

Appendix B

Air Quality and Greenhouse Gas
Modeling Data

Construction Emissions Summary

Project Construction Emissions by Year (MTCO₂e/year)	
2021	788
2022	5438
2023	5280
2024	5187
2025	5036
2026	4917
2027	4811
2028	4699
2029	521
Total	36,677
Amortized	916.93

Unmitigated Construction Emissions				
NO _x lb/day	PM ₁₀ lb/day	PM ₁₀ tpy	PM _{2.5} lb/day	PM _{2.5} tpy
88	37	2	12	1
82	36	5	11	1
71	36	5	10	1
69	36	5	10	1
66	36	5	10	1
65	36	5	10	1
64	36	5	10	1
63	36	5	10	1
61	36	<1	10	<1

Mitigated Construction Emissions				
NO _x lb/day	PM ₁₀ lb/day	PM ₁₀ tpy	PM _{2.5} lb/day	PM _{2.5} tpy
79.2	17.02	0.92	5.52	0.46
73.8	16.56	2.3	5.06	0.46
63.9	16.56	2.3	4.6	0.46
62.1	16.56	2.3	4.6	0.46
59.4	16.56	2.3	4.6	0.46
58.5	16.56	2.3	4.6	0.46
57.6	16.56	2.3	4.6	0.46
56.7	16.56	2.3	4.6	0.46
54.9	16.56	#VALUE!	4.6	#VALUE!

CalEEMod Inputs (Construction Run)

Name: City of Elk Grove Housing Element
 2021-2029
 Project Number: 17010101.07
 Project Location: Elk Grove
 County/Air Basin: Sacramento, SVAB
 Climate Zone: 2
 Land Use Setting: Urban
 Operational Year: 2029
 Utility Company: SMUD/PG&E
 Air Basin: SMUD/PG&E
 Air District: SMAQMD

Project Site Acreage	261.5
Disturbed Site Acreage	261.5

Map ID	General Location	Acreage	Existing Zoning	Proposed Zoning	Dwelling Unit Capacity Potential
E-1	M&H Site in Lent Ranch	12.8	RD-20	RD-20	230
E-2	Quail Run	4.88	RD-25	RD-25	102
E-3	Bruceville Road south of Poppy Ridge Rd	15.48	RD-20	RD-20	279
E-4	NWC Bruceville Road and Big Horn Boul	6.5	RD-25	RD-25	137
E-5	SEPA, Clark Property	9	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	189
E-6	SEPA, Suyanaga Property	8.6	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	181
E-7	SEPA, Souza Lot 1096	7.1	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	149
E-8	SEPA, Souza Lot 1097	7.9	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	166
E-9	SEPA, Souza Lot 1098	6.5	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	137
E-10	SEPA, Souza Lot 1098	7.2	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	151
E-11	SEPA, Souza Lot 1105	9.3	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	195
E-12	SEPA, Bruceville Meadows	8.4	SEPA-HDR (15.1)	SEPA-HDR (15.1-30)	176
E-13	Backer Family, Big Horn Boulevard at Po	11.1	RD-25	RD-25	233
E-14	Elk Grove Florin Road at Brown Road	4.4	RD-25	RD-25	92
E-15	Harbour Point Drive and Maritime Drive	3.06	RD-25	RD-25	64
E-16	East Stockton Boulevard at Bow Street	2.9	RD-25	RD-25	61
E-17	Sheldon Farms North, Anthem	5.3	RD-25	RD-25	111
E-18	Sheldon Farms South, Arsone	9	RD-25	RD-25	189
C-1	Sterling Meadows HDR Site	10.68	RD-20	RD-30	267
C-2	End of Dunisch Road	2.87	SC	RD-25	60
C-3	Laguna Boulevard and Bruceville Road (C	7.6	RD-15	RD-30	190
C-4	2804 Elk Grove Boulevard (Samos)	7.49	RD-15	RD-30	187
C-5	SEC Sheldon Road and East Stockton Bo	12.3	SC	RD-30	308
C-6	NEC Sheldon Road and Power Inn Road	8	GC	RD-30	200
C-7	Waterman Road at Rancho Drive	3.5	RD-4	RD-25	74
C-8	8994 Calvine Road	2.32	RD-5	RD-25	49
C-9	8770 Calvine Road	3.5	RD-20	RD-25	74
C-10	Laguna Boulevard and Hausmann Street	6.96	LC	RD-30	174
C-11	Laguna Vaux	2.59	LC	RD-30	78
C-12	Laguna Boulevard and Gropius Street	5.85	MP	RD-30	146
C-13	9296 E Stockton Boulevard	3.81	RD-20	RD-30	95
C-14	9343 E Stockton Boulevard	1.96	BP	RD-30	49
C-15	NWC Bond Road and Waterman Road	4.6	GC	RD-25	97
C-16	Stathos Drive	3.19	RD-5	RD-30	80
C-17	Waterman 75 (Mosher Road and Grant Line Road)	5	RD-10	RD-30	125
C-18	Bow Street Northwest	10.3	RD-6	RD-25	258
C-19	Old Town 4 lots	2.1	OTSPA	RD-20	42
C-20	SEC Bond Road and Waterman Road	1.5	AR-2	RD-25	32
C-21	Bond Road and Stonebrook Drive	1.66	RD-15	RD-25	35
C-22	Calvine Road and Jordan Ranch Road	2.06	RD-4	RD-25	43
C-23	Calvine Road and Bradshaw Road	2.02	GC/AR-5	RD-25	42
C-24	SWC Lotz Parkway and Whitelock Parkway	5	RD-5	RD-25	105
C-25	Eden Gardens	5.17	AR-5	RD-25	109
Totals		261.45			5761

CalEEMod Land Uses	SQFT	Dwelling Units	Acres	
Apartments Medium Rise	3,243,000	1967	91.64	Rd-25
Apartments High Rise	1,967,000	3243	139.43	rd-30
Apartments Low Ride	551,000	551	30.38	rd-20
	5,761,000	5,761.0	261.5	

Architectural Coating

Interior Paint VOC content:	100
Exterior Paint VOC content:	100

Non-Residential Architectural Coating

Percentage of Buildings' Interior Painted:	100%
Percentage of Buildings' Exterior Painted:	100%

Structure Type	Land Use Square Feet	CalEEMod Application Factor	Total Paintable		
			Surface Area ¹	Paintable Interior Area ²	Paintable Exterior Area ²
Non-Residential					
Residential	5,761,000	2.0	11,522,000	8,641,500	2,880,500

¹ CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.

² The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

CalEEMod Construction Phase Inputs*

5-Day Work Week/8 hours per day

Adjusted Phasing for 20-Year Construction Period (2021-2040)

	<u>Default</u>	<u>Adjusted</u>
Site Preparation	180	71
Grading	465	183
Building Construction	4650	1833
Paving	330	130
Arch Coating	330	130
Construction Start Date	1/1/2021	
Construction End Date	12/31/2029	
Total Work Days	2347	

CalEEMod Construction Schedule Inputs

<u>Phase Name</u>	<u>Phase Type</u>	<u>Start Date</u>	<u>End Date</u>	<u>CalEEMod Total Days</u>
Site Preparation	Site Preparation	3/31/2022	5/23/2022	71
Grading	Grading	5/24/2022	10/5/2022	183
Building Construction	Building Construction	10/6/2022	6/23/2026	1833
Paving	Paving	6/24/2026	9/24/2026	130
Architectural Coating	Architectural Coating	9/25/2026	12/30/2026	130
				<u>2347</u>

*Based on overall construction schedule of 20 years provided by the Applicant, CalEEMod default phase lengths were normalized to meet this period

Construction

<u>Phase</u>	<u># of Days (CalEEMod default)</u>	<u>% of year</u>	<u>Adjusted # of Days</u>	<u>Off Model Adjustments</u>
Demolition				1469.683123 Adjusted Arch Coating Days
Site Preparation	180	3%	71	based on 2/3 building days plus paving and arch coating
Grading	465	8%	183	416 Unmitigated ROG (2029)
Building Constr	4650	78%	1833	54105.14861 ROG X Arch Tech Days
Paving	330	6%	130	36.81415929 Adjusted ROG (2029)
Arch Coating	330	6%	130	
	5955	100%	2347	
	Start Date	End Date		
	1/1/2021	12/31/2029		

CalEEMod Inputs (Proposed Land Uses)

Name: City of Elk Grove Housing
Project Number: Element 2021-2029
Project Location: 17010101.07
County/Air Basin: Elk Grove
Climate Zone: Sacramento, SVAB
Land Use Setting: 2
Operational Year: Urban
Utility Company: 2029
Air Basin: SMUD/PG&E
Air District: SMUD/PG&E
Air District: SMAQMD

Project Site Acreage ¹	261.45
Disturbed Site Acreage ¹	261.50

CalEEMod Land Uses	SQFT	Dwelling Units	Acres	Zoning Designation
Apartments Medium Rise	3,243,000	1967	92	Rd-25
Apartments High Rise	1,967,000	3243	139	rd-30
Apartments Low Rise	551,000	551	30	rd-20
Total	5,761,000	5761	261	

Energy Detail

Land Use Subtype	Title-24 Electricity (KWhr/size/year) Default	Adjusted Title 24 Electricity	Nontitle 24 Energy Intensity	Lighting Energy (KWhr/size/year)	Title-24 Natural Gas (KBTU/size/year)	Adjusted Title 24 NG	Non-Title 24 NG (KBTU/size/year)
Apartmentns High Rise	460.92	216.6324	3.6	3.17	7,061.10	3318.72	0.47
Apartments Low Rise	511.12	240.2264	1.4	2.34	9,411.72	4423.51	0.42
Apartments Mid Rise	460.92	216.6324	1.4	2.34	7,061.10	3318.72	0.42

Trip Generation Traffic Study (Cumulative)

	Daily VMT	Total Project Annual VMT
North Study Area	37,622	13,732,030
East Study Area	420,612	153,523,380
South Study Area	1,311,107	478,554,055
West Study Area	705,243	257,413,695
Fehr and Peers 2020	2,474,584.00	903,223,160

Water Use

Land Use Subtype	Indoor Water Use Default (GPY)
Apartments High Rise	211,294,505.09
Apartments Low Rise	35,899,868.12
Apartments Mid Rise	128,157,968.40

Solid Waste

Land Use Subtype	Solid Waste Gen (TPY)
Apartments High Rise	1,491.78
Apartments Low Rise	253.46
Apartments Mid Rise	904.82

Operational Summary

Unmitigated Annual Emissions Estimates

	ROG	NOx	CO	SO2	Fugitive 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	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587
Energy	0.1899	1.6223	0.6904	0.0104		0.1312	0.1312		0.1312	0.1312			8,098.9792	0.3416	0.0977	8,136.6238
Mobile	5.5444	25.6253	63.5170	0.2630	28.7999	0.1740	28.9739	7.7127	0.1618	7.8745			24,303.3050	0.9475	0.0000	24,326.9926
Waste						0.0000	0.0000		0.0000	0.0000			537.9382	31.7912	0.0000	1,332.7192
Water						0.0000	0.0000		0.0000	0.0000			855.3385	0.4926	0.2961	955.9031
Total	33.6109	27.9307	123.4616	0.2765	28.7999	0.6347	29.4346	7.7127	0.6225	8.3352			33,892.6081	33.6654	0.3938	34,851.5975

Unmitigated Daily Emissions Estimates

	ROG	NOx	CO	SO2	Fugitive 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	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941
Energy	1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.15	0.2175	0.2081	11,415.58
Mobile	42.9872	150.5167	434.8495	1.7159	180.2777	1.0507	181.3284	48.1417	0.9769	49.1186			174,531.04	6.4132		174,691.37
Total	201.2439	164.8708	912.6660	1.7977	180.2777	4.4052	184.6829	48.1417	4.3314	52.4731			186,735.00	7.4460	0.2081	186,983.15

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

**Elk Grove Housing Element Construction + Operation Emissions
Sacramento County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	3,243.00	Dwelling Unit	139.43	3,243,000.00	8659
Apartments Low Rise	551.00	Dwelling Unit	30.38	551,000.00	1471
Apartments Mid Rise	1,967.00	Dwelling Unit	91.64	1,967,000.00	5252

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2030
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	590.31	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

Project Characteristics - Emissions estimates for Elk Grove Housing Element Update (2021-2029).

Land Use - 261 acres of disturbed land + 5,761 DUs

Construction Phase - Construction to occur from 2021-2029. CalEEMod default ratios utilized.

Off-road Equipment - CalEEMod Defaults Used

Trips and VMT - No project specific information available

Demolition - No project specific information available

Grading - No project specific information available

Architectural Coating - Consistent with SMAQMD's Rule 422

Vehicle Trips - Values adjusted to adhere to Traffic Study

Energy Use - Adjusted to reflect consistency with 2019 California Energy Code

Water And Wastewater - Defaults used

Solid Waste - Defaults Used

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	3,888,675.00	2,880,500.00
tblArchitecturalCoating	ConstArea_Residential_Interior	11,666,025.00	8,641,500.00
tblConstructionPhase	NumDays	330.00	129.00
tblConstructionPhase	NumDays	4,650.00	1,833.00
tblConstructionPhase	NumDays	465.00	183.00
tblConstructionPhase	NumDays	330.00	130.00
tblConstructionPhase	NumDays	180.00	71.00
tblEnergyUse	T24E	460.92	216.60
tblEnergyUse	T24E	511.12	240.22
tblEnergyUse	T24E	460.92	216.63
tblEnergyUse	T24NG	7,061.10	3,318.70
tblEnergyUse	T24NG	9,411.72	4,423.51
tblEnergyUse	T24NG	7,061.10	3,318.72
tblGrading	AcresOfGrading	457.50	1,162.50
tblLandUse	LotAcreage	52.31	139.43
tblLandUse	LotAcreage	34.44	30.38
tblLandUse	LotAcreage	51.76	91.64

2.0 Emissions Summary

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.5938	6.0032	4.1233	8.8300e-003	1.9462	0.2591	2.2052	0.7588	0.2384	0.9973			782.7993	0.2073	0.0000	787.9819
2022	2.2006	10.9054	16.6875	0.0590	4.4285	0.1520	4.5805	1.1886	0.1428	1.3314			5,431.9008	0.2565	0.0000	5,438.3133
2023	2.0226	9.4310	15.4158	0.0573	4.4285	0.1267	4.5552	1.1886	0.1189	1.3075			5,274.8547	0.2370	0.0000	5,280.7796
2024	1.9179	9.1582	14.5489	0.0562	4.4625	0.1153	4.5778	1.1977	0.1081	1.3058			5,181.5812	0.2302	0.0000	5,187.3358
2025	1.8040	8.7938	13.6041	0.0546	4.4454	0.1027	4.5481	1.1931	0.0963	1.2894			5,030.0956	0.2217	0.0000	5,035.6388
2026	1.7218	8.6093	12.8448	0.0533	4.4454	0.1015	4.5469	1.1931	0.0951	1.2883			4,912.0716	0.2155	0.0000	4,917.4583
2027	1.6420	8.4412	12.1617	0.0521	4.4453	0.0999	4.5453	1.1931	0.0936	1.2868			4,805.9757	0.2097	0.0000	4,811.2192
2028	1.5542	8.2640	11.5175	0.0508	4.4283	0.0976	4.5259	1.1885	0.0915	1.2800			4,694.0577	0.2039	0.0000	4,699.1541
2029	26.8937	0.7205	1.8656	4.7000e-003	0.4174	0.0329	0.4503	0.1111	0.0306	0.1416			420.6977	0.0479	0.0000	421.8940
Maximum	26.8937	10.9054	16.6875	0.0590	4.4625	0.2591	4.5805	1.1977	0.2384	1.3314			5,431.9008	0.2565	0.0000	5,438.3133

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.5938	6.0032	4.1233	8.8300e-003	1.9462	0.2591	2.2052	0.7588	0.2384	0.9973			782.7985	0.2073	0.0000	787.9812
2022	2.2006	10.9054	16.6875	0.0590	4.4285	0.1520	4.5805	1.1886	0.1428	1.3314			5,431.9004	0.2565	0.0000	5,438.3129
2023	2.0226	9.4310	15.4158	0.0573	4.4285	0.1267	4.5552	1.1886	0.1189	1.3075			5,274.8543	0.2370	0.0000	5,280.7792
2024	1.9179	9.1582	14.5489	0.0562	4.4625	0.1153	4.5778	1.1977	0.1081	1.3058			5,181.5809	0.2302	0.0000	5,187.3354
2025	1.8040	8.7938	13.6041	0.0546	4.4454	0.1027	4.5481	1.1931	0.0963	1.2894			5,030.0952	0.2217	0.0000	5,035.6384
2026	1.7218	8.6093	12.8448	0.0533	4.4454	0.1015	4.5469	1.1931	0.0951	1.2883			4,912.0713	0.2155	0.0000	4,917.4579
2027	1.6420	8.4412	12.1617	0.0521	4.4453	0.0999	4.5453	1.1931	0.0936	1.2868			4,805.9754	0.2097	0.0000	4,811.2188
2028	1.5542	8.2640	11.5175	0.0508	4.4283	0.0976	4.5259	1.1885	0.0915	1.2800			4,694.0573	0.2039	0.0000	4,699.1538
2029	26.8937	0.7205	1.8656	4.7000e-003	0.4174	0.0329	0.4503	0.1111	0.0306	0.1416			420.6975	0.0479	0.0000	421.8939
Maximum	26.8937	10.9054	16.6875	0.0590	4.4625	0.2591	4.5805	1.1977	0.2384	1.3314			5,431.9004	0.2565	0.0000	5,438.3129

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	1.4303	1.4303

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

2	4-1-2021	6-30-2021	1.6282	1.6282
3	7-1-2021	9-30-2021	1.6663	1.6663
4	10-1-2021	12-31-2021	1.8571	1.8571
5	1-1-2022	3-31-2022	3.2993	3.2993
6	4-1-2022	6-30-2022	3.2852	3.2852
7	7-1-2022	9-30-2022	3.3213	3.3213
8	10-1-2022	12-31-2022	3.3726	3.3726
9	1-1-2023	3-31-2023	2.8850	2.8850
10	4-1-2023	6-30-2023	2.8809	2.8809
11	7-1-2023	9-30-2023	2.9126	2.9126
12	10-1-2023	12-31-2023	2.9491	2.9491
13	1-1-2024	3-31-2024	2.7975	2.7975
14	4-1-2024	6-30-2024	2.7643	2.7643
15	7-1-2024	9-30-2024	2.7947	2.7947
16	10-1-2024	12-31-2024	2.8282	2.8282
17	1-1-2025	3-31-2025	2.6560	2.6560
18	4-1-2025	6-30-2025	2.6548	2.6548
19	7-1-2025	9-30-2025	2.6840	2.6840
20	10-1-2025	12-31-2025	2.7150	2.7150
21	1-1-2026	3-31-2026	2.5876	2.5876
22	4-1-2026	6-30-2026	2.5875	2.5875
23	7-1-2026	9-30-2026	2.6159	2.6159
24	10-1-2026	12-31-2026	2.6451	2.6451
25	1-1-2027	3-31-2027	2.5239	2.5239
26	4-1-2027	6-30-2027	2.5248	2.5248
27	7-1-2027	9-30-2027	2.5525	2.5525
28	10-1-2027	12-31-2027	2.5800	2.5800

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

29	1-1-2028	3-31-2028	2.4927	2.4927
30	4-1-2028	6-30-2028	2.4670	2.4670
31	7-1-2028	9-30-2028	2.4941	2.4941
32	10-1-2028	12-31-2028	2.5201	2.5201
33	1-1-2029	3-31-2029	0.3268	0.3268
34	4-1-2029	6-30-2029	0.3103	0.3103
35	7-1-2029	9-30-2029	13.3003	13.3003
		Highest	13.3003	13.3003

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	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587
Energy	0.1899	1.6223	0.6904	0.0104		0.1312	0.1312		0.1312	0.1312			8,098.9792	0.3416	0.0977	8,136.6238
Mobile	5.5444	25.6253	63.5170	0.2630	28.7999	0.1740	28.9739	7.7127	0.1618	7.8745			24,303.3050	0.9475	0.0000	24,326.9926
Waste						0.0000	0.0000		0.0000	0.0000			537.9382	31.7912	0.0000	1,332.7192
Water						0.0000	0.0000		0.0000	0.0000			855.3385	0.4926	0.2961	955.9031
Total	33.6109	27.9307	123.4616	0.2765	28.7999	0.6347	29.4346	7.7127	0.6225	8.3352			33,892.6081	33.6654	0.3938	34,851.5975

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587
Energy	0.1899	1.6223	0.6904	0.0104		0.1312	0.1312		0.1312	0.1312			8,098.9792	0.3416	0.0977	8,136.6238
Mobile	5.5444	25.6253	63.5170	0.2630	28.7999	0.1740	28.9739	7.7127	0.1618	7.8745			24,303.3050	0.9475	0.0000	24,326.9926
Waste						0.0000	0.0000		0.0000	0.0000			537.9382	31.7912	0.0000	1,332.7192
Water						0.0000	0.0000		0.0000	0.0000			855.3385	0.4926	0.2961	955.9031
Total	33.6109	27.9307	123.4616	0.2765	28.7999	0.6347	29.4346	7.7127	0.6225	8.3352			33,892.6081	33.6654	0.3938	34,851.5975

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

3.0 Construction Detail

Construction Phase

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	4/9/2021	5	71	
2	Grading	Grading	4/10/2021	12/22/2021	5	183	
3	Building Construction	Building Construction	12/23/2021	1/1/2029	5	1833	
4	Paving	Paving	1/3/2029	7/3/2029	5	130	
5	Architectural Coating	Architectural Coating	7/4/2029	12/31/2029	5	129	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 0

Residential Indoor: 8,641,500; Residential Outdoor: 2,880,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	4,148.00	616.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	830.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.6414	0.0000	0.6414	0.3525	0.0000	0.3525			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1380	1.4377	0.7510	1.3500e-003		0.0726	0.0726		0.0668	0.0668			118.6968	0.0384	0.0000	119.6565
Total	0.1380	1.4377	0.7510	1.3500e-003	0.6414	0.0726	0.7139	0.3525	0.0668	0.4193			118.6968	0.0384	0.0000	119.6565

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
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	2.2100e-003	1.4500e-003	0.0162	4.0000e-005	4.6900e-003	3.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003			4.0166	1.1000e-004	0.0000	4.0193
Total	2.2100e-003	1.4500e-003	0.0162	4.0000e-005	4.6900e-003	3.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003			4.0166	1.1000e-004	0.0000	4.0193

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.2 Site Preparation - 2021

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					0.6414	0.0000	0.6414	0.3525	0.0000	0.3525			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1380	1.4377	0.7510	1.3500e-003		0.0726	0.0726		0.0668	0.0668			118.6967	0.0384	0.0000	119.6564
Total	0.1380	1.4377	0.7510	1.3500e-003	0.6414	0.0726	0.7139	0.3525	0.0668	0.4193			118.6967	0.0384	0.0000	119.6564

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
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	2.2100e-003	1.4500e-003	0.0162	4.0000e-005	4.6900e-003	3.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003			4.0166	1.1000e-004	0.0000	4.0193
Total	2.2100e-003	1.4500e-003	0.0162	4.0000e-005	4.6900e-003	3.0000e-005	4.7300e-003	1.2500e-003	3.0000e-005	1.2800e-003			4.0166	1.1000e-004	0.0000	4.0193

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1674	0.0000	1.1674	0.3694	0.0000	0.3694			0.0000	0.0000	0.0000	0.0000
Off-Road	0.3835	4.2456	2.8254	5.6700e-003		0.1817	0.1817		0.1671	0.1671			498.6291	0.1613	0.0000	502.6608
Total	0.3835	4.2456	2.8254	5.6700e-003	1.1674	0.1817	1.3491	0.3694	0.1671	0.5366			498.6291	0.1613	0.0000	502.6608

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
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	6.3400e-003	4.1400e-003	0.0463	1.3000e-004	0.0134	9.0000e-005	0.0135	3.5700e-003	9.0000e-005	3.6600e-003			11.5030	3.0000e-004	0.0000	11.5105
Total	6.3400e-003	4.1400e-003	0.0463	1.3000e-004	0.0134	9.0000e-005	0.0135	3.5700e-003	9.0000e-005	3.6600e-003			11.5030	3.0000e-004	0.0000	11.5105

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.3 Grading - 2021

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					1.1674	0.0000	1.1674	0.3694	0.0000	0.3694			0.0000	0.0000	0.0000	0.0000
Off-Road	0.3835	4.2456	2.8254	5.6700e-003		0.1817	0.1817		0.1671	0.1671			498.6285	0.1613	0.0000	502.6602
Total	0.3835	4.2456	2.8254	5.6700e-003	1.1674	0.1817	1.3491	0.3694	0.1671	0.5366			498.6285	0.1613	0.0000	502.6602

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
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	6.3400e-003	4.1400e-003	0.0463	1.3000e-004	0.0134	9.0000e-005	0.0135	3.5700e-003	9.0000e-005	3.6600e-003			11.5030	3.0000e-004	0.0000	11.5105
Total	6.3400e-003	4.1400e-003	0.0463	1.3000e-004	0.0134	9.0000e-005	0.0135	3.5700e-003	9.0000e-005	3.6600e-003			11.5030	3.0000e-004	0.0000	11.5105

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6500e-003	0.0610	0.0580	9.0000e-005		3.3600e-003	3.3600e-003		3.1500e-003	3.1500e-003			8.1073	1.9600e-003	0.0000	8.1562
Total	6.6500e-003	0.0610	0.0580	9.0000e-005		3.3600e-003	3.3600e-003		3.1500e-003	3.1500e-003			8.1073	1.9600e-003	0.0000	8.1562

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	6.7800e-003	0.2206	0.0590	5.3000e-004	0.0126	6.1000e-004	0.0132	3.6400e-003	5.8000e-004	4.2300e-003			50.5894	2.8900e-003	0.0000	50.6617
Worker	0.0503	0.0329	0.3675	1.0100e-003	0.1066	7.5000e-004	0.1074	0.0284	6.9000e-004	0.0291			91.2571	2.4000e-003	0.0000	91.3170
Total	0.0571	0.2534	0.4264	1.5400e-003	0.1192	1.3600e-003	0.1206	0.0320	1.2700e-003	0.0333			141.8465	5.2900e-003	0.0000	141.9787

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.6500e-003	0.0610	0.0580	9.0000e-005		3.3600e-003	3.3600e-003		3.1500e-003	3.1500e-003			8.1073	1.9600e-003	0.0000	8.1562
Total	6.6500e-003	0.0610	0.0580	9.0000e-005		3.3600e-003	3.3600e-003		3.1500e-003	3.1500e-003			8.1073	1.9600e-003	0.0000	8.1562

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
Vendor	6.7800e-003	0.2206	0.0590	5.3000e-004	0.0126	6.1000e-004	0.0132	3.6400e-003	5.8000e-004	4.2300e-003			50.5894	2.8900e-003	0.0000	50.6617
Worker	0.0503	0.0329	0.3675	1.0100e-003	0.1066	7.5000e-004	0.1074	0.0284	6.9000e-004	0.0291			91.2571	2.4000e-003	0.0000	91.3170
Total	0.0571	0.2534	0.4264	1.5400e-003	0.1192	1.3600e-003	0.1206	0.0320	1.2700e-003	0.0333			141.8465	5.2900e-003	0.0000	141.9787

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990			301.2428	0.0722	0.0000	303.0471
Total	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990			301.2428	0.0722	0.0000	303.0471

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2337	7.7782	2.0188	0.0194	0.4681	0.0199	0.4880	0.1353	0.0190	0.1543			1,862.5170	0.1044	0.0000	1,865.1263
Worker	1.7450	1.0971	12.5415	0.0362	3.9604	0.0270	3.9874	1.0533	0.0248	1.0782			3,268.1409	0.0800	0.0000	3,270.1399
Total	1.9788	8.8753	14.5602	0.0555	4.4285	0.0468	4.4753	1.1886	0.0438	1.2325			5,130.6580	0.1843	0.0000	5,135.2662

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990			301.2425	0.0722	0.0000	303.0467
Total	0.2218	2.0300	2.1272	3.5000e-003		0.1052	0.1052		0.0990	0.0990			301.2425	0.0722	0.0000	303.0467

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
Vendor	0.2337	7.7782	2.0188	0.0194	0.4681	0.0199	0.4880	0.1353	0.0190	0.1543			1,862.5170	0.1044	0.0000	1,865.1263
Worker	1.7450	1.0971	12.5415	0.0362	3.9604	0.0270	3.9874	1.0533	0.0248	1.0782			3,268.1409	0.0800	0.0000	3,270.1399
Total	1.9788	8.8753	14.5602	0.0555	4.4285	0.0468	4.4753	1.1886	0.0438	1.2325			5,130.6580	0.1843	0.0000	5,135.2662

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856			301.3462	0.0717	0.0000	303.1383
Total	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856			301.3462	0.0717	0.0000	303.1383

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.1848	6.5739	1.7860	0.0190	0.4681	9.4500e-003	0.4775	0.1353	9.0300e-003	0.1443			1,828.0913	0.0936	0.0000	1,830.4319
Worker	1.6334	0.9871	11.5181	0.0348	3.9604	0.0263	3.9867	1.0533	0.0242	1.0776			3,145.4172	0.0717	0.0000	3,147.2094
Total	1.8181	7.5610	13.3041	0.0538	4.4285	0.0358	4.4642	1.1886	0.0333	1.2219			4,973.5085	0.1653	0.0000	4,977.6413

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856			301.3458	0.0717	0.0000	303.1380
Total	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856			301.3458	0.0717	0.0000	303.1380

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
Vendor	0.1848	6.5739	1.7860	0.0190	0.4681	9.4500e-003	0.4775	0.1353	9.0300e-003	0.1443			1,828.0913	0.0936	0.0000	1,830.4319
Worker	1.6334	0.9871	11.5181	0.0348	3.9604	0.0263	3.9867	1.0533	0.0242	1.0776			3,145.4172	0.0717	0.0000	3,147.2094
Total	1.8181	7.5610	13.3041	0.0538	4.4285	0.0358	4.4642	1.1886	0.0333	1.2219			4,973.5085	0.1653	0.0000	4,977.6413

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756			303.7223	0.0718	0.0000	305.5179
Total	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756			303.7223	0.0718	0.0000	305.5179

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.1774	6.4980	1.6825	0.0190	0.4716	9.0400e-003	0.4807	0.1363	8.6400e-003	0.1449			1,831.4592	0.0932	0.0000	1,833.7891
Worker	1.5477	0.8991	10.7486	0.0337	3.9909	0.0259	4.0168	1.0614	0.0239	1.0853			3,046.3998	0.0652	0.0000	3,048.0288
Total	1.7251	7.3971	12.4311	0.0527	4.4625	0.0350	4.4975	1.1977	0.0325	1.2302			4,877.8589	0.1584	0.0000	4,881.8179

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756			303.7220	0.0718	0.0000	305.5175
Total	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756			303.7220	0.0718	0.0000	305.5175

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
Vendor	0.1774	6.4980	1.6825	0.0190	0.4716	9.0400e-003	0.4807	0.1363	8.6400e-003	0.1449			1,831.4592	0.0932	0.0000	1,833.7891
Worker	1.5477	0.8991	10.7486	0.0337	3.9909	0.0259	4.0168	1.0614	0.0239	1.0853			3,046.3998	0.0652	0.0000	3,048.0288
Total	1.7251	7.3971	12.4311	0.0527	4.4625	0.0350	4.4975	1.1977	0.0325	1.2302			4,877.8589	0.1584	0.0000	4,881.8179

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.1695	6.3532	1.5869	0.0188	0.4698	8.5400e-003	0.4783	0.1358	8.1600e-003	0.1439			1,814.1704	0.0918	0.0000	1,816.4642
Worker	1.4560	0.8133	9.9182	0.0322	3.9756	0.0254	4.0010	1.0574	0.0233	1.0807			2,913.2702	0.0588	0.0000	2,914.7411
Total	1.6256	7.1665	11.5051	0.0510	4.4454	0.0339	4.4793	1.1931	0.0315	1.2246			4,727.4407	0.1506	0.0000	4,731.2053

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331

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
Vendor	0.1695	6.3532	1.5869	0.0188	0.4698	8.5400e-003	0.4783	0.1358	8.1600e-003	0.1439			1,814.1704	0.0918	0.0000	1,816.4642
Worker	1.4560	0.8133	9.9182	0.0322	3.9756	0.0254	4.0010	1.0574	0.0233	1.0807			2,913.2702	0.0588	0.0000	2,914.7411
Total	1.6256	7.1665	11.5051	0.0510	4.4454	0.0339	4.4793	1.1931	0.0315	1.2246			4,727.4407	0.1506	0.0000	4,731.2053

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.1632	6.2391	1.5144	0.0187	0.4698	8.0700e-003	0.4778	0.1357	7.7200e-003	0.1435			1,804.3863	0.0908	0.0000	1,806.6553
Worker	1.3802	0.7430	9.2314	0.0310	3.9756	0.0246	4.0002	1.0574	0.0227	1.0800			2,805.0305	0.0536	0.0000	2,806.3694
Total	1.5434	6.9820	10.7457	0.0497	4.4454	0.0327	4.4781	1.1931	0.0304	1.2235			4,609.4167	0.1443	0.0000	4,613.0247

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331

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
Vendor	0.1632	6.2391	1.5144	0.0187	0.4698	8.0700e-003	0.4778	0.1357	7.7200e-003	0.1435			1,804.3863	0.0908	0.0000	1,806.6553
Worker	1.3802	0.7430	9.2314	0.0310	3.9756	0.0246	4.0002	1.0574	0.0227	1.0800			2,805.0305	0.0536	0.0000	2,806.3694
Total	1.5434	6.9820	10.7457	0.0497	4.4454	0.0327	4.4781	1.1931	0.0304	1.2235			4,609.4167	0.1443	0.0000	4,613.0247

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.1576	6.1341	1.4513	0.0186	0.4697	7.6800e-003	0.4774	0.1357	7.3400e-003	0.1431			1,795.1853	0.0898	0.0000	1,797.4302
Worker	1.3060	0.6798	8.6114	0.0299	3.9756	0.0234	3.9990	1.0574	0.0215	1.0789			2,708.1356	0.0488	0.0000	2,709.3555
Total	1.4636	6.8139	10.0626	0.0486	4.4453	0.0311	4.4764	1.1931	0.0289	1.2220			4,503.3209	0.1386	0.0000	4,506.7857

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331

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
Vendor	0.1576	6.1341	1.4513	0.0186	0.4697	7.6800e-003	0.4774	0.1357	7.3400e-003	0.1431			1,795.1853	0.0898	0.0000	1,797.4302
Worker	1.3060	0.6798	8.6114	0.0299	3.9756	0.0234	3.9990	1.0574	0.0215	1.0789			2,708.1356	0.0488	0.0000	2,709.3555
Total	1.4636	6.8139	10.0626	0.0486	4.4453	0.0311	4.4764	1.1931	0.0289	1.2220			4,503.3209	0.1386	0.0000	4,506.7857

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4953	0.0709	0.0000	303.2671
Total	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4953	0.0709	0.0000	303.2671

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.1521	6.0216	1.3926	0.0185	0.4679	7.3100e-003	0.4752	0.1352	6.9900e-003	0.1422			1,780.4880	0.0885	0.0000	1,782.6999
Worker	1.2243	0.6214	8.0339	0.0289	3.9604	0.0218	3.9821	1.0533	0.0200	1.0734			2,612.0743	0.0445	0.0000	2,613.1871
Total	1.3764	6.6430	9.4265	0.0473	4.4283	0.0291	4.4573	1.1885	0.0270	1.2155			4,392.5624	0.1330	0.0000	4,395.8870

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4949	0.0709	0.0000	303.2667
Total	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4949	0.0709	0.0000	303.2667

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
Vendor	0.1521	6.0216	1.3926	0.0185	0.4679	7.3100e-003	0.4752	0.1352	6.9900e-003	0.1422			1,780.4880	0.0885	0.0000	1,782.6999
Worker	1.2243	0.6214	8.0339	0.0289	3.9604	0.0218	3.9821	1.0533	0.0200	1.0734			2,612.0743	0.0445	0.0000	2,613.1871
Total	1.3764	6.6430	9.4265	0.0473	4.4283	0.0291	4.4573	1.1885	0.0270	1.2155			4,392.5624	0.1330	0.0000	4,395.8870

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8000e-004	6.2300e-003	8.0400e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.5000e-004	2.5000e-004			1.1596	2.7000e-004	0.0000	1.1664
Total	6.8000e-004	6.2300e-003	8.0400e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.5000e-004	2.5000e-004			1.1596	2.7000e-004	0.0000	1.1664

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	5.7000e-004	0.0228	5.1900e-003	7.0000e-005	1.8000e-003	3.0000e-005	1.8300e-003	5.2000e-004	3.0000e-005	5.5000e-004			6.8207	3.4000e-004	0.0000	6.8291
Worker	4.3900e-003	2.1900e-003	0.0289	1.1000e-004	0.0152	8.0000e-005	0.0153	4.0500e-003	7.0000e-005	4.1200e-003			9.7544	1.6000e-004	0.0000	9.7583
Total	4.9600e-003	0.0250	0.0341	1.8000e-004	0.0170	1.1000e-004	0.0171	4.5700e-003	1.0000e-004	4.6700e-003			16.5750	5.0000e-004	0.0000	16.5873

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.4 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8000e-004	6.2300e-003	8.0400e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.5000e-004	2.5000e-004			1.1596	2.7000e-004	0.0000	1.1664
Total	6.8000e-004	6.2300e-003	8.0400e-003	1.0000e-005		2.6000e-004	2.6000e-004		2.5000e-004	2.5000e-004			1.1596	2.7000e-004	0.0000	1.1664

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
Vendor	5.7000e-004	0.0228	5.1900e-003	7.0000e-005	1.8000e-003	3.0000e-005	1.8300e-003	5.2000e-004	3.0000e-005	5.5000e-004			6.8207	3.4000e-004	0.0000	6.8291
Worker	4.3900e-003	2.1900e-003	0.0289	1.1000e-004	0.0152	8.0000e-005	0.0153	4.0500e-003	7.0000e-005	4.1200e-003			9.7544	1.6000e-004	0.0000	9.7583
Total	4.9600e-003	0.0250	0.0341	1.8000e-004	0.0170	1.1000e-004	0.0171	4.5700e-003	1.0000e-004	4.6700e-003			16.5750	5.0000e-004	0.0000	16.5873

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.5 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0595	0.5578	0.9476	1.4800e-003		0.0272	0.0272		0.0250	0.0250			130.1252	0.0421	0.0000	131.1773
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	0.0595	0.5578	0.9476	1.4800e-003		0.0272	0.0272		0.0250	0.0250			130.1252	0.0421	0.0000	131.1773

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
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	2.0600e-003	1.0300e-003	0.0136	5.0000e-005	7.1600e-003	4.0000e-005	7.2000e-003	1.9000e-003	3.0000e-005	1.9400e-003			4.5856	7.0000e-005	0.0000	4.5874
Total	2.0600e-003	1.0300e-003	0.0136	5.0000e-005	7.1600e-003	4.0000e-005	7.2000e-003	1.9000e-003	3.0000e-005	1.9400e-003			4.5856	7.0000e-005	0.0000	4.5874

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.5 Paving - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0595	0.5578	0.9476	1.4800e-003		0.0272	0.0272		0.0250	0.0250			130.1250	0.0421	0.0000	131.1771
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	0.0595	0.5578	0.9476	1.4800e-003		0.0272	0.0272		0.0250	0.0250			130.1250	0.0421	0.0000	131.1771

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
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	2.0600e-003	1.0300e-003	0.0136	5.0000e-005	7.1600e-003	4.0000e-005	7.2000e-003	1.9000e-003	3.0000e-005	1.9400e-003			4.5856	7.0000e-005	0.0000	4.5874
Total	2.0600e-003	1.0300e-003	0.0136	5.0000e-005	7.1600e-003	4.0000e-005	7.2000e-003	1.9000e-003	3.0000e-005	1.9400e-003			4.5856	7.0000e-005	0.0000	4.5874

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.6 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	26.7022					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0739	0.1167	1.9000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003			16.4685	9.0000e-004	0.0000	16.4910
Total	26.7133	0.0739	0.1167	1.9000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003			16.4685	9.0000e-004	0.0000	16.4910

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
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	0.1133	0.0565	0.7457	2.7800e-003	0.3932	2.0100e-003	0.3952	0.1046	1.8500e-003	0.1064			251.7838	4.0300e-003	0.0000	251.8846
Total	0.1133	0.0565	0.7457	2.7800e-003	0.3932	2.0100e-003	0.3952	0.1046	1.8500e-003	0.1064			251.7838	4.0300e-003	0.0000	251.8846

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

3.6 Architectural Coating - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	26.7022					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0110	0.0739	0.1167	1.9000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003			16.4685	9.0000e-004	0.0000	16.4909
Total	26.7133	0.0739	0.1167	1.9000e-004		3.3200e-003	3.3200e-003		3.3200e-003	3.3200e-003			16.4685	9.0000e-004	0.0000	16.4909

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
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	0.1133	0.0565	0.7457	2.7800e-003	0.3932	2.0100e-003	0.3952	0.1046	1.8500e-003	0.1064			251.7838	4.0300e-003	0.0000	251.8846
Total	0.1133	0.0565	0.7457	2.7800e-003	0.3932	2.0100e-003	0.3952	0.1046	1.8500e-003	0.1064			251.7838	4.0300e-003	0.0000	251.8846

4.0 Operational Detail - Mobile

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.5444	25.6253	63.5170	0.2630	28.7999	0.1740	28.9739	7.7127	0.1618	7.8745			24,303.30 50	0.9475	0.0000	24,326.99 26
Unmitigated	5.5444	25.6253	63.5170	0.2630	28.7999	0.1740	28.9739	7.7127	0.1618	7.8745			24,303.30 50	0.9475	0.0000	24,326.99 26

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	13,620.60	16,150.14	11836.95	35,225,378	35,225,378
Apartments Low Rise	3,631.09	3,945.16	3344.57	9,327,872	9,327,872
Apartments Mid Rise	13,080.55	12,569.13	11526.62	32,808,987	32,808,987
Total	30,332.24	32,664.43	26,708.14	77,362,237	77,362,237

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Apartments Low Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.576778	0.034729	0.211659	0.106131	0.012287	0.004450	0.018380	0.025480	0.001877	0.001519	0.005480	0.000610	0.000618
Apartments Low Rise	0.576778	0.034729	0.211659	0.106131	0.012287	0.004450	0.018380	0.025480	0.001877	0.001519	0.005480	0.000610	0.000618
Apartments Mid Rise	0.576778	0.034729	0.211659	0.106131	0.012287	0.004450	0.018380	0.025480	0.001877	0.001519	0.005480	0.000610	0.000618

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			6,220.1661	0.3056	0.0632	6,246.6459
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			6,220.1661	0.3056	0.0632	6,246.6459
NaturalGas Mitigated	0.1899	1.6223	0.6904	0.0104		0.1312	0.1312		0.1312	0.1312			1,878.8131	0.0360	0.0344	1,889.9779
NaturalGas Unmitigated	0.1899	1.6223	0.6904	0.0104		0.1312	0.1312		0.1312	0.1312			1,878.8131	0.0360	0.0344	1,889.9779

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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 High Rise	1.94765e+007	0.1050	0.8975	0.3819	5.7300e-003		0.0726	0.0726		0.0726	0.0726			1,039.3394	0.0199	0.0191	1,045.5157
Apartments Low Rise	3.91789e+006	0.0211	0.1805	0.0768	1.1500e-003		0.0146	0.0146		0.0146	0.0146			209.0736	4.0100e-003	3.8300e-003	210.3160
Apartments Mid Rise	1.18133e+007	0.0637	0.5443	0.2316	3.4700e-003		0.0440	0.0440		0.0440	0.0440			630.4001	0.0121	0.0116	634.1462
Total		0.1899	1.6223	0.6903	0.0104		0.1312	0.1312		0.1312	0.1312			1,878.8131	0.0360	0.0344	1,889.9779

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 High Rise	1.94765e+007	0.1050	0.8975	0.3819	5.7300e-003		0.0726	0.0726		0.0726	0.0726			1,039.3394	0.0199	0.0191	1,045.5157
Apartments Low Rise	3.91789e+006	0.0211	0.1805	0.0768	1.1500e-003		0.0146	0.0146		0.0146	0.0146			209.0736	4.0100e-003	3.8300e-003	210.3160
Apartments Mid Rise	1.18133e+007	0.0637	0.5443	0.2316	3.4700e-003		0.0440	0.0440		0.0440	0.0440			630.4001	0.0121	0.0116	634.1462
Total		0.1899	1.6223	0.6903	0.0104		0.1312	0.1312		0.1312	0.1312			1,878.8131	0.0360	0.0344	1,889.9779

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.30114e+007	3,483.9259	0.1712	0.0354	3,498.7573
Apartments Low Rise	2.32706e+006	623.0939	0.0306	6.3300e-003	625.7465
Apartments Mid Rise	7.89194e+006	2,113.1463	0.1038	0.0215	2,122.1422
Total		6,220.1661	0.3056	0.0632	6,246.6459

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	1.30114e+007	3,483.9259	0.1712	0.0354	3,498.7573
Apartments Low Rise	2.32706e+006	623.0939	0.0306	6.3300e-003	625.7465
Apartments Mid Rise	7.89194e+006	2,113.1463	0.1038	0.0215	2,122.1422
Total		6,220.1661	0.3056	0.0632	6,246.6459

6.0 Area Detail

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6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587
Unmitigated	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.6048					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	22.4996					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	1.7723	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587
Total	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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	3.6048					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	22.4996					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	1.7723	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587
Total	27.8767	0.6831	59.2542	3.1400e-003		0.3295	0.3295		0.3295	0.3295			97.0472	0.0925	0.0000	99.3587

7.0 Water Detail

7.1 Mitigation Measures Water

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	855.3385	0.4926	0.2961	955.9031
Unmitigated	855.3385	0.4926	0.2961	955.9031

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	211.295 / 133.207	481.4898	0.2773	0.1667	538.0999
Apartments Low Rise	35.8999 / 22.6325	81.8072	0.0471	0.0283	91.4256
Apartments Mid Rise	128.158 / 80.7952	292.0415	0.1682	0.1011	326.3776
Total		855.3385	0.4926	0.2961	955.9031

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	211.295 / 133.207	481.4898	0.2773	0.1667	538.0999
Apartments Low Rise	35.8999 / 22.6325	81.8072	0.0471	0.0283	91.4256
Apartments Mid Rise	128.158 / 80.7952	292.0415	0.1682	0.1011	326.3776
Total		855.3385	0.4926	0.2961	955.9031

8.0 Waste Detail

8.1 Mitigation Measures Waste

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	537.9382	31.7912	0.0000	1,332.719 2
Unmitigated	537.9382	31.7912	0.0000	1,332.719 2

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	1491.78	302.8179	17.8960	0.0000	750.2184
Apartments Low Rise	253.46	51.4501	3.0406	0.0000	127.4654
Apartments Mid Rise	904.82	183.6703	10.8546	0.0000	455.0354
Total		537.9382	31.7912	0.0000	1,332.719 2

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	1491.78	302.8179	17.8960	0.0000	750.2184
Apartments Low Rise	253.46	51.4501	3.0406	0.0000	127.4654
Apartments Mid Rise	904.82	183.6703	10.8546	0.0000	455.0354
Total		537.9382	31.7912	0.0000	1,332.7192

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Annual

11.0 Vegetation

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

Elk Grove Housing Element Construction + Operation Emissions

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments High Rise	3,243.00	Dwelling Unit	139.43	3,243,000.00	8659
Apartments Low Rise	551.00	Dwelling Unit	30.38	551,000.00	1471
Apartments Mid Rise	1,967.00	Dwelling Unit	91.64	1,967,000.00	5252

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	6			Operational Year	2030
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	590.31	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

Project Characteristics - Emissions estimates for Elk Grove Housing Element Update (2021-2029).

Land Use - 261 acres of disturbed land + 5,761 DUs

Construction Phase - Construction to occur from 2021-2029. CalEEMod default ratios utilized.

Off-road Equipment - CalEEMod Defaults Used

Trips and VMT - No project specific information available

Demolition - No project specific information available

Grading - No project specific information available

Architectural Coating - Consistent with SMAQMD's Rule 422

Vehicle Trips - Values adjusted to adhere to Traffic Study

Energy Use - Adjusted to reflect consistency with 2019 California Energy Code

Water And Wastewater - Defaults used

Solid Waste - Defaults Used

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	3,888,675.00	2,880,500.00
tblArchitecturalCoating	ConstArea_Residential_Interior	11,666,025.00	8,641,500.00
tblConstructionPhase	NumDays	330.00	129.00
tblConstructionPhase	NumDays	4,650.00	1,833.00
tblConstructionPhase	NumDays	465.00	183.00
tblConstructionPhase	NumDays	330.00	130.00
tblConstructionPhase	NumDays	180.00	71.00
tblEnergyUse	T24E	460.92	216.60
tblEnergyUse	T24E	511.12	240.22
tblEnergyUse	T24E	460.92	216.63
tblEnergyUse	T24NG	7,061.10	3,318.70
tblEnergyUse	T24NG	9,411.72	4,423.51
tblEnergyUse	T24NG	7,061.10	3,318.72
tblGrading	AcresOfGrading	457.50	1,162.50
tblLandUse	LotAcreage	52.31	139.43
tblLandUse	LotAcreage	34.44	30.38
tblLandUse	LotAcreage	51.76	91.64

2.0 Emissions Summary

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	20.4294	87.8136	156.4632	0.4983	35.2605	2.0454	36.6017	9.9670	1.8818	11.8488			50,453.95 33	2.3423	0.0000	50,512.51 19
2022	18.9904	82.0917	145.1970	0.4853	35.2600	1.1651	36.4251	9.4364	1.0944	10.5308			49,174.22 59	2.2273	0.0000	49,229.90 90
2023	17.4728	71.1700	134.3432	0.4708	35.2596	0.9722	36.2318	9.4362	0.9119	10.3481			47,727.09 47	2.0574	0.0000	47,778.52 90
2024	16.4216	68.6334	125.8139	0.4583	35.2592	0.8779	36.1372	9.4361	0.8229	10.2590			46,487.66 50	1.9777	0.0000	46,537.10 81
2025	15.4920	66.1953	118.0193	0.4459	35.2589	0.7852	36.0441	9.4360	0.7357	10.1717			45,263.12 50	1.9080	0.0000	45,310.82 41
2026	14.7576	64.8578	111.3558	0.4348	35.2586	0.7762	36.0348	9.4359	0.7273	10.1631			44,167.15 02	1.8501	0.0000	44,213.40 31
2027	14.0458	63.6392	105.3616	0.4249	35.2583	0.7641	36.0224	9.4358	0.7160	10.1518			43,183.47 90	1.7973	0.0000	43,228.41 24
2028	13.3260	62.5825	100.0941	0.4162	35.2581	0.7497	36.0078	9.4357	0.7026	10.1383			42,313.55 39	1.7507	0.0000	42,357.32 20
2029	416.1738	61.5842	95.0968	0.4084	35.2579	0.7357	35.9936	9.4356	0.6897	10.1253			41,541.83 83	1.7060	0.0000	41,584.48 82
Maximum	416.1738	87.8136	156.4632	0.4983	35.2605	2.0454	36.6017	9.9670	1.8818	11.8488			50,453.95 33	2.3423	0.0000	50,512.51 19

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941
Energy	1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.1474	0.2175	0.2081	11,415.5838
Mobile	42.9872	150.5167	434.8495	1.7159	180.2777	1.0507	181.3284	48.1417	0.9769	49.1186			174,531.0408	6.4132		174,691.3698
Total	201.2439	164.8708	912.6660	1.7977	180.2777	4.4052	184.6829	48.1417	4.3314	52.4731			186,734.9980	7.4460	0.2081	186,983.1477

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	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941
Energy	1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.1474	0.2175	0.2081	11,415.5838
Mobile	42.9872	150.5167	434.8495	1.7159	180.2777	1.0507	181.3284	48.1417	0.9769	49.1186			174,531.0408	6.4132		174,691.3698
Total	201.2439	164.8708	912.6660	1.7977	180.2777	4.4052	184.6829	48.1417	4.3314	52.4731			186,734.9980	7.4460	0.2081	186,983.1477

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	4/9/2021	5	71	
2	Grading	Grading	4/10/2021	12/22/2021	5	183	
3	Building Construction	Building Construction	12/23/2021	1/1/2029	5	1833	
4	Paving	Paving	1/3/2029	7/3/2029	5	130	
5	Architectural Coating	Architectural Coating	7/4/2029	12/31/2029	5	129	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1162.5

Acres of Paving: 0

Residential Indoor: 8,641,500; Residential Outdoor: 2,880,500; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	4,148.00	616.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	830.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809			3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116			3,685.6569	1.1920		3,715.4573

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
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
Worker	0.0721	0.0369	0.5385	1.3900e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372			137.9662	3.6700e-003		138.0580
Total	0.0721	0.0369	0.5385	1.3900e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372			137.9662	3.6700e-003		138.0580

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.2 Site Preparation - 2021

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809			3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116			3,685.6569	1.1920		3,715.4573

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
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
Worker	0.0721	0.0369	0.5385	1.3900e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372			137.9662	3.6700e-003		138.0580
Total	0.0721	0.0369	0.5385	1.3900e-003	0.1369	9.2000e-004	0.1379	0.0363	8.5000e-004	0.0372			137.9662	3.6700e-003		138.0580

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.3 Grading - 2021

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					12.7589	0.0000	12.7589	4.0376	0.0000	4.0376			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265			6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	12.7589	1.9853	14.7442	4.0376	1.8265	5.8642			6,007.0434	1.9428		6,055.6134

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
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
Worker	0.0802	0.0410	0.5983	1.5400e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413			153.2958	4.0800e-003		153.3978
Total	0.0802	0.0410	0.5983	1.5400e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413			153.2958	4.0800e-003		153.3978

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.3 Grading - 2021

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					12.7589	0.0000	12.7589	4.0376	0.0000	4.0376			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265			6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	12.7589	1.9853	14.7442	4.0376	1.8265	5.8642			6,007.0434	1.9428		6,055.6134

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
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
Worker	0.0802	0.0410	0.5983	1.5400e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413			153.2958	4.0800e-003		153.3978
Total	0.0802	0.0410	0.5983	1.5400e-003	0.1521	1.0300e-003	0.1532	0.0404	9.5000e-004	0.0413			153.2958	4.0800e-003		153.3978

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013			2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013			2,553.3639	0.6160		2,568.7643

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
Vendor	1.9036	61.8713	15.7988	0.1520	3.7066	0.1697	3.8763	1.0666	0.1623	1.2289			16,107.0390	0.8803		16,129.0468
Worker	16.6249	8.5102	124.0891	0.3194	31.5538	0.2130	31.7668	8.3699	0.1963	8.5662			31,793.5504	0.8460		31,814.7008
Total	18.5285	70.3815	139.8880	0.4714	35.2605	0.3827	35.6431	9.4366	0.3586	9.7951			47,900.5894	1.7263		47,943.7476

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013			2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013			2,553.3639	0.6160		2,568.7643

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
Vendor	1.9036	61.8713	15.7988	0.1520	3.7066	0.1697	3.8763	1.0666	0.1623	1.2289			16,107.0390	0.8803		16,129.0468
Worker	16.6249	8.5102	124.0891	0.3194	31.5538	0.2130	31.7668	8.3699	0.1963	8.5662			31,793.5504	0.8460		31,814.7008
Total	18.5285	70.3815	139.8880	0.4714	35.2605	0.3827	35.6431	9.4366	0.3586	9.7951			47,900.5894	1.7263		47,943.7476

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612			2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612			2,554.3336	0.6120		2,569.6322

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
Vendor	1.7663	58.8220	14.5566	0.1506	3.7062	0.1486	3.8548	1.0664	0.1422	1.2086			15,966.5359	0.8549		15,987.9089
Worker	15.5178	7.6540	114.2770	0.3078	31.5538	0.2074	31.7612	8.3699	0.1911	8.5611			30,653.3564	0.7605		30,672.3679
Total	17.2841	66.4760	128.8336	0.4584	35.2600	0.3561	35.6161	9.4364	0.3333	9.7697			46,619.8923	1.6154		46,660.2768

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612			2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612			2,554.3336	0.6120		2,569.6322

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
Vendor	1.7663	58.8220	14.5566	0.1506	3.7062	0.1486	3.8548	1.0664	0.1422	1.2086			15,966.5359	0.8549		15,987.9089
Worker	15.5178	7.6540	114.2770	0.3078	31.5538	0.2074	31.7612	8.3699	0.1911	8.5611			30,653.3564	0.7605		30,672.3679
Total	17.2841	66.4760	128.8336	0.4584	35.2600	0.3561	35.6161	9.4364	0.3333	9.7697			46,619.8923	1.6154		46,660.2768

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584			2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584			2,555.2099	0.6079		2,570.4061

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
Vendor	1.3958	49.8954	12.9128	0.1477	3.7058	0.0701	3.7759	1.0663	0.0670	1.1333			15,670.9680	0.7679		15,690.1642
Worker	14.5043	6.8897	105.1865	0.2962	31.5538	0.2024	31.7562	8.3699	0.1864	8.5564			29,500.9169	0.6817		29,517.9588
Total	15.9001	56.7851	118.0992	0.4439	35.2596	0.2725	35.5321	9.4362	0.2535	9.6897			45,171.8848	1.4495		45,208.1229

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584			2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584			2,555.2099	0.6079		2,570.4061

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
Vendor	1.3958	49.8954	12.9128	0.1477	3.7058	0.0701	3.7759	1.0663	0.0670	1.1333			15,670.9680	0.7679		15,690.1642
Worker	14.5043	6.8897	105.1865	0.2962	31.5538	0.2024	31.7562	8.3699	0.1864	8.5564			29,500.9169	0.6817		29,517.9588
Total	15.9001	56.7851	118.0992	0.4439	35.2596	0.2725	35.5321	9.4362	0.2535	9.6897			45,171.8848	1.4495		45,208.1229

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769			2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769			2,555.6989	0.6044		2,570.8077

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
Vendor	1.3300	48.9604	12.0695	0.1468	3.7054	0.0667	3.7721	1.0662	0.0638	1.1299			15,579.3482	0.7584		15,598.3089
Worker	13.6200	6.2292	97.5775	0.2846	31.5538	0.1979	31.7517	8.3699	0.1823	8.5522			28,352.6179	0.6149		28,367.9915
Total	14.9500	55.1896	109.6470	0.4313	35.2592	0.2646	35.5238	9.4361	0.2460	9.6821			43,931.9661	1.3734		43,966.3004

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769			2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769			2,555.6989	0.6044		2,570.8077

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
Vendor	1.3300	48.9604	12.0695	0.1468	3.7054	0.0667	3.7721	1.0662	0.0638	1.1299			15,579.3482	0.7584		15,598.3089
Worker	13.6200	6.2292	97.5775	0.2846	31.5538	0.1979	31.7517	8.3699	0.1823	8.5522			28,352.6179	0.6149		28,367.9915
Total	14.9500	55.1896	109.6470	0.4313	35.2592	0.2646	35.5238	9.4361	0.2460	9.6821			43,931.9661	1.3734		43,966.3004

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.2756	48.0676	11.4283	0.1459	3.7051	0.0634	3.7685	1.0660	0.0606	1.1266			15,490.66 24	0.7495		15,509.40 02
Worker	12.8491	5.6580	90.5064	0.2731	31.5538	0.1943	31.7481	8.3699	0.1789	8.5488			27,215.98 82	0.5575		27,229.92 58
Total	14.1246	53.7256	101.9347	0.4189	35.2589	0.2576	35.5165	9.4360	0.2395	9.6754			42,706.65 07	1.3070		42,739.32 61

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.2756	48.0676	11.4283	0.1459	3.7051	0.0634	3.7685	1.0660	0.0606	1.1266			15,490.66 24	0.7495		15,509.40 02
Worker	12.8491	5.6580	90.5064	0.2731	31.5538	0.1943	31.7481	8.3699	0.1789	8.5488			27,215.98 82	0.5575		27,229.92 58
Total	14.1246	53.7256	101.9347	0.4189	35.2589	0.2576	35.5165	9.4360	0.2395	9.6754			42,706.65 07	1.3070		42,739.32 61

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.2276	47.2181	10.9082	0.1450	3.7048	0.0601	3.7649	1.0659	0.0574	1.1234			15,406.33 27	0.7414		15,424.86 82
Worker	12.1627	5.1701	84.3629	0.2629	31.5538	0.1886	31.7424	8.3699	0.1736	8.5435			26,204.34 31	0.5078		26,217.03 68
Total	13.3902	52.3881	95.2711	0.4079	35.2586	0.2486	35.5072	9.4359	0.2310	9.6669			41,610.67 58	1.2492		41,641.90 51

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.2276	47.2181	10.9082	0.1450	3.7048	0.0601	3.7649	1.0659	0.0574	1.1234			15,406.33 27	0.7414		15,424.86 82
Worker	12.1627	5.1701	84.3629	0.2629	31.5538	0.1886	31.7424	8.3699	0.1736	8.5435			26,204.34 31	0.5078		26,217.03 68
Total	13.3902	52.3881	95.2711	0.4079	35.2586	0.2486	35.5072	9.4359	0.2310	9.6669			41,610.67 58	1.2492		41,641.90 51

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.1853	46.4375	10.4561	0.1442	3.7045	0.0573	3.7618	1.0658	0.0548	1.1206			15,327.06 10	0.7335		15,345.39 94
Worker	11.4931	4.7320	78.8208	0.2538	31.5538	0.1793	31.7331	8.3699	0.1650	8.5350			25,299.94 36	0.4629		25,311.51 49
Total	12.6784	51.1695	89.2770	0.3980	35.2583	0.2365	35.4949	9.4358	0.2198	9.6555			40,627.00 46	1.1964		40,656.91 43

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.1853	46.4375	10.4561	0.1442	3.7045	0.0573	3.7618	1.0658	0.0548	1.1206			15,327.06 10	0.7335		15,345.39 94
Worker	11.4931	4.7320	78.8208	0.2538	31.5538	0.1793	31.7331	8.3699	0.1650	8.5350			25,299.94 36	0.4629		25,311.51 49
Total	12.6784	51.1695	89.2770	0.3980	35.2583	0.2365	35.4949	9.4358	0.2198	9.6555			40,627.00 46	1.1964		40,656.91 43

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.1481	45.7696	10.0756	0.1435	3.7043	0.0548	3.7591	1.0658	0.0524	1.1182			15,259.23 86	0.7256		15,277.37 79
Worker	10.8105	4.3432	73.9339	0.2457	31.5538	0.1673	31.7211	8.3699	0.1540	8.5239			24,497.84 09	0.4242		24,508.44 60
Total	11.9586	50.1128	84.0094	0.3892	35.2581	0.2221	35.4803	9.4357	0.2064	9.6421			39,757.07 96	1.1498		39,785.82 40

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.1481	45.7696	10.0756	0.1435	3.7043	0.0548	3.7591	1.0658	0.0524	1.1182			15,259.23 86	0.7256		15,277.37 79
Worker	10.8105	4.3432	73.9339	0.2457	31.5538	0.1673	31.7211	8.3699	0.1540	8.5239			24,497.84 09	0.4242		24,508.44 60
Total	11.9586	50.1128	84.0094	0.3892	35.2581	0.2221	35.4803	9.4357	0.2064	9.6421			39,757.07 96	1.1498		39,785.82 40

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.1145	45.1334	9.7583	0.1429	3.7041	0.0523	3.7564	1.0657	0.0500	1.1157			15,197.51 26	0.7176		15,215.45 36
Worker	10.0693	3.9811	69.2538	0.2385	31.5538	0.1559	31.7097	8.3699	0.1434	8.5134			23,787.85 14	0.3874		23,797.53 66
Total	11.1838	49.1145	79.0121	0.3814	35.2579	0.2081	35.4661	9.4356	0.1934	9.6290			38,985.36 39	1.1051		39,012.99 01

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.4 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

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
Vendor	1.1145	45.1334	9.7583	0.1429	3.7041	0.0523	3.7564	1.0657	0.0500	1.1157			15,197.51 26	0.7176		15,215.45 36
Worker	10.0693	3.9811	69.2538	0.2385	31.5538	0.1559	31.7097	8.3699	0.1434	8.5134			23,787.85 14	0.3874		23,797.53 66
Total	11.1838	49.1145	79.0121	0.3814	35.2579	0.2081	35.4661	9.4356	0.1934	9.6290			38,985.36 39	1.1051		39,012.99 01

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.5 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850			2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850			2,206.7452	0.7137		2,224.5878

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
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
Worker	0.0364	0.0144	0.2504	8.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308			86.0216	1.4000e-003		86.0567
Total	0.0364	0.0144	0.2504	8.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308			86.0216	1.4000e-003		86.0567

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.5 Paving - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850			2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850			2,206.7452	0.7137		2,224.5878

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
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
Worker	0.0364	0.0144	0.2504	8.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308			86.0216	1.4000e-003		86.0567
Total	0.0364	0.0144	0.2504	8.6000e-004	0.1141	5.6000e-004	0.1147	0.0303	5.2000e-004	0.0308			86.0216	1.4000e-003		86.0567

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.6 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	413.9881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515			281.4481	0.0154		281.8319
Total	414.1590	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515			281.4481	0.0154		281.8319

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
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
Worker	2.0148	0.7966	13.8574	0.0477	6.3138	0.0312	6.3450	1.6748	0.0287	1.7035			4,759.8642	0.0775		4,761.8022
Total	2.0148	0.7966	13.8574	0.0477	6.3138	0.0312	6.3450	1.6748	0.0287	1.7035			4,759.8642	0.0775		4,761.8022

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

3.6 Architectural Coating - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	413.9881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515			281.4481	0.0154		281.8319
Total	414.1590	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515			281.4481	0.0154		281.8319

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
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
Worker	2.0148	0.7966	13.8574	0.0477	6.3138	0.0312	6.3450	1.6748	0.0287	1.7035			4,759.8642	0.0775		4,761.8022
Total	2.0148	0.7966	13.8574	0.0477	6.3138	0.0312	6.3450	1.6748	0.0287	1.7035			4,759.8642	0.0775		4,761.8022

4.0 Operational Detail - Mobile

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	42.9872	150.5167	434.8495	1.7159	180.2777	1.0507	181.3284	48.1417	0.9769	49.1186			174,531.0408	6.4132		174,691.3698
Unmitigated	42.9872	150.5167	434.8495	1.7159	180.2777	1.0507	181.3284	48.1417	0.9769	49.1186			174,531.0408	6.4132		174,691.3698

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	13,620.60	16,150.14	11836.95	35,225,378	35,225,378
Apartments Low Rise	3,631.09	3,945.16	3344.57	9,327,872	9,327,872
Apartments Mid Rise	13,080.55	12,569.13	11526.62	32,808,987	32,808,987
Total	30,332.24	32,664.43	26,708.14	77,362,237	77,362,237

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments High Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Apartments Low Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.576778	0.034729	0.211659	0.106131	0.012287	0.004450	0.018380	0.025480	0.001877	0.001519	0.005480	0.000610	0.000618
Apartments Low Rise	0.576778	0.034729	0.211659	0.106131	0.012287	0.004450	0.018380	0.025480	0.001877	0.001519	0.005480	0.000610	0.000618
Apartments Mid Rise	0.576778	0.034729	0.211659	0.106131	0.012287	0.004450	0.018380	0.025480	0.001877	0.001519	0.005480	0.000610	0.000618

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.1474	0.2175	0.2081	11,415.5838
NaturalGas Unmitigated	1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.1474	0.2175	0.2081	11,415.5838

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

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 High Rise	53360.2	0.5755	4.9175	2.0926	0.0314		0.3976	0.3976		0.3976	0.3976			6,277.6745	0.1203	0.1151	6,314.9796
Apartments Low Rise	10733.9	0.1158	0.9892	0.4209	6.3100e-003		0.0800	0.0800		0.0800	0.0800			1,262.8174	0.0242	0.0232	1,270.3217
Apartments Mid Rise	32365.1	0.3490	2.9827	1.2692	0.0190		0.2412	0.2412		0.2412	0.2412			3,807.6555	0.0730	0.0698	3,830.2825
Total		1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.1474	0.2175	0.2081	11,415.5838

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	53.3602	0.5755	4.9175	2.0926	0.0314		0.3976	0.3976		0.3976	0.3976			6,277.6745	0.1203	0.1151	6,314.9796
Apartments Low Rise	10.7339	0.1158	0.9892	0.4209	6.3100e-003		0.0800	0.0800		0.0800	0.0800			1,262.8174	0.0242	0.0232	1,270.3217
Apartments Mid Rise	32.3651	0.3490	2.9827	1.2692	0.0190		0.2412	0.2412		0.2412	0.2412			3,807.6555	0.0730	0.0698	3,830.2825
Total		1.0403	8.8894	3.7827	0.0567		0.7187	0.7187		0.7187	0.7187			11,348.1474	0.2175	0.2081	11,415.5838

6.0 Area Detail

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941
Unmitigated	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, Summer

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	19.7523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	123.2854					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	14.1787	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154		876.1941
Total	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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	19.7523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	123.2854					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	14.1787	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154		876.1941
Total	157.2165	5.4647	474.0338	0.0251		2.6358	2.6358		2.6358	2.6358			855.8098	0.8154	0.0000	876.1941

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

Elk Grove Housing Element Construction + Operation Emissions - Sacramento County, 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



Strategic Area Project Health Effects Tool

Strategic Area Location	IV. South Sacramento	<-- Step 1: Input the area
NOx Emissions	140	<-- Step 2: Input NOx emissions in lbs./day
ROG Emissions	171	<-- Step 3: Input ROG emissions in lbs./day
PM25 Emissions	15	<-- Step 4: Input PM2.5 emissions in lbs./day

PM2.5 Health Endpoint	Age Range ¹	Incidences Across the Reduced Sacramento 4-km Modeling Domain Resulting from Project Emissions (per year) ^{2,5}	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year) ²	Percent of Background Health Incidences Across the 5-Air-District Region ³	Total Number of Health Incidences Across the 5-Air-District Region (per year) ⁴
		(Mean)	(Mean)		
Respiratory					
Emergency Room Visits, Asthma	0 - 99	3.5	3.3	0.018%	18419
Hospital Admissions, Asthma	0 - 64	0.23	0.22	0.012%	1846
Hospital Admissions, All Respiratory	65 - 99	1.1	0.99	0.0050%	19644
Cardiovascular					
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65 - 99	0.61	0.58	0.0024%	24037
Acute Myocardial Infarction, Nonfatal	18 - 24	0.00032	0.00030	0.0079%	4
Acute Myocardial Infarction, Nonfatal	25 - 44	0.025	0.024	0.0078%	308
Acute Myocardial Infarction, Nonfatal	45 - 54	0.063	0.060	0.0081%	741
Acute Myocardial Infarction, Nonfatal	55 - 64	0.10	0.10	0.0081%	1239
Acute Myocardial Infarction, Nonfatal	65 - 99	0.39	0.37	0.0074%	5052
Mortality					
Mortality, All Cause	30 - 99	7.0	6.6	0.015%	44766
Ozone Health Endpoint					
Ozone Health Endpoint	Age Range ¹	Incidences Across the Reduced Sacramento 4-km Modeling Domain Resulting from Project Emissions (per year) ^{2,5}	Incidences Across the 5-Air-District Region Resulting from Project Emissions (per year) ²	Percent of Background Health Incidences Across the 5-Air-District Region ³	Total Number of Health Incidences Across the 5-Air-District Region (per year) ⁴
		(Mean)	(Mean)		
Respiratory					
Hospital Admissions, All Respiratory	65 - 99	0.17	0.14	0.00070%	19644
Emergency Room Visits, Asthma	0 - 17	0.92	0.80	0.014%	5859
Emergency Room Visits, Asthma	18 - 99	1.4	1.2	0.0097%	12560
Mortality					
Mortality, Non-Accidental	0 - 99	0.11	0.090	0.00029%	30386

1. Affected age ranges are shown. Other age ranges are available, but the endpoints and age ranges shown here are the ones used by the USEPA in their health assessments. The age ranges are consistent with the epidemiological study that is the basis of the health function.
 2. Health effects are shown in terms of incidences of each health endpoint and how it compares to the base (2035 base year health effect incidences, or "background health incidence") values. Health effects are shown for the Reduced Sacramento 4-km Modeling Domain and the 5-Air-District Region.
 3. The percent of background health incidence uses the mean incidence. The background health incidence is an estimate of the average number of people that are affected by the health endpoint in a given population over a given period of time. In this case, the background incidence rates cover the 5-Air-District Region (estimated 2035 population of 3,271,451 persons). Health incidence rates and other health data are typically collected by the government as well as the World Health Organization. The background incidence rates used here are obtained from BenMAP.
 4. The total number of health incidences across the 5-Air-District Region is calculated based on the modeling data. The information is presented to assist in providing overall health context.
 5. The technical specifications and map for the Reduced Sacramento 4-km Modeling Domain are included in Appendix A, Table A-1 and Appendix B, Figure B-2 of the *Guidance to Address the Friant Ranch Ruling for CEQA Projects in the Sac Metro Air District*.
- Sac Metro Air District Strategic Area Project Health Effects Tool, version 2, published September 2020**