317.5562	317.5562	6.0900e-003	5.8200e-003	319.4433
Landscaping	0.8875	0.3396	29.4851	1.5600e-003		0.1635	0.1635		0.1635	0.1635	0.0000	48.2203	48.2203	0.0463	0.0000	49.3775
Total	49.4163	0.6138	29.6018	3.3100e-003		0.1857	0.1857		0.1857	0.1857	0.0000	365.7765	365.7765	0.0524	5.8200e-003	368.8208

7.0 Water Detail

7.1 Mitigation Measures Water

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,235.4005	26.5671	0.6434	2,091.3142
Unmitigated	1,235.4005	26.5671	0.6434	2,091.3142

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	28.2117 / 17.7856	40.3997	0.9221	0.0223	70.0951
Golf Course	0 / 149.721	76.6871	6.8900e-003	1.4300e-003	77.2844
Office Park	462.108 / 283.227	657.5985	15.1037	0.3651	1,143.9763
Regional Shopping Center	91.8499 / 56.2951	130.7063	3.0021	0.0726	227.3802
Single Family Housing	230.45 / 145.284	330.0090	7.5323	0.1821	572.5782
Total		1,235.4005	26.5671	0.6434	2,091.3142

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	28.2117 / 17.7856	40.3997	0.9221	0.0223	70.0951
Golf Course	0 / 149.721	76.6871	6.8900e-003	1.4300e-003	77.2844
Office Park	462.108 / 283.227	657.5985	15.1037	0.3651	1,143.9763
Regional Shopping Center	91.8499 / 56.2951	130.7063	3.0021	0.0726	227.3802
Single Family Housing	230.45 / 145.284	330.0090	7.5323	0.1821	572.5782
Total		1,235.4005	26.5671	0.6434	2,091.3142

8.0 Waste Detail

8.1 Mitigation Measures Waste

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,658.497 1	98.0144	0.0000	4,108.856 3
Unmitigated	1,658.497 1	98.0144	0.0000	4,108.856 3

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	199.18	40.4317	2.3895	0.0000	100.1679
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Office Park	2418	490.8322	29.0074	0.0000	1,216.015 9
Regional Shopping Center	1302	264.2942	15.6193	0.0000	654.7778
Single Family Housing	4248.72	862.4518	50.9694	0.0000	2,136.687 7
Total		1,658.497 1	98.0144	0.0000	4,108.856 3

Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	199.18	40.4317	2.3895	0.0000	100.1679
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Office Park	2418	490.8322	29.0074	0.0000	1,216.0159
Regional Shopping Center	1302	264.2942	15.6193	0.0000	654.7778
Single Family Housing	4248.72	862.4518	50.9694	0.0000	2,136.6877
Total		1,658.4971	98.0144	0.0000	4,108.8563

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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Sand Creek (As Approved) - Bay Area AQMD Air District, Annual

User Defined Equipment

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

11.0 Vegetation

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

Sand Creek (As Approved)
Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3,537.00	Dwelling Unit	1,148.38	6,366,600.00	10116
Apartments Low Rise	433.00	Dwelling Unit	27.06	433,000.00	1238
Office Park	2,600.00	1000sqft	59.69	2,600,000.00	0
Regional Shopping Center	1,240.00	1000sqft	28.47	1,240,000.00	0
Golf Course	18.00	Hole	125.66	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	322.63	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblConstructionPhase	PhaseEndDate	11/28/2078	11/30/2055
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	7.64	7.26
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	21.14	20.08
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	BuildingSpaceSquareFeet	0.00	35,000.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

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	4,119.1268	78.2864	5,303.4866	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.7599	24,041.4205	99,744.1804	94.6484	5.3423	103,702.4004
Energy	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222
Mobile	140.6024	583.9731	1,343.4865	5.7651	578.5705	4.0476	582.6181	154.7211	3.7693	158.4904		585,772.3042	585,772.3042	18.3082		586,230.0101
Total	4,264.2925	702.1446	6,670.0938	15.4124	578.5705	712.7625	1,291.3330	154.7211	712.4842	867.2053	75,702.7599	659,594.6239	735,297.3838	113.9108	6.2550	740,009.1326

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	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.4440	63,435.4440	1.7715	1.1522	63,823.0734
Energy	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222
Mobile	135.5410	557.7485	1,218.6815	5.1431	510.2992	3.6432	513.9424	136.4640	3.3920	139.8560		522,725.8115	522,725.8115	16.7177		523,143.7544
Total	421.4614	650.6348	1,590.3630	5.7236	510.2992	12.5932	522.8924	136.4640	12.3420	148.8060	0.0000	635,942.1546	635,942.1546	19.4433	2.0648	637,043.5500

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	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	90.12	7.34	76.16	62.86	11.80	98.23	59.51	11.80	98.27	82.84	100.00	3.59	13.51	82.93	66.99	13.91

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/30/2055	11/30/2055	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHTD

3.1 Mitigation Measures Construction

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2055

Unmitigated Construction On-Site

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

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
Vendor					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
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2055

Mitigated Construction On-Site

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

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
Vendor					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
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

4.0 Operational Detail - Mobile

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	135.5410	557.7485	1,218.6815	5.1431	510.2992	3.6432	513.9424	136.4640	3.3920	139.8560		522,725.8115	522,725.8115	16.7177		523,143.7544
Unmitigated	140.6024	583.9731	1,343.4865	5.7651	578.5705	4.0476	582.6181	154.7211	3.7693	158.4904		585,772.3042	585,772.3042	18.3082		586,230.0101

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,853.47	3,100.28	2628.31	6,597,538	5,819,029
Golf Course	643.32	731.34	711.54	1,202,998	1,061,044
Office Park	29,692.00	4,264.00	1976.00	55,388,067	48,852,275
Regional Shopping Center	52,948.00	61,962.80	31297.60	89,669,118	79,088,162
Single Family Housing	33,672.24	35,051.67	30488.94	77,174,475	68,067,887
Total	119,809.03	105,110.09	67,102.39	230,032,197	202,888,398

4.3 Trip Type Information

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Office Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Golf Course	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222
NaturalGas Unmitigated	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222

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					
Apartments Low Rise	12424.5	0.1340	1.1450	0.4872	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7032	1,461.7032	0.0280	0.0268	1,470.3894
Golf Course	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
Office Park	143627	1.5489	14.0811	11.8281	0.0845		1.0702	1.0702		1.0702	1.0702		16,897.2764	16,897.2764	0.3239	0.3098	16,997.6885
Regional Shopping Center	7681.21	0.0828	0.7531	0.6326	4.5200e-003		0.0572	0.0572		0.0572	0.0572		903.6712	903.6712	0.0173	0.0166	909.0413
Single Family Housing	259405	2.7975	23.9060	10.1728	0.1526		1.9328	1.9328		1.9328	1.9328		30,518.2484	30,518.2484	0.5849	0.5595	30,699.6031
Total		4.5633	39.8851	23.1206	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	12.4245	0.1340	1.1450	0.4872	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7032	1,461.7032	0.0280	0.0268	1,470.3894
Golf Course	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
Office Park	143.627	1.5489	14.0811	11.8281	0.0845		1.0702	1.0702		1.0702	1.0702		16,897.2764	16,897.2764	0.3239	0.3098	16,997.6885
Regional Shopping Center	7.68121	0.0828	0.7531	0.6326	4.5200e-003		0.0572	0.0572		0.0572	0.0572		903.6712	903.6712	0.0173	0.0166	909.0413
Single Family Housing	259.405	2.7975	23.9060	10.1728	0.1526		1.9328	1.9328		1.9328	1.9328		30,518.2484	30,518.2484	0.5849	0.5595	30,699.6031
Total		4.5633	39.8851	23.1206	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34
Unmitigated	4,119.126 8	78.2864	5,303.486 6	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.75 99	24,041.42 05	99,744.18 04	94.6484	5.3423	103,702.4 004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	37.2991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.4364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,843.530 5	74.5136	4,975.874 0	9.3811		703.7451	703.7451		703.7451	703.7451	75,702.75 99	23,450.82 35	99,153.58 34	94.0815	5.3423	103,097.6 296
Landscaping	9.8608	3.7727	327.6126	0.0173		1.8170	1.8170		1.8170	1.8170		590.5970	590.5970	0.5670		604.7708
Total	4,119.126 8	78.2864	5,303.486 6	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.75 99	24,041.42 05	99,744.18 04	94.6484	5.3423	103,702.4 004

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

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	37.2991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.4364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.7608	49.2285	20.9483	0.3142		3.9802	3.9802		3.9802	3.9802	0.0000	62,844.84 71	62,844.84 71	1.2045	1.1522	63,218.30 26
Landscaping	9.8608	3.7727	327.6126	0.0173		1.8170	1.8170		1.8170	1.8170		590.5970	590.5970	0.5670		604.7708
Total	281.3571	53.0012	348.5609	0.3315		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.44 40	63,435.44 40	1.7715	1.1522	63,823.07 34

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

Sand Creek (As Approved) - Bay Area AQMD Air District, Summer

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

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

Sand Creek (As Approved)
Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3,537.00	Dwelling Unit	1,148.38	6,366,600.00	10116
Apartments Low Rise	433.00	Dwelling Unit	27.06	433,000.00	1238
Office Park	2,600.00	1000sqft	59.69	2,600,000.00	0
Regional Shopping Center	1,240.00	1000sqft	28.47	1,240,000.00	0
Golf Course	18.00	Hole	125.66	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	322.63	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblConstructionPhase	PhaseEndDate	11/28/2078	11/30/2055
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	7.64	7.26
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	21.14	20.08
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	BuildingSpaceSquareFeet	0.00	35,000.00
tblLandUse	LandUseSquareFeet	0.00	35,000.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

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	4,119.1268	78.2864	5,303.4866	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.7599	24,041.4205	99,744.1804	94.6484	5.3423	103,702.4004
Energy	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222
Mobile	119.3278	604.2759	1,355.4750	5.4075	578.5705	4.0640	582.6345	154.7211	3.7850	158.5061		549,581.1280	549,581.1280	18.8247		550,051.7453
Total	4,243.0178	722.4474	6,682.0823	15.0548	578.5705	712.7789	1,291.3494	154.7211	712.4999	867.2210	75,702.7599	623,403.4476	699,106.2076	114.4273	6.2550	703,830.8678

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	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.4440	63,435.4440	1.7715	1.1522	63,823.0734
Energy	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222
Mobile	114.2890	575.2035	1,243.6826	4.8227	510.2992	3.6596	513.9587	136.4640	3.4077	139.8717		490,236.9122	490,236.9122	17.2795		490,668.8997
Total	400.2094	668.0897	1,615.3641	5.4032	510.2992	12.6096	522.9087	136.4640	12.3577	148.8217	0.0000	603,453.2553	603,453.2553	20.0051	2.0648	604,568.6952

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	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	90.57	7.52	75.83	64.11	11.80	98.23	59.51	11.80	98.27	82.84	100.00	3.20	13.68	82.52	66.99	14.10

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/30/2055	11/30/2055	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHTD

3.1 Mitigation Measures Construction

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2055

Unmitigated Construction On-Site

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

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
Vendor					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
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2055

Mitigated Construction On-Site

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

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
Vendor					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
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

4.0 Operational Detail - Mobile

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	114.2890	575.2035	1,243.6826	4.8227	510.2992	3.6596	513.9587	136.4640	3.4077	139.8717		490,236.9122	490,236.9122	17.2795		490,668.8997
Unmitigated	119.3278	604.2759	1,355.4750	5.4075	578.5705	4.0640	582.6345	154.7211	3.7850	158.5061		549,581.1280	549,581.1280	18.8247		550,051.7453

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,853.47	3,100.28	2628.31	6,597,538	5,819,029
Golf Course	643.32	731.34	711.54	1,202,998	1,061,044
Office Park	29,692.00	4,264.00	1976.00	55,388,067	48,852,275
Regional Shopping Center	52,948.00	61,962.80	31297.60	89,669,118	79,088,162
Single Family Housing	33,672.24	35,051.67	30488.94	77,174,475	68,067,887
Total	119,809.03	105,110.09	67,102.39	230,032,197	202,888,398

4.3 Trip Type Information

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9
Office Park	9.50	7.30	7.30	33.00	48.00	19.00	82	15	3
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Office Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Golf Course	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222
NaturalGas Unmitigated	4.5633	39.8851	23.1207	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222

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					
Apartments Low Rise	12424.5	0.1340	1.1450	0.4872	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7032	1,461.7032	0.0280	0.0268	1,470.3894
Golf Course	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
Office Park	143627	1.5489	14.0811	11.8281	0.0845		1.0702	1.0702		1.0702	1.0702		16,897.2764	16,897.2764	0.3239	0.3098	16,997.6885
Regional Shopping Center	7681.21	0.0828	0.7531	0.6326	4.5200e-003		0.0572	0.0572		0.0572	0.0572		903.6712	903.6712	0.0173	0.0166	909.0413
Single Family Housing	259405	2.7975	23.9060	10.1728	0.1526		1.9328	1.9328		1.9328	1.9328		30,518.2484	30,518.2484	0.5849	0.5595	30,699.6031
Total		4.5633	39.8851	23.1206	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	12.4245	0.1340	1.1450	0.4872	7.3100e-003		0.0926	0.0926		0.0926	0.0926		1,461.7032	1,461.7032	0.0280	0.0268	1,470.3894
Golf Course	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
Office Park	143.627	1.5489	14.0811	11.8281	0.0845		1.0702	1.0702		1.0702	1.0702		16,897.2764	16,897.2764	0.3239	0.3098	16,997.6885
Regional Shopping Center	7.68121	0.0828	0.7531	0.6326	4.5200e-003		0.0572	0.0572		0.0572	0.0572		903.6712	903.6712	0.0173	0.0166	909.0413
Single Family Housing	259.405	2.7975	23.9060	10.1728	0.1526		1.9328	1.9328		1.9328	1.9328		30,518.2484	30,518.2484	0.5849	0.5595	30,699.6031
Total		4.5633	39.8851	23.1206	0.2489		3.1528	3.1528		3.1528	3.1528		49,780.8992	49,780.8992	0.9541	0.9127	50,076.7222

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	281.3571	53.0012	348.5609	0.3316		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.4440	63,435.4440	1.7715	1.1522	63,823.0734
Unmitigated	4,119.1268	78.2864	5,303.4866	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.7599	24,041.4205	99,744.1804	94.6484	5.3423	103,702.4004

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	37.2991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.4364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,843.5305	74.5136	4,975.8740	9.3811		703.7451	703.7451		703.7451	703.7451	75,702.7599	23,450.8235	99,153.5834	94.0815	5.3423	103,097.6296
Landscaping	9.8608	3.7727	327.6126	0.0173		1.8170	1.8170		1.8170	1.8170		590.5970	590.5970	0.5670		604.7708
Total	4,119.1268	78.2864	5,303.4866	9.3984		705.5621	705.5621		705.5621	705.5621	75,702.7599	24,041.4205	99,744.1804	94.6484	5.3423	103,702.4004

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

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	37.2991					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	228.4364					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.7608	49.2285	20.9483	0.3142		3.9802	3.9802		3.9802	3.9802	0.0000	62,844.8471	62,844.8471	1.2045	1.1522	63,218.3026
Landscaping	9.8608	3.7727	327.6126	0.0173		1.8170	1.8170		1.8170	1.8170		590.5970	590.5970	0.5670		604.7708
Total	281.3571	53.0012	348.5609	0.3315		5.7972	5.7972		5.7972	5.7972	0.0000	63,435.4440	63,435.4440	1.7715	1.1522	63,823.0734

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

Sand Creek (As Approved) - Bay Area AQMD Air District, Winter

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Rubber Tired Dozers	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/Backhoes	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			

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	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	99.85	42.86	99.63	97.32	99.51	99.51	100.00	-167.99	45.98	99.31	78.44	48.30
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	4.12	4.68	8.59	10.77	9.97	9.99	0.00	10.75	10.75	8.41	0.00	10.75
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: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
Yes	Land Use	Increase Diversity	0.22	0.51		
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	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
Yes	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	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
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	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.12		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
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
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Institute Recycling and Composting Services Percent Reduction in Waste Disposed	
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Sand Creek (As Approved) - Bay Area AQMD Air District, Summary Report

Sand Creek (As Approved)
Bay Area AQMD, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	3,537.00	Dwelling Unit	1,148.38	6,366,600.00	10116
Apartments Low Rise	433.00	Dwelling Unit	27.06	433,000.00	1238
Office Park	2,600.00	1000sqft	59.69	2,600,000.00	0
Regional Shopping Center	1,240.00	1000sqft	28.47	1,240,000.00	0
Golf Course	18.00	Hole	125.66	35,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	322.63	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Sand Creek (As Approved) - Bay Area AQMD Air District, Summary Report

Project Characteristics - CO2 Intensity adjusted to reflect PG&E progress towards RPS

Land Use - General Plan Buildout

Construction Phase - Construction not modeled

Off-road Equipment -

Off-road Equipment - Construction not modeled

Energy Use - Energy Intensity adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
Year	Phase	lb/day											
2055	Site Preparation	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
	Peak Daily Total	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
	Air District Threshold												
	Exceed Significance?												

Peak Daily Operational Emissions

Peak Daily Operational Emissions

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Sand Creek (As Proposed)
Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1,014.00	Acre	1,014.00	44,169,840.00	0
Single Family Housing	3,676.00	Dwelling Unit	1,632.00	6,616,800.00	10513
Apartments Low Rise	324.00	Dwelling Unit	20.25	324,000.00	927
Regional Shopping Center	588.06	1000sqft	33.75	588,060.00	0
Hospital	146.00	Bed	2.40	104,500.61	0
Medical Office Building	245.80	1000sqft	5.64	245,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	322.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - *

Construction Phase - Construction not modeled

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	LotAcreage	1,193.51	1,632.00
tblLandUse	LotAcreage	13.50	33.75
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	59.8690	0.8340	62.2251	0.0686		4.8551	4.8551		4.8551	4.8551	482.0310	169.3453	651.3763	0.9531	0.0277	683.4531
Energy	0.6401	5.5195	2.6923	0.0349		0.4422	0.4422		0.4422	0.4422	0.0000	13,067.9563	13,067.9563	0.7267	0.2414	13,158.0465
Mobile	12.9377	63.7814	138.4388	0.5839	59.5648	0.4331	59.9979	15.9798	0.4033	16.3831	0.0000	53,861.4358	53,861.4358	1.7781	0.0000	53,905.8882
Waste						0.0000	0.0000		0.0000	0.0000	1,694.9989	0.0000	1,694.9989	100.1716	0.0000	4,199.2880
Water						0.0000	0.0000		0.0000	0.0000	110.4459	996.6078	1,107.0538	11.4334	0.2864	1,478.2331
Total	73.4468	70.1349	203.3562	0.6874	59.5648	5.7304	65.2952	15.9798	5.7007	21.6804	2,287.4759	68,095.3452	70,382.8211	115.0629	0.5554	73,424.9088

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	37.4880	0.6226	29.8100	3.3600e-003		0.1874	0.1874		0.1874	0.1874	0.0000	373.5524	373.5524	0.0528	5.9600e-003	376.6475
Energy	0.6401	5.5195	2.6923	0.0349		0.4422	0.4422		0.4422	0.4422	0.0000	13,067.9563	13,067.9563	0.7267	0.2414	13,158.0465
Mobile	12.4039	60.7955	126.5438	0.5210	52.5362	0.3898	52.9260	14.0942	0.3630	14.4571	0.0000	48,070.4534	48,070.4534	1.6286	0.0000	48,111.1673
Waste						0.0000	0.0000		0.0000	0.0000	1,694.9989	0.0000	1,694.9989	100.1716	0.0000	4,199.2880
Water						0.0000	0.0000		0.0000	0.0000	110.4459	996.6078	1,107.0538	11.4334	0.2864	1,478.2331
Total	50.5319	66.9377	159.0461	0.5593	52.5362	1.0195	53.5557	14.0942	0.9926	15.0868	1,805.4448	62,508.5700	64,314.0148	114.0130	0.5337	67,323.3825

	ROG	NOx	CO	SO2	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	31.20	4.56	21.79	18.64	11.80	82.21	17.98	11.80	82.59	30.41	21.07	8.20	8.62	0.91	3.91	8.31

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Acres of Grading (Grading Phase): 0

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
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

3.2 Site Preparation - 2017

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive 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	12.4039	60.7955	126.5438	0.5210	52.5362	0.3898	52.9260	14.0942	0.3630	14.4571	0.0000	48,070.45 34	48,070.45 34	1.6286	0.0000	48,111.16 73
Unmitigated	12.9377	63.7814	138.4388	0.5839	59.5648	0.4331	59.9979	15.9798	0.4033	16.3831	0.0000	53,861.43 58	53,861.43 58	1.7781	0.0000	53,905.88 82

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,135.16	2,319.84	1966.68	4,936,726	4,354,193
City Park	1,916.46	23,068.50	16974.36	15,134,630	13,348,743
Regional Shopping Center	25,110.16	29,385.36	14842.63	42,524,856	37,506,923
Single Family Housing	34,995.52	36,429.16	31687.12	80,207,343	70,742,876
Hospital	1,889.24	1,188.44	1049.74	4,203,767	3,707,722
Medical Office Building	8,880.75	2,202.37	380.99	13,137,936	11,587,659
Total	74,927.30	94,593.67	66,901.52	160,145,258	141,248,117

4.3 Trip Type Information

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Hospital	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Medical Office Building	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	6,733.3535	6,733.3535	0.6052	0.1252	6,785.8003
Electricity Unmitigated							0.0000	0.0000		0.0000	0.0000	0.0000	6,733.3535	6,733.3535	0.6052	0.1252	6,785.8003
NaturalGas Mitigated	0.6401	5.5195	2.6923	0.0349			0.4422	0.4422		0.4422	0.4422	0.0000	6,334.6028	6,334.6028	0.1214	0.1161	6,372.2462
NaturalGas Unmitigated	0.6401	5.5195	2.6923	0.0349			0.4422	0.4422		0.4422	0.4422	0.0000	6,334.6028	6,334.6028	0.1214	0.1161	6,372.2462

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.39335e+006	0.0183	0.1564	0.0665	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	181.0819	181.0819	3.4700e-003	3.3200e-003	182.1579
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
Hospital	1.15358e+007	0.0622	0.5655	0.4750	3.3900e-003		0.0430	0.0430		0.0430	0.0430	0.0000	615.5954	615.5954	0.0118	0.0113	619.2536
Medical Office Building	4.04341e+006	0.0218	0.1982	0.1665	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	215.7718	215.7718	4.1400e-003	3.9600e-003	217.0540
Regional Shopping Center	1.3296e+006	7.1700e-003	0.0652	0.0548	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003	0.0000	70.9527	70.9527	1.3600e-003	1.3000e-003	71.3744
Single Family Housing	9.84038e+007	0.5306	4.5343	1.9295	0.0289		0.3666	0.3666		0.3666	0.3666	0.0000	5,251.2011	5,251.2011	0.1007	0.0963	5,282.4064
Total		0.6401	5.5195	2.6923	0.0349		0.4422	0.4422		0.4422	0.4422	0.0000	6,334.6028	6,334.6028	0.1214	0.1161	6,372.2462

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	3.39335e+006	0.0183	0.1564	0.0665	1.0000e-003		0.0126	0.0126		0.0126	0.0126	0.0000	181.0819	181.0819	3.4700e-003	3.3200e-003	182.1579
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
Hospital	1.15358e+007	0.0622	0.5655	0.4750	3.3900e-003		0.0430	0.0430		0.0430	0.0430	0.0000	615.5954	615.5954	0.0118	0.0113	619.2536
Medical Office Building	4.04341e+006	0.0218	0.1982	0.1665	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	215.7718	215.7718	4.1400e-003	3.9600e-003	217.0540
Regional Shopping Center	1.3296e+006	7.1700e-003	0.0652	0.0548	3.9000e-004		4.9500e-003	4.9500e-003		4.9500e-003	4.9500e-003	0.0000	70.9527	70.9527	1.3600e-003	1.3000e-003	71.3744
Single Family Housing	9.84038e+007	0.5306	4.5343	1.9295	0.0289		0.3666	0.3666		0.3666	0.3666	0.0000	5,251.2011	5,251.2011	0.1007	0.0963	5,282.4064
Total		0.6401	5.5195	2.6923	0.0349		0.4422	0.4422		0.4422	0.4422	0.0000	6,334.6028	6,334.6028	0.1214	0.1161	6,372.2462

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.4707e+006	215.2260	0.0194	4.0000e-003	216.9025
City Park	0	0.0000	0.0000	0.0000	0.0000
Hospital	2.18302e+006	319.4683	0.0287	5.9400e-003	321.9567
Medical Office Building	4.47848e+006	655.3914	0.0589	0.0122	660.4963
Regional Shopping Center	6.43102e+006	941.1322	0.0846	0.0175	948.4628
Single Family Housing	3.14477e+007	4,602.1356	0.4137	0.0856	4,637.9821
Total		6,733.3535	0.6052	0.1252	6,785.8003

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.4707e+006	215.2260	0.0194	4.0000e-003	216.9025
City Park	0	0.0000	0.0000	0.0000	0.0000
Hospital	2.18302e+006	319.4683	0.0287	5.9400e-003	321.9567
Medical Office Building	4.47848e+006	655.3914	0.0589	0.0122	660.4963
Regional Shopping Center	6.43102e+006	941.1322	0.0846	0.0175	948.4628
Single Family Housing	3.14477e+007	4,602.1356	0.4137	0.0856	4,637.9821
Total		6,733.3535	0.6052	0.1252	6,785.8003

6.0 Area Detail**6.1 Mitigation Measures Area**

Use only Natural Gas Hearths

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive 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	37.4880	0.6226	29.8100	3.3600e-003		0.1874	0.1874		0.1874	0.1874	0.0000	373.5524	373.5524	0.0528	5.9600e-003	376.6475
Unmitigated	59.8690	0.8340	62.2251	0.0686		4.8551	4.8551		4.8551	4.8551	482.0310	169.3453	651.3763	0.9531	0.0277	683.4531

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.3752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	31.1874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	22.4138	0.4920	32.5345	0.0670		4.6904	4.6904		4.6904	4.6904	482.0310	120.7945	602.8255	0.9066	0.0277	633.7385
Landscaping	0.8926	0.3420	29.6906	1.5700e-003		0.1647	0.1647		0.1647	0.1647	0.0000	48.5508	48.5508	0.0466	0.0000	49.7146
Total	59.8690	0.8340	62.2251	0.0686		4.8551	4.8551		4.8551	4.8551	482.0310	169.3453	651.3763	0.9531	0.0277	683.4531

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.3752					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	31.1874					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0328	0.2806	0.1194	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	325.0016	325.0016	6.2300e-003	5.9600e-003	326.9329
Landscaping	0.8926	0.3420	29.6906	1.5700e-003		0.1647	0.1647		0.1647	0.1647	0.0000	48.5508	48.5508	0.0466	0.0000	49.7146
Total	37.4880	0.6226	29.8100	3.3600e-003		0.1874	0.1874		0.1874	0.1874	0.0000	373.5524	373.5524	0.0528	5.9600e-003	376.6475

7.0 Water Detail

7.1 Mitigation Measures Water

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,107.053 8	11.4334	0.2864	1,478.233 1
Unmitigated	1,107.053 8	11.4334	0.2864	1,478.233 1

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	21.1099 / 13.3084	30.2298	0.6900	0.0167	52.4499
City Park	0 / 1208.16	618.8191	0.0556	0.0115	623.6392
Hospital	13.1128 / 2.49767	15.8229	0.4283	0.0103	29.6023
Medical Office Building	30.8431 / 5.87488	37.2176	1.0075	0.0242	69.6286
Regional Shopping Center	43.5591 / 26.6975	61.9864	1.4237	0.0344	107.8332
Single Family Housing	239.506 / 150.993	342.9779	7.8283	0.1892	595.0799
Total		1,107.0538	11.4334	0.2864	1,478.2331

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	21.1099 / 13.3084	30.2298	0.6900	0.0167	52.4499
City Park	0 / 1208.16	618.8191	0.0556	0.0115	623.6392
Hospital	13.1128 / 2.49767	15.8229	0.4283	0.0103	29.6023
Medical Office Building	30.8431 / 5.87488	37.2176	1.0075	0.0242	69.6286
Regional Shopping Center	43.5591 / 26.6975	61.9864	1.4237	0.0344	107.8332
Single Family Housing	239.506 / 150.993	342.9779	7.8283	0.1892	595.0799
Total		1,107.0538	11.4334	0.2864	1,478.2331

8.0 Waste Detail

8.1 Mitigation Measures Waste

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,694.9989	100.1716	0.0000	4,199.2880
Unmitigated	1,694.9989	100.1716	0.0000	4,199.2880

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	149.04	30.2538	1.7880	0.0000	74.9524
City Park	87.2	17.7008	1.0461	0.0000	43.8530
Hospital	426.32	86.5391	5.1143	0.0000	214.3970
Medical Office Building	2654.64	538.8679	31.8462	0.0000	1,335.0225
Regional Shopping Center	617.46	125.3388	7.4073	0.0000	310.5216
Single Family Housing	4415.46	896.2985	52.9697	0.0000	2,220.5415
Total		1,694.9989	100.1716	0.0000	4,199.2880

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	149.04	30.2538	1.7880	0.0000	74.9524
City Park	87.2	17.7008	1.0461	0.0000	43.8530
Hospital	426.32	86.5391	5.1143	0.0000	214.3970
Medical Office Building	2654.64	538.8679	31.8462	0.0000	1,335.0225
Regional Shopping Center	617.46	125.3388	7.4073	0.0000	310.5216
Single Family Housing	4415.46	896.2985	52.9697	0.0000	2,220.5415
Total		1,694.9989	100.1716	0.0000	4,199.2880

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Annual

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

Sand Creek (As Proposed)
Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1,014.00	Acre	1,014.00	44,169,840.00	0
Single Family Housing	3,676.00	Dwelling Unit	1,632.00	6,616,800.00	10513
Apartments Low Rise	324.00	Dwelling Unit	20.25	324,000.00	927
Regional Shopping Center	588.06	1000sqft	33.75	588,060.00	0
Hospital	146.00	Bed	2.40	104,500.61	0
Medical Office Building	245.80	1000sqft	5.64	245,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	322.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - *

Construction Phase - Construction not modeled

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	LotAcreage	1,193.51	1,632.00
tblLandUse	LotAcreage	13.50	33.75
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

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	4,153.0117	80.0957	5,432.8438	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.9267	24,500.0573	102,122.9841	96.9054	5.4777	106,177.9734
Energy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621
Mobile	109.7624	455.8089	1,047.7099	4.4946	450.9869	3.1561	454.1430	120.6028	2.9391	123.5418		456,687.5248	456,687.5248	14.2791		457,044.5034
Total	4,266.2814	566.1485	6,495.3058	14.3212	450.9869	729.0903	1,180.0772	120.6028	728.8733	849.4760	77,622.9267	519,448.9759	597,071.9026	111.9179	6.1792	601,711.2388

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	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.9514	64,912.9514	1.8029	1.1792	65,309.4170
Energy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621
Mobile	105.8171	435.3672	950.4263	4.0098	397.7705	2.8409	400.6113	106.3716	2.6450	109.0166		407,543.7419	407,543.7419	13.0394		407,869.7259
Total	325.4807	519.7933	1,316.5133	4.5402	397.7705	11.1677	408.9381	106.3716	10.9718	117.3434	0.0000	510,718.0871	510,718.0871	15.5756	1.8806	511,667.9050

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	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	92.37	8.19	79.73	68.30	11.80	98.47	65.35	11.80	98.49	86.19	100.00	1.68	14.46	86.08	69.56	14.96

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

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

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

3.2 Site Preparation - 2017

Mitigated Construction On-Site

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

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	105.8171	435.3672	950.4263	4.0098	397.7705	2.8409	400.6113	106.3716	2.6450	109.0166		407,543.7419	407,543.7419	13.0394		407,869.7259
Unmitigated	109.7624	455.8089	1,047.7099	4.4946	450.9869	3.1561	454.1430	120.6028	2.9391	123.5418		456,687.5248	456,687.5248	14.2791		457,044.5034

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,135.16	2,319.84	1966.68	4,936,726	4,354,193
City Park	1,916.46	23,068.50	16974.36	15,134,630	13,348,743
Regional Shopping Center	25,110.16	29,385.36	14842.63	42,524,856	37,506,923
Single Family Housing	34,995.52	36,429.16	31687.12	80,207,343	70,742,876
Hospital	1,889.24	1,188.44	1049.74	4,203,767	3,707,722
Medical Office Building	8,880.75	2,202.37	380.99	13,137,936	11,587,659
Total	74,927.30	94,593.67	66,901.52	160,145,258	141,248,117

4.3 Trip Type Information

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Hospital	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Medical Office Building	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
NaturalGas Unmitigated	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9296.84	0.1003	0.8568	0.3646	5.4700e-003		0.0693	0.0693		0.0693	0.0693		1,093.7456	1,093.7456	0.0210	0.0201	1,100.2452
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
Hospital	31605	0.3408	3.0985	2.6028	0.0186		0.2355	0.2355		0.2355	0.2355		3,718.2344	3,718.2344	0.0713	0.0682	3,740.3300
Medical Office Building	11077.8	0.1195	1.0861	0.9123	6.5200e-003		0.0825	0.0825		0.0825	0.0825		1,303.2748	1,303.2748	0.0250	0.0239	1,311.0195
Regional Shopping Center	3642.75	0.0393	0.3571	0.3000	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.5588	428.5588	8.2100e-003	7.8600e-003	431.1055
Single Family Housing	269599	2.9074	24.8454	10.5725	0.1586		2.0088	2.0088		2.0088	2.0088		31,717.5802	31,717.5802	0.6079	0.5815	31,906.0619
Total		3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.29684	0.1003	0.8568	0.3646	5.4700e-003		0.0693	0.0693		0.0693	0.0693		1,093.7456	1,093.7456	0.0210	0.0201	1,100.2452
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
Hospital	31.605	0.3408	3.0985	2.6028	0.0186		0.2355	0.2355		0.2355	0.2355		3,718.2344	3,718.2344	0.0713	0.0682	3,740.3300
Medical Office Building	11.0778	0.1195	1.0861	0.9123	6.5200e-003		0.0825	0.0825		0.0825	0.0825		1,303.2748	1,303.2748	0.0250	0.0239	1,311.0195
Regional Shopping Center	3.64275	0.0393	0.3571	0.3000	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.5588	428.5588	8.2100e-003	7.8600e-003	431.1055
Single Family Housing	269.599	2.9074	24.8454	10.5725	0.1586		2.0088	2.0088		2.0088	2.0088		31,717.5802	31,717.5802	0.6079	0.5815	31,906.0619
Total		3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70
Unmitigated	4,153.011 7	80.0957	5,432.843 8	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734

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	29.4532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	170.8897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,942.751 3	76.2962	5,102.948 4	9.6178		721.6809	721.6809		721.6809	721.6809	77,622.92 67	23,905.41 18	101,528.3 385	96.3352	5.4777	105,569.0 739
Landscaping	9.9176	3.7995	329.8954	0.0174		1.8301	1.8301		1.8301	1.8301		594.6456	594.6456	0.5702		608.8996
Total	4,153.011 7	80.0957	5,432.843 8	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

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	29.4532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	170.8897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.8958	50.3827	21.4394	0.3216		4.0735	4.0735		4.0735	4.0735	0.0000	64,318.30 59	64,318.30 59	1.2328	1.1792	64,700.51 74
Landscaping	9.9176	3.7995	329.8954	0.0174		1.8301	1.8301		1.8301	1.8301		594.6456	594.6456	0.5702		608.8996
Total	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summer

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

Sand Creek (As Proposed)
Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1,014.00	Acre	1,014.00	44,169,840.00	0
Single Family Housing	3,676.00	Dwelling Unit	1,632.00	6,616,800.00	10513
Apartments Low Rise	324.00	Dwelling Unit	20.25	324,000.00	927
Regional Shopping Center	588.06	1000sqft	33.75	588,060.00	0
Hospital	146.00	Bed	2.40	104,500.61	0
Medical Office Building	245.80	1000sqft	5.64	245,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	322.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - *

Construction Phase - Construction not modeled

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	6,000.00	1.00
tblEnergyUse	T24E	431.22	310.48
tblEnergyUse	T24E	2.89	2.88
tblEnergyUse	T24E	368.92	265.62
tblEnergyUse	T24NG	10,164.29	7,318.29
tblEnergyUse	T24NG	2.38	2.26
tblEnergyUse	T24NG	32,797.58	23,614.26
tblLandUse	LotAcreage	1,193.51	1,632.00
tblLandUse	LotAcreage	13.50	33.75
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	322.63
tblProjectCharacteristics	OperationalYear	2018	2028

2.0 Emissions Summary

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

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	4,153.0117	80.0957	5,432.8438	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.9267	24,500.0573	102,122.9841	96.9054	5.4777	106,177.9734
Energy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621
Mobile	93.1436	471.6282	1,057.2612	4.2158	450.9869	3.1689	454.1558	120.6028	2.9513	123.5541		428,468.9219	428,468.9219	14.6832		428,836.0028
Total	4,249.6625	581.9678	6,504.8571	14.0424	450.9869	729.1030	1,180.0900	120.6028	728.8855	849.4882	77,622.9267	491,230.3730	568,853.2997	112.3220	6.1792	573,502.7383

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	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.9514	64,912.9514	1.8029	1.1792	65,309.4170
Energy	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621
Mobile	89.2159	448.9666	970.1207	3.7600	397.7705	2.8536	400.6241	106.3716	2.6572	109.0289		382,211.0077	382,211.0077	13.4788		382,547.9772
Total	308.8795	533.3927	1,336.2077	4.2903	397.7705	11.1804	408.9509	106.3716	10.9840	117.3557	0.0000	485,385.3528	485,385.3528	16.0151	1.8806	486,346.1563

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	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	92.73	8.35	79.46	69.45	11.80	98.47	65.35	11.80	98.49	86.19	100.00	1.19	14.67	85.74	69.56	15.20

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	8/1/2017	8/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHTD

3.1 Mitigation Measures Construction

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

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

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

3.2 Site Preparation - 2017

Mitigated Construction On-Site

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

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	89.2159	448.9666	970.1207	3.7600	397.7705	2.8536	400.6241	106.3716	2.6572	109.0289		382,211.0077	382,211.0077	13.4788		382,547.9772
Unmitigated	93.1436	471.6282	1,057.2612	4.2158	450.9869	3.1689	454.1558	120.6028	2.9513	123.5541		428,468.9219	428,468.9219	14.6832		428,836.0028

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,135.16	2,319.84	1966.68	4,936,726	4,354,193
City Park	1,916.46	23,068.50	16974.36	15,134,630	13,348,743
Regional Shopping Center	25,110.16	29,385.36	14842.63	42,524,856	37,506,923
Single Family Housing	34,995.52	36,429.16	31687.12	80,207,343	70,742,876
Hospital	1,889.24	1,188.44	1049.74	4,203,767	3,707,722
Medical Office Building	8,880.75	2,202.37	380.99	13,137,936	11,587,659
Total	74,927.30	94,593.67	66,901.52	160,145,258	141,248,117

4.3 Trip Type Information

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

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
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Single Family Housing	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Apartments Low Rise	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Regional Shopping Center	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Hospital	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690
Medical Office Building	0.584654	0.036923	0.193743	0.107168	0.013366	0.005280	0.019160	0.027858	0.002682	0.001891	0.005671	0.000914	0.000690

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21
NaturalGas Unmitigated	3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.39 37	38,261.39 37	0.7333	0.7015	38,488.76 21

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9296.84	0.1003	0.8568	0.3646	5.4700e-003		0.0693	0.0693		0.0693	0.0693		1,093.7456	1,093.7456	0.0210	0.0201	1,100.2452
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
Hospital	31605	0.3408	3.0985	2.6028	0.0186		0.2355	0.2355		0.2355	0.2355		3,718.2344	3,718.2344	0.0713	0.0682	3,740.3300
Medical Office Building	11077.8	0.1195	1.0861	0.9123	6.5200e-003		0.0825	0.0825		0.0825	0.0825		1,303.2748	1,303.2748	0.0250	0.0239	1,311.0195
Regional Shopping Center	3642.75	0.0393	0.3571	0.3000	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.5588	428.5588	8.2100e-003	7.8600e-003	431.1055
Single Family Housing	269599	2.9074	24.8454	10.5725	0.1586		2.0088	2.0088		2.0088	2.0088		31,717.5802	31,717.5802	0.6079	0.5815	31,906.0619
Total		3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	9.29684	0.1003	0.8568	0.3646	5.4700e-003		0.0693	0.0693		0.0693	0.0693		1,093.7456	1,093.7456	0.0210	0.0201	1,100.2452
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
Hospital	31.605	0.3408	3.0985	2.6028	0.0186		0.2355	0.2355		0.2355	0.2355		3,718.2344	3,718.2344	0.0713	0.0682	3,740.3300
Medical Office Building	11.0778	0.1195	1.0861	0.9123	6.5200e-003		0.0825	0.0825		0.0825	0.0825		1,303.2748	1,303.2748	0.0250	0.0239	1,311.0195
Regional Shopping Center	3.64275	0.0393	0.3571	0.3000	2.1400e-003		0.0271	0.0271		0.0271	0.0271		428.5588	428.5588	8.2100e-003	7.8600e-003	431.1055
Single Family Housing	269.599	2.9074	24.8454	10.5725	0.1586		2.0088	2.0088		2.0088	2.0088		31,717.5802	31,717.5802	0.6079	0.5815	31,906.0619
Total		3.5073	30.2439	14.7522	0.1913		2.4232	2.4232		2.4232	2.4232		38,261.3937	38,261.3937	0.7333	0.7015	38,488.7621

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70
Unmitigated	4,153.011 7	80.0957	5,432.843 8	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734

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	29.4532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	170.8897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3,942.751 3	76.2962	5,102.948 4	9.6178		721.6809	721.6809		721.6809	721.6809	77,622.92 67	23,905.41 18	101,528.3 385	96.3352	5.4777	105,569.0 739
Landscaping	9.9176	3.7995	329.8954	0.0174		1.8301	1.8301		1.8301	1.8301		594.6456	594.6456	0.5702		608.8996
Total	4,153.011 7	80.0957	5,432.843 8	9.6353		723.5110	723.5110		723.5110	723.5110	77,622.92 67	24,500.05 73	102,122.9 841	96.9054	5.4777	106,177.9 734

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

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	29.4532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	170.8897					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	5.8958	50.3827	21.4394	0.3216		4.0735	4.0735		4.0735	4.0735	0.0000	64,318.30 59	64,318.30 59	1.2328	1.1792	64,700.51 74
Landscaping	9.9176	3.7995	329.8954	0.0174		1.8301	1.8301		1.8301	1.8301		594.6456	594.6456	0.5702		608.8996
Total	216.1563	54.1822	351.3349	0.3390		5.9036	5.9036		5.9036	5.9036	0.0000	64,912.95 14	64,912.95 14	1.8029	1.1792	65,309.41 70

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

Sand Creek (As Proposed) - Bay Area AQMD Air District, Winter

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

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Rubber Tired Dozers	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/Backhoes	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			

Phase	Source	Unmitigated		Mitigated		Percent Reduction	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	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	99.85	42.97	99.63	97.33	99.52	99.52	100.00	-169.05	46.09	99.31	78.47	48.41
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	4.13	4.68	8.59	10.77	9.98	9.99	0.00	10.75	10.75	8.41	0.00	10.75
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: Suburban Center

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
Yes	Land Use	Increase Diversity	0.11	0.33		
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	0.10			

Yes	Neighborhood Enhancements	Improve Pedestrian Network	2.00	Project Site and Connecting Off-Site		
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.02			
Yes	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	0.12			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"	4.50			
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	10.00			
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00		
		Total VMT Reduction	0.12		

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
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
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Institute Recycling and Composting Services Percent Reduction in Waste Disposed	
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Sand Creek (As Proposed) - Bay Area AQMD Air District, Summary Report

Sand Creek (As Proposed)
Bay Area AQMD, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	1,014.00	Acre	1,014.00	44,169,840.00	0
Single Family Housing	3,676.00	Dwelling Unit	1,632.00	6,616,800.00	10513
Apartments Low Rise	324.00	Dwelling Unit	20.25	324,000.00	927
Regional Shopping Center	588.06	1000sqft	33.75	588,060.00	0
Hospital	146.00	Bed	2.40	104,500.61	0
Medical Office Building	245.80	1000sqft	5.64	245,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2028
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	322.63	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Sand Creek (As Proposed) - Bay Area AQMD Air District, Summary Report

Project Characteristics - CO2 Intensity Adjusted for PG&E progress towards RPS

Land Use - *

Construction Phase - Construction not modeled

Off-road Equipment - Construction not modeled

Off-road Equipment - Construction not modeled

Energy Use - Adjusted based on 2016 Title 24

Mobile Land Use Mitigation -

Area Mitigation -

Trips and VMT - Construction not modeled

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
Year	Phase	lb/day											
2017	Site Preparation	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
	Peak Daily Total	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S	0.0000 S
	Air District Threshold												
	Exceed Significance?												

Peak Daily Operational Emissions

Peak Daily Operational Emissions

