

APPENDIX B

Air Quality and Greenhouse Gas Emissions

**PCAPCD Thresholds of Significance
PCAPCD CEQA Guidelines Update 2017**

Criteria Air Pollutants:

	ROG (lb/day)	NOX (lb/day)	PM10 (lb/day)
Construction	82	82	82
Operational (Project-Level)	55	55	82
Operational (Cumulative-Level)	55	55	82

Thresholds of Significance Justification Report (2016):
<https://www.placer.ca.gov/DocumentCenter/View/2061>

GHGs:

Bright-Line Thresholds for Land Use and Stationary Project			
10,000 MT CO ₂ e/yr			
Efficiency Matrix			
Residential		Non-Residential	
Urban	Rural	Urban	Rural
(MT CO ₂ e/capita)		(MT CO ₂ e/1,000 sf)	
4.5	5.5	26.5	27.3
De Minimus Level 1,100 MT CO ₂ e/yr			

GHG Emissions Summary

New Development, as Proposed under the General Plan Buildout

Emissions Source	GHG Emissions (MTCO ₂ e / year)
Construction GHG Emissions	
Maximum Annual Construction Emissions	54,820
Total Construction Emissions of Full Buildout	548,204
Operational GHG Emissions	
Area	37,040
Energy	108,513
Mobile ¹	502,823
Waste	28,731
Water	13,452
Total Annual Operational Emissions	690,559
Total⁴ Annual Operational + Amortized Construction Emissions	708,833
Total⁴ Annual Project Emissions per 1,000 Square Feet²	10.33
PCAPCD GHG Efficiency Threshold	27.3
Total⁴ Annual Project Emissions per Service Population³	11.39
2030 Statewide GHG Efficiency Threshold	2.32
Exceed threshold?	Yes
Notes:	
¹ Mobile emissions are calculated outside of CalEEMod using EMFAC 2017 emissions rates and VMT from the Transportation Impact Analysis.	
² Annual project emissions (amortized construction + operational) per 1,000 square feet calculated based upon new development of approximately 68,600,861 square feet with buildout of the General Plan.	
³ Annual project emissions (amortized construction + operational) are calculated based upon estimated additional population and employment with new development under the General Plan.	
⁴ Totals may not add due to rounding.	
Source: Modeled by AECOM in 2019	

Existing in City of Roseville + New with the General Plan Buildout

Emissions Source	GHG Emissions (MTCO ₂ e / year)
Construction GHG Emissions	
Maximum Annual Construction Emissions	54,820
Total Construction Emissions of Full Buildout	548,204
Operational GHG Emissions	
Area	115,302
Energy	303,238
Mobile ¹	1,071,201
Waste	87,758
Water	33,268
Total Annual Operational Emissions	1,610,767
Total⁴ Annual Operational + Amortized Construction Emissions	1,629,040
Total⁴ Annual Project Emissions per 1,000 Square Feet²	9.07
PCAPCD GHG Efficiency Threshold	27.3
Total⁴ Annual Project Emissions per Service Population³	5.12
2030 Statewide GHG Efficiency Threshold	2.32
Exceed threshold?	Yes
Notes:	
¹ Mobile emissions are calculated outside of CalEEMod using EMFAC 2017 emissions rates and VMT from the Transportation Impact Analysis.	
² Annual project emissions (amortized construction + operational) per 1,000 square feet calculated based upon total Land Use in Planning Area with buildout of 2035 General Plan Update (approximately 68,600,861 square feet of development).	
³ Annual project emissions (amortized construction + operational) per service population are calculated based upon estimate of 198,000 residents + 120,000 employees in the City of Roseville in 2035 with buildout of the 2035 General Plan Update (See General Plan Land Use Element)	
⁴ Totals may not add due to rounding.	
Source: Modeled by AECOM in 2019	

Criteria Air Pollutant Emissions

Construction-related Emissions

Max Single-Year Construction Scenario (2021)				Unmitigated Maximum Daily Emissions (lb/dy)					
Construction Phase		VOC	NOX	PM10			PM2.5		
				Fugitive Dust	PM10 Exhaust	PM10 Total	Fugitive Dust	PM2.5 Exhaust	PM2.5 Total
Demolition	<i>on-site</i>	3.3121	33.201	0	1.6587	1.6587	0	1.5419	1.5419
	<i>off-site</i>	0.0563	0.0401	0.1232	0.00078	0.12398	0.0327	0.00072	0.03342
	<i>Sub-total</i>	3.3684	33.2411	0.1232	1.65948	1.78268	0.0327	1.54262	1.57532
Site Preparation	<i>on-site</i>	4.0765	42.4173	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523
	<i>off-site</i>	0.0676	0.0482	0.1479	0.00094	0.14884	0.0392	0.00087	0.04007
	<i>Sub-total</i>	4.1441	42.4655	18.2142	2.19834	20.41254	9.9699	2.02247	11.99237
Grading	<i>on-site</i>	4.4501	50.1975	8.6733	2.1739	10.8472	3.5965	2	5.5965
	<i>off-site</i>	0.0751	0.0535	0.1643	0.00104	0.16534	0.0436	0.00096	0.04456
	<i>Sub-total</i>	4.5252	50.251	8.8376	2.17494	11.01254	3.6401	2.00096	5.64106
Building Construction	<i>on-site</i>	2.1198	19.186	0	1.1171	1.1171	0	1.0503	1.0503
	<i>off-site</i>	24.1855	230.4032	50.0247	1.211	51.2357	13.5517	1.15	14.7017
	<i>Sub-total</i>	26.3053	249.5892	50.0247	2.3281	52.3528	13.5517	2.2003	15.752
Paving	<i>on-site</i>	1.3566	14.0656	0	0.7528	0.7528	0	0.6926	0.6926
	<i>off-site</i>	0.0563	0.0401	0.1232	0.00078	0.12398	0.0327	0.00072	0.03342
	<i>Sub-total</i>	1.4129	14.1057	0.1232	0.75358	0.87678	0.0327	0.69332	0.72602
Architectural Coating	<i>on-site</i>	468.8793	1.6838	0	0.1109	0.1109	0	0.1109	0.1109
	<i>off-site</i>	3.4327	2.4455	7.5083	0.0477	7.556	1.9916	0.044	2.0356
	<i>Sub-total</i>	472.312	4.1293	7.5083	0.1586	7.6669	1.9916	0.1549	2.1465
Total		512.0679	393.7818	84.8312	9.27304	94.10424	29.2187	8.61457	37.83327

Maximum Single-Year Construction Scenario (2021)			
Construction Phase	Maximum Daily Emissions (lb/dy)		
	VOC	NO _x	PM ₁₀
Demolition	3	33	2
Site Preparation	4	42	20
Grading	5	50	11
Building Construction	26	250	52
Paving	1	14	1
Architectural Coating	472	4	8
Maximum Daily Emissions	512	394	94
PCAPCD Thresholds of Significance	82	82	82
Does Project Exceed Thresholds?	Yes	Yes	Yes
Notes: lb/day = pounds per day; VOC = volatile organic compounds; NO _x = oxides of nitrogen; PM ₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PCAPCD = Placer County Air Pollution Control District.			
Source: AECOM 2019			

Operational Emissions

Summary of CalEEMod Modeled Maximum Daily Long-Term Operational Emissions of Criteria Air Pollutants and Precursors¹			
Emissions Source	Daily Emissions (lbs/day)		
	ROG	NO_x	PM₁₀
Area	38745	748	6437
Energy	26	227	18
Mobile ²	167	1701	659
Total Daily Operational Emissions³	38937	2676	7114
PCAPCD Thresholds of Significance	55	55	82
Does Project Exceed Thresholds?	Yes	Yes	Yes
<p>Notes: lbs/day = pounds per day; ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; PCAPCD = Placer County Air Pollution Control District.</p> <p>¹ Operational emissions were modeled for full buildout year 2035.</p> <p>² Mobile emissions are calculated outside of CalEEMod using EMFAC 2017 emissions rates and VMT from the Transportation Impact Analysis.</p> <p>³ Total emissions may not add correctly due to rounding.</p> <p>Source: AECOM 2019</p>			

Criteria Air Pollutant Emissions

Construction-related Emissions

Max Single-Year Construction Scenario (2021)				Mitigated Maximum Daily Emissions (lb/dy)					
Construction Phase		VOC	NOX	PM10			PM2.5		
				Fugitive Dust	PM10 Exhaust	PM10 Total	Fugitive Dust	PM2.5 Exhaust	PM2.5 Total
Demolition	<i>on-site</i>	0.4623	2.0032	0	0.0616	0.0616	0	0.0616	0.0616
	<i>off-site</i>	0.0563	0.0401	0.1232	0.00078	0.12398	0.0327	0.00072	0.03342
	<i>Sub-total</i>	<i>0.5186</i>	<i>2.0433</i>	<i>0.1232</i>	<i>0.06238</i>	<i>0.18558</i>	<i>0.0327</i>	<i>0.06232</i>	<i>0.09502</i>
Site Preparation	<i>on-site</i>	0.4656	2.0175	7.0485	0.0621	7.1106	3.873	0.0621	3.9351
	<i>off-site</i>	0.0676	0.0482	0.1479	0.00094	0.14884	0.0392	0.00087	0.04007
	<i>Sub-total</i>	<i>0.5332</i>	<i>2.0657</i>	<i>7.1964</i>	<i>0.06304</i>	<i>7.25944</i>	<i>3.9122</i>	<i>0.06297</i>	<i>3.97517</i>
Grading	<i>on-site</i>	0.7616	3.3	3.3826	0.1015	3.4841	1.4026	0.1015	1.5041
	<i>off-site</i>	0.0751	0.0535	0.1643	0.00104	0.16534	0.0436	0.00096	0.04456
	<i>Sub-total</i>	<i>0.8367</i>	<i>3.3535</i>	<i>3.5469</i>	<i>0.10254</i>	<i>3.64944</i>	<i>1.4462</i>	<i>0.10246</i>	<i>1.54866</i>
Building Construction	<i>on-site</i>	0.3278	2.2347	0	0.0408	0.0408	0	0.0408	0.0408
	<i>off-site</i>	24.1855	230.4032	50.0247	1.211	51.2357	13.5517	1.15	14.7017
	<i>Sub-total</i>	<i>24.5133</i>	<i>232.6379</i>	<i>50.0247</i>	<i>1.2518</i>	<i>51.2765</i>	<i>13.5517</i>	<i>1.1908</i>	<i>14.7425</i>
Paving	<i>on-site</i>	0.2805	1.2154	0	0.0374	0.0374	0	0.0374	0.0374
	<i>off-site</i>	0.0563	0.0401	0.1232	0.00078	0.12398	0.0327	0.00072	0.03342
	<i>Sub-total</i>	<i>0.3368</i>	<i>1.2555</i>	<i>0.1232</i>	<i>0.03818</i>	<i>0.16138</i>	<i>0.0327</i>	<i>0.03812</i>	<i>0.07082</i>
Architectural Coating	<i>on-site</i>	468.6668	0.1288	0	0.00396	0.00396	0	0.00396	0.00396
	<i>off-site</i>	3.4327	2.4455	7.5083	0.0477	7.556	1.9916	0.044	2.0356
	<i>Sub-total</i>	<i>472.0995</i>	<i>2.5743</i>	<i>7.5083</i>	<i>0.05166</i>	<i>7.55996</i>	<i>1.9916</i>	<i>0.04796</i>	<i>2.03956</i>
Total		498.8381	243.9302	68.5227	1.5696	70.0923	20.9671	1.50463	22.47173

Maximum Single-Year Construction Scenario (2021)			
Construction Phase	Maximum Daily Emissions (lb/dy)		
	VOC	NO _x	PM ₁₀
Demolition	0.5186	2.0433	0.18558
Site Preparation	0.5332	2.0657	7.25944
Grading	0.8367	3.3535	3.64944
Building Construction	24.5133	232.6379	51.2765
Paving	0.3368	1.2555	0.16138
Architectural Coating	472.0995	2.5743	7.55996
Maximum Daily Emissions	472.0995	232.6379	51.2765
PCAPCD Thresholds of Significance	82	82	82
Does Project Exceed Thresholds?	Yes	Yes	No
Notes: lb/day = pounds per day; VOC = volatile organic compounds; NO _x = oxides of nitrogen; PM ₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PCAPCD = Placer County Air Pollution Control District.			
Source: AECOM 2019			

Operational Emissions - Mobile

Mobile Sources Annual Emissions of Planning Area in 2035 with Buildout of General Plan

Land Use	Annual VMT ¹	Emissions (tons/yr)						MT / Year
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Total	3,755,753,275	64.80	661.33	2,079.92	11.35	1,403.24	382.90	1,071,201.50

¹ Annual VMT is based upon Roseville_GP_VMT_Summary dated 10Jan2020

Mobile Sources Average Daily Emissions of Planning Area in 2035 with Buildout of General Plan

Land Use	Emissions (lb/dy)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Total	355.07	3,623.72	11,396.84	62.19	7,688.98	2,098.09

Mobile Sources Annual Emissions of New Development in 2035 General Plan

Land Use	Annual VMT ¹	Emissions (tons/yr)						MT / Year
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂ e
Total	1,762,952,920	30.42	310.43	976.32	5.33	658.68	179.73	502,822.65

¹ Annual VMT is based upon Roseville_GP_VMT_Summary dated 10Jan2020 for the Delta from Baseline to 2035 Cumulative + Project

Mobile Sources Average Daily Emissions of New Development in General Plan

Land Use	Emissions (lb/dy)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Total	166.67	1,700.97	5,349.68	29.19	3,609.21	984.84

Exhaust Emission Factors:

Vehicle Type	Year	Vehicle Class	Emission Factors (g/mile)						
			ROG	NO _x	CO	SO _x	PM ₁₀ ¹	PM _{2.5} ¹	CO ₂ e
Average Fleet	2035	Aggregate	0.016	0.160	0.502	0.003	0.054	0.023	285.213

¹ PM10 and PM2.5 are inclusive of BW and TW emissions

Source: EMFAC 2017

EMFAC 2017 Adjustment Factor: Need to account for this (only applicable to light-duty vehicles (LDA, LDT1, LDT2, MDV)?

https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft?utm_medium=email&utm_source=govdelivery

On-Road Fugitive Dust Emission Factors:

$$EF_{DUST} = [(k(sL)^{0.91} \times (W)^{1.02})(1 - P/4N)]$$

Source: AP-42 Section 13.2.1 (Paved Roads) - <http://www.epa.gov/ttnchie1/ap42/ch13/final/c13s0201.pdf>

EF (PM10)	0.00062755	lb/VMT
EF (PM2.5)	0.000154035	lb/VMT

Variable	Value	Description	
k (PM10)	0.0022	particle size multiplier for particle size range and units of interest (lb/VMT)	
k (PM2.5)	0.00054	particle size multiplier for particle size range and units of interest (lb/VMT)	
sL	0.1	road surface silt loading (g/m ²)	
W	2.4	average weight (tons) of vehicles (2.4 tons)	
P	74	number of "wet" days with at least 0.254 mm (0.1 inches) of precipitation	*CalEEMod data for Placer-Sacramento
N	365	number of days in averaging period	

Conversion Factors:	
grams per pound:	454
pounds per ton:	2,000
pounds per metric ton:	2,205
days per year	365

Global Warming Potential¹:	
CO2	1
CH4	28
N2O	265

¹Per IPCC 5th Assessment Report (AR5)

Construction Energy Consumption
Maximum Annual Construction Scenario

Phase	Source	MT CO ₂ e/yr ^a	Fuel Type	Emission Factor (MT CO ₂ /gallon) ^b	Gallons/year
<i>Demolition</i>	Offroad Equip	445.10	Diesel	0.01016	43,809
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	13.23	Gas	0.008887	1,488
<i>Site Prep</i>	Offroad Equip	438.11	Diesel	0.01016	43,121
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	15.87	Gas	0.008887	1,786
<i>Grading</i>	Offroad Equip	714.02	Diesel	0.01016	70,278
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	17.63	Gas	0.008887	1,984
<i>Building Construction</i>	Offroad Equip	302.93	Diesel	0.01016	29,816
	Hauling	0.00	Diesel	0.01016	-
	Vendor	6621.61	Diesel	0.01016	651,733
	Worker	4029.23	Gas	0.008887	453,384
<i>Paving</i>	Offroad Equip	262.47	Diesel	0.01016	25,834
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	13.23	Gas	0.008887	1,488
<i>Architectural Coating</i>	Offroad Equip	33.26	Diesel	0.01016	3,273
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	805.85	Gas	0.008887	90,677
Total			Diesel	867,865	
			Gasoline	550,807	

Notes:

Assumed amortization period is 30 years.

Sources:

^a Modeled by AECOM in 2019;

^b U.S. Energy Information Administration 2016 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)

Amortization period (years): 30

Construction Buildout Period (years): 16

Factor: MT/gallon
 Diesel 1.02E-02
 Gasoline 8.89E-03

Full Build-Out Scenario

Phase	Source	MT CO ₂ e ^a	Fuel Type	Emission Factor (MT CO ₂ /gallon) ^b	Gallons
<i>Demolition</i>	Offroad Equip	4451.01	Diesel	0.01016	438,092
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	132.25	Gas	0.008887	14,881
<i>Site Prep</i>	Offroad Equip	4381.13	Diesel	0.01016	431,213
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	158.70	Gas	0.008887	17,858
<i>Grading</i>	Offroad Equip	7140.23	Diesel	0.01016	702,778
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	176.33	Gas	0.008887	19,842
<i>Building Construction</i>	Offroad Equip	3029.29	Diesel	0.01016	298,159
	Hauling	0.00	Diesel	0.01016	-
	Vendor	66216.10	Diesel	0.01016	6,517,333
	Worker	40292.27	Gas	0.008887	4,533,844
<i>Paving</i>	Offroad Equip	2624.72	Diesel	0.01016	258,339
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	132.25	Gas	0.008887	14,881
<i>Architectural Coating</i>	Offroad Equip	332.57	Diesel	0.01016	32,733
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	8058.45	Gas	0.008887	906,769
Total Demand			Diesel	8,678,646	
			Gasoline	5,508,075	

Notes:

Total construction demand determined based upon 10 times the maximum annual construction year (assumed to be 10% of total buildout)
 Assumed amortization period is 30 years.

Sources:

^a Modeled by AECOM in 2019;

^b U.S. Energy Information Administration 2016 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)

Full Build-Out Scenario

Phase	Source	MT CO ₂ e ^a	Fuel Type	Emission Factor (MT CO ₂ /gallon) ^b	Gallons
<i>Demolition</i>	Offroad Equip	4451.01	Diesel	0.01016	438,092
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	132.25	Gas	0.008887	14,881
<i>Site Prep</i>	Offroad Equip	4381.13	Diesel	0.01016	431,213
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	158.70	Gas	0.008887	17,858
<i>Grading</i>	Offroad Equip	7140.23	Diesel	0.01016	702,778
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	176.33	Gas	0.008887	19,842
<i>Building Construction</i>	Offroad Equip	3029.29	Diesel	0.01016	298,159
	Hauling	0.00	Diesel	0.01016	-
	Vendor	66216.10	Diesel	0.01016	6,517,333
	Worker	40292.27	Gas	0.008887	4,533,844
<i>Paving</i>	Offroad Equip	2624.72	Diesel	0.01016	258,339
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	132.25	Gas	0.008887	14,881
<i>Architectural Coating</i>	Offroad Equip	332.57	Diesel	0.01016	32,733
	Hauling	0.00	Diesel	0.01016	-
	Vendor	0.00	Diesel	0.01016	-
	Worker	8058.45	Gas	0.008887	906,769
Total Demand				Diesel	8,678,646
				Gasoline	5,508,075
Amortized Annual Demands (over 30 years)				Diesel	289,288
				Gasoline	183,602
Average Annual Demands (over 16 year Buildout Period)				Diesel	542,415.40
				Gasoline	344,254.66

Notes:

Total construction demand determined based upon 10 times the maximum annual construction year (assumed to be 10% of total buildout)
Assumed amortization period is 30 years.

Sources:

^a Modeled by AECOM in 2019;

^b U.S. Energy Information Administration 2016 (https://www.eia.gov/environment/emissions/co2_vol_mass.php)

Estimated Annual Operational Energy Demand

	Energy Consumption	Unit	Annual Energy Consumption (MMBTU/year)
Residential Infrastructure Operational Demand			
Electrical	539,229,600	kWh/year	8,335,001
Natural Gas	1,605,307,450	kBTU/year	1,605,307
Subtotal			9,940,308
Non-Residential Infrastructure Operational Demand			
Electrical	661,181,913	kWh/year	10,220,047
Natural Gas	1,016,858,440	kBTU/year	1,016,858
Subtotal			11,236,905
			21,177,214
Transportation Energy Demand			
Gasoline	91,582,729	Gallons/year	11,447,841
Diesel Fuel	29,422,382	Gallons/year ¹	4,063,091
Subtotal			15,510,932
Total			
Notes: kWh = kilowatt-hours; kBtu = thousand British thermal unit			
Source: AECOM 2019			

Conversion Factors

City of Roseville Electricity	15.45723919	MMBTU per MWh (or kBTU/kWh)	Source: https://ww2.energy.ca.gov/almanac/electricity_data/web_qfer/Heat_Rates_cms.php
Category	Amount	Units	
Diesel (heat content)	5.8	MMBTu/barrel	http://www.theclimateregistry.org/wp-content/uploads/2017/05/2017-Climate-Registry-Default-Emission-Factors.pdf
Motor Gasoline	5.25	MMBTu/barrel	http://www.theclimateregistry.org/wp-content/uploads/2017/05/2017-Climate-Registry-Default-Emission-Factors.pdf
Natural Gas	0.1	MMBTu/therm	https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references
Propane	0.0913	MMBTu/gallon	https://www.eia.gov/environment/emissions/co2_vol_mass.php
Kerosene	0.135	MMBTu/gallon	https://www.eia.gov/environment/emissions/co2_vol_mass.php
Wood	20	MMBTu/cord	https://www.eia.gov/energyexplained/index.cfm?page=about_btu
Gallons per Barrel	42	gallons/barrel	http://www.theclimateregistry.org/wp-content/uploads/2017/05/2017-Climate-Registry-Default-Emission-Factors.pdf

Energy Demand by Land Use (CalEEMod output data)

Land Use	Natural Gas Demand (kBtu/year)	Electricity Demand (kWh/year)
Apartment - Low Rise	2.48E+08	9.23E+07
Congregate Care (Assisted Living)	3.31E+06	1.45E+06
Single Family Housing	1.30E+09	4.26E+08
Retirement Community	5.14E+07	1.99E+07
Total Residential	1.61E+09	5.39E+08
Arena	2.76E+07	1.25E+07
City Park	0	0
Elementary School	2.57E+07	1.53E+07
General Light Industry	9.37E+07	4.25E+07
Golf Course	0	0.00E+00
Government (Civic Center)	2.92E+07	1.77E+07
Hospital	1.52E+08	2.81E+07
Hotel	4.98E+07	1.23E+07
Industrial Park	2.17E+08	1.32E+08
Medical Office Building	1.66E+07	1.01E+07
Motel	1.31E+06	3.24E+05
Office Park	1.46E+08	1.41E+08
Place of Worship	1.88E+07	8.50E+06
Regional Shopping Center	2.05E+07	2.07E+07
Strip Mall	2.19E+08	2.20E+08
Total Non-Residential	1.02E+09	6.61E+08

Transportation Energy Consumption

	Annual VMT ^a	Fuel Consumption ^b (gallons per year)
Total	3,755,753,275.00	
Gasoline	3,234,905,448.63	91,582,729.16
Diesel	368,821,403.16	29,422,381.96

Fuel	% VMT by Fuel Type	Weighted Ave Fuel Consumption per VMT
Gasoline	0.86132001	0.02831079
Diesel	0.098201712	0.079774063

*Based upon EMFAC 2017 (see Tab EMFAC2017-EI-2011CLASS-Placer(SV))

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: Placer (SV)

Calendar Year: 2035

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	% VMT	Trips	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_TOTEX	ROG_DIURN	ROG_HTSK	ROG_RUNLS	ROG_RESTL	ROG_TOTAL	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_TOTEX	TOG_DIURN	TOG_HTSK	TOG_RUNLS	TOG_RESTL	TOG_TOTAL
Placer (SV)	2035	All Other Buses	Aggregated	Aggregated	DSL	35.55260291	1785.565501	0.002041237	298.6418645	2.1254E-05	1.93332E-06	0	2.31873E-05	0	0	0	0	2.31873E-05	2.4196E-05	2.20094E-06	0	2.63969E-05	0	0	0	0	2.63969E-05
Placer (SV)	2035	LDA	Aggregated	Aggregated	DSL	1418.862875	48222.16187	0.055126994	6719.667516	0.000252616	0	0	0.000252616	0	0	0	0	0.000252616	0.000287586	0	0	0.000287586	0	0	0	0	0.000287586
Placer (SV)	2035	LDT1	Aggregated	Aggregated	DSL	2.548697673	81.99058841	9.37307E-05	11.35261721	1.57242E-06	0	0	1.57242E-06	0	0	0	0	1.57242E-06	1.79009E-06	0	0	1.79009E-06	0	0	0	0	1.79009E-06
Placer (SV)	2035	LDT2	Aggregated	Aggregated	DSL	530.6867739	19415.54024	0.022195611	2494.523149	0.00028638	0	0	0.00028638	0	0	0	0	0.00028638	0.000326025	0	0	0.000326025	0	0	0	0	0.000326025
Placer (SV)	2035	LHD1	Aggregated	Aggregated	DSL	3436.261523	108363.2178	0.123879523	43223.84714	0.01660095	0.000415751	0	0.017016701	0	0	0	0	0.017016701	0.018899078	0.000473305	0	0.019372383	0	0	0	0	0.019372383
Placer (SV)	2035	LHD2	Aggregated	Aggregated	DSL	1341.059353	41935.35139	0.047939988	16868.83961	0.006249987	0.000162254	0	0.006412241	0	0	0	0	0.006412241	0.007115195	0.000184715	0	0.00729991	0	0	0	0	0.00729991
Placer (SV)	2035	MDV	Aggregated	Aggregated	DSL	1228.364062	38751.04606	0.044299728	5696.152399	0.000249571	0	0	0.000249571	0	0	0	0	0.000249571	0.00028412	0	0	0.00028412	0	0	0	0	0.00028412
Placer (SV)	2035	MH	Aggregated	Aggregated	DSL	358.3321148	2669.469287	0.003051705	35.83321148	0.000320315	0	0	0.000320315	0	0	0	0	0.000320315	0.000364657	0	0	0.000364657	0	0	0	0	0.000364657
Placer (SV)	2035	Motor Coach	Aggregated	Aggregated	DSL	13.19951986	1574.103591	0.001799496	192.7129899	3.21262E-05	5.81259E-05	0	9.0252E-05	0	0	0	0	9.0252E-05	3.65732E-05	6.61719E-05	0	0.000102745	0	0	0	0	0.000102745
Placer (SV)	2035	PTO	Aggregated	Aggregated	DSL	0	6516.443134	0.00449519	0	0.000181704	0	0	0.000181704	0	0	0	0	0.000181704	0.000206856	0	0	0.000206856	0	0	0	0	0.000206856
Placer (SV)	2035	SBUS	Aggregated	Aggregated	DSL	225.3709626	7145.641838	0.008168812	2600.749662	0.000481637	6.63021E-05	0	0.000547939	0	0	0	0	0.000547939	0.000548308	7.54799E-05	0	0.000623787	0	0	0	0	0.000623787
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	26.06265821	4460.068709	0.005098697	380.5148099	3.81611E-05	1.41727E-06	0	3.95784E-05	0	0	0	0	3.95784E-05	4.34435E-05	1.61345E-06	0	4.5057E-05	0	0	0	0	4.5057E-05
Placer (SV)	2035	T6 CAIRP small	Aggregated	Aggregated	DSL	19.71601668	875.8965632	0.01001314	287.858435	7.60891E-06	1.07214E-06	0	8.68105E-06	0	0	0	8.68105E-06	8.66216E-06	1.22055E-06	0	9.88271E-06	0	0	0	0	0	9.88271E-06
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	82.25658682	5195.976369	0.005939977	371.8788309	0.000104972	4.47191E-06	0	0.000109444	0	0	0	0	0.000109444	0.000119503	5.09093E-06	0	0.000124594	0	0	0	0	0.000124594
Placer (SV)	2035	T6 instate const	Aggregated	Aggregated	DSL	552.4826517	27465.62251	0.031398368	2497.752588	0.000451954	3.00439E-05	0	0.000481998	0	0	0	0	0.000481998	0.000514515	3.42027E-05	0	0.000548718	0	0	0	0	0.000548718
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	1150.929102	134248.8027	0.153471611	13281.56227	0.001329175	6.25866E-05	0	0.001391762	0	0	0	0	0.001391762	0.001513165	7.125E-05	0	0.001584415	0	0	0	0	0.001584415
Placer (SV)	2035	T6 instate small	Aggregated	Aggregated	DSL	3913.040655	188910.3386	0.21596002	45155.94663	0.001849681	0.000212788	0	0.002062469	0	0	0	0	0.002062469	0.002105721	0.000242243	0	0.002347964	0	0	0	0	0.002347964
Placer (SV)	2035	T6 OOS heavy	Aggregated	Aggregated	DSL	14.50739513	2498.117	0.002855817	211.807969	2.13502E-05	7.889E-07	0	2.21391E-05	0	0	0	2.21391E-05	2.43056E-05	8.98103E-07	0	2.52037E-05	0	0	0	0	0	2.52037E-05
Placer (SV)	2035	T6 OOS small	Aggregated	Aggregated	DSL	7.897747313	347.2486369	0.000396997	115.3071108	3.02643E-06	4.29473E-07	0	3.4559E-06	0	0	0	3.4559E-06	3.44536E-06	4.88922E-07	0	3.93428E-06	0	0	0	0	0	3.93428E-06
Placer (SV)	2035	T6 Public	Aggregated	Aggregated	DSL	393.8122119	6139.242897	0.000701808	1194.563708	0.000130953	0.000112949	0	0.000243902	0	0	0	0.000243902	0.00014908	0.000128584	0	0.000277664	0	0	0	0	0	0.000277664
Placer (SV)	2035	T6 utility	Aggregated	Aggregated	DSL	33.70567629	562.2800693	0.000642792	387.6152774	4.50496E-06	5.03737E-06	0	9.54233E-06	0	0	0	9.54233E-06	5.12855E-06	5.73466E-06	0	1.08632E-05	0	0	0	0	0	1.08632E-05
Placer (SV)	2035	T7 CAIRP	Aggregated	Aggregated	DSL	207.416862	43902.38913	0.050188682	3028.286185	0.000965838	0.00238566	0	0.003351498	0	0	0	0.003351498	0.001099533	0.002715892	0	0.003815425	0	0	0	0	0	0.003815425
Placer (SV)	2035	T7 CAIRP construct	Aggregated	Aggregated	DSL	20.39026884	3732.314962	0.004266737	92.18361267	0.00014526	0.000181097	0	0.000181097	0	0	0	0.000181097	0.000163608	4.07971E-05	0	0.000206165	0	0	0	0	0	0.000206165
Placer (SV)	2035	T7 NNOS	Aggregated	Aggregated	DSL	311.2434945	53525.05554	0.061189198	4544.15502	0.001099157	0.000443075	0	0.005542232	0	0	0	0.005542232	0.001251307	0.005058102	0	0.006309409	0	0	0	0	0	0.006309409
Placer (SV)	2035	T7 NNOS	Aggregated	Aggregated	DSL	82.45603563	17234.086	0.019701799	1203.85812	0.000379668	0.001177079	0	0.001556748	0	0	0	0.001556748	0.000432223	0.001340015	0	0.001772239	0	0	0	0	0	0.001772239
Placer (SV)	2035	T7 other port	Aggregated	Aggregated	DSL	2.817992806	443.7592592	0.0005073	21.41674533	1.42007E-05	5.10054E-06	0	1.93012E-05	0	0	0	1.93012E-05	1.61664E-05	5.80658E-06	0	2.1973E-05	0	0	0	0	0	2.1973E-05
Placer (SV)	2035	T7 POAK	Aggregated	Aggregated	DSL	13.49754665	2107.413676	0.00240917	102.5813545	6.8252E-05	3.90077E-05	0	0.00010726	0	0	0	0.00010726	7.76997E-05	4.44073E-05	0	0.000122107	0	0	0	0	0	0.000122107
Placer (SV)	2035	T7 Public	Aggregated	Aggregated	DSL	298.2995516	6043.070784	0.006908366	904.8419722	0.00036962	0.000377197	0	0.000746817	0	0	0	0.000746817	0.000420784	0.000429411	0	0.000850194	0	0	0	0	0	0.000850194
Placer (SV)	2035	T7 Single	Aggregated	Aggregated	DSL	414.3113632	32818.11015	0.037517268	4781.095689	0.000645365	0.000998394	0	0.001643758	0	0	0	0.001643758	0.000734698	0.001136595	0	0.001871294	0	0	0	0	0	0.001871294
Placer (SV)	2035	T7 single construct	Aggregated	Aggregated	DSL	124.3229184	9259.186935	0.010584991	562.0590806	0.000330305	0.000218133	0	0.000551168	0	0	0	0.000551168	0.000379135	0.000248327	0	0.000627463	0	0	0	0	0	0.000627463
Placer (SV)	2035	T7 S/WCV	Aggregated	Aggregated	DSL	166.9186979	6806.533563	0.007781147	650.9829217	0.000223278	0.00026586	0	0.000489139	0	0	0	0.000489139	0.000254185	0.000302662	0	0.000556847	0	0	0	0	0	0.000556847
Placer (SV)	2035	T7 tractor	Aggregated	Aggregated	DSL	273.2710717	32861.50821	0.03756688	3470.54261	0.000666111	0.000566204	0	0.001232314	0	0	0	0.001232314	0.000758316	0.00064458	0	0.001402896	0	0	0	0	0	0.001402896
Placer (SV)	2035	T7 tractor construct	Aggregated	Aggregated	DSL	103.2217117	7638.014035	0.008731685	466.6613456	0.000316354	0.000181338	0	0.000497692	0	0	0	0.000497692	0.000360145	0.00020644	0	0.000566584	0	0	0	0	0	0.000566584
Placer (SV)	2035	T7 utility	Aggregated	Aggregated	DSL	6.457846604	130.845644	0.000149581	74.26523595	2.26935E-06	4.52332E-06	0	6.79268E-06	0	0	0	6.79268E-06	2.58349E-06	5.14946E-06	0	7.73295E-06	0	0	0	0	0	7.73295E-06
Placer (SV)	2035	UBUS	Aggregated	Aggregated	DSL	106.5037243	11080.39757	0.012666977	426.0148972	9.7393E-06	0	9.7393E-06	0	0	0	0	9.7393E-06	0.000671768	0	0	0.000671768	0	0	0	0	0	0.000671768
							874746.8108		1																		
Placer (SV)	2035	LDA	Aggregated	Aggregated	ELEC	6629.065437	252364.6831		32009.11283	0	0	0	0	0.000183981													

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: Placer (SV)
Calendar Year: 2035
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	CO_RUNEX	CO_IDLEX	CO_STREX	CO_TOTEX	NOx_RUNEX	NOx_IDLEX	NOx_STREX	NOx_TOTEX	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CO2_TOTEX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	CH4_TOTEX	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_TOTEX	PM10_PMTW	PM10_PMBW
Placer (SV)	2035	All Other Buses	Aggregated	Aggregated	DSL	0.000274067	8.18662E-05	0	0.000355933	0.00411544	0.000111907	0.000728968	0.004956315	1.854163994	0.022172853	0	1.876336847	9.87191E-07	8.97977E-08	0	1.07699E-06	1.11967E-05	2.79328E-08	0	1.12246E-05	2.3619E-05	0.000256542
Placer (SV)	2035	LDA	Aggregated	Aggregated	DSL	0.007358335	0	0	0.007358335	0.00067163	0	0	0.00067163	8.140389367	1.17335E-05	0	8.140389367	1.17335E-05	0	0	1.17335E-05	6.38805E-05	0	0	6.38805E-05	0.000425247	0.001953477
Placer (SV)	2035	LDT1	Aggregated	Aggregated	DSL	1.64218E-05	0	0	1.64218E-05	1.15391E-05	0	0	1.15391E-05	0.027117592	0	0	0.027117592	7.30357E-08	0	0	7.30357E-08	6.22947E-07	0	0	6.22947E-07	7.23033E-07	3.32143E-06
Placer (SV)	2035	LDT2	Aggregated	Aggregated	DSL	0.002929443	0	0	0.002929443	0.000629904	0	0	0.000629904	4.393581199	0	0	4.393581199	1.33018E-05	0	0	1.33018E-05	9.02025E-05	0	0	9.02025E-05	0.000712126	0.000786522
Placer (SV)	2035	LHD1	Aggregated	Aggregated	DSL	0.078925207	0.003445959	0	0.082371166	0.085616103	0.005611638	0	0.091227741	56.89134048	0.453085958	0	57.34442644	0.000771082	1.93108E-05	0	0.000790939	0.001746269	0.00102961	0	0.00184923	0.0014334	0.009130758
Placer (SV)	2035	LHD2	Aggregated	Aggregated	DSL	0.029883524	0.001344844	0	0.031228368	0.025552491	0.002153794	0	0.027706285	24.70382557	0.283684266	0	24.98750984	0.0002903	7.53638E-06	0	0.000297836	0.00091583	4.05113E-05	0	0.000956342	0.00055471	0.004122418
Placer (SV)	2035	MDV	Aggregated	Aggregated	DSL	0.006964283	0	0	0.006964283	0.000646476	0	0	0.000646476	11.66974873	0	0	11.66974873	1.15921E-05	0	0	1.15921E-05	6.992E-05	0	0	6.992E-05	0.000341726	0.001569803
Placer (SV)	2035	MH	Aggregated	Aggregated	DSL	0.001081496	0	0	0.001081496	0.010913464	0	0	0.010913464	2.749414385	0	0	2.749414385	1.4878E-05	0	0	1.4878E-05	0.000217038	0	0	0.000217038	4.70814E-05	0.000383537
Placer (SV)	2035	Motor Coach	Aggregated	Aggregated	DSL	0.000298543	0.000858857	0	0.0011574	0.003264638	0.00066867	0.000473715	0.004425224	2.16121397	0.133036604	0	2.294658001	1.49218E-06	2.6998E-06	0	4.19197E-06	4.14707E-05	2.47373E-07	0	4.17181E-05	2.08218E-05	0.00022616
Placer (SV)	2035	PTO	Aggregated	Aggregated	DSL	0.002911709	0	0	0.002911709	0.032774336	0	0	0.032774336	11.8260317	0	0	11.8260317	8.43967E-06	0	0	8.43967E-06	3.44228E-05	0	0	3.44228E-05	0	0
Placer (SV)	2035	SBUS	Aggregated	Aggregated	DSL	0.001692594	0.002113906	0	0.0038065	0.02515051	0.007365606	0.004160446	0.036676562	7.663797391	0.814267498	0	8.478064889	2.23708E-05	3.07956E-06	0	2.54504E-05	0.00020122	4.44425E-06	0	0.000205664	9.45207E-05	0.005866582
Placer (SV)	2035	T6 CAIRP heavy	Aggregated	Aggregated	DSL	0.000316271	6.00139E-05	0	0.000376284	0.0045156	8.2036E-05	0.000551647	0.005149283	3.408437646	0.014273588	0	3.422711234	1.77249E-06	6.58283E-08	0	1.83831E-06	4.84463E-05	2.04768E-06	0	4.84668E-05	5.89966E-05	0.000640802
Placer (SV)	2035	T6 CAIRP small	Aggregated	Aggregated	DSL	6.30630E-05	4.53996E-05	0	0.00010846	0.000911967	6.2059E-05	0.000417371	0.001391397	0.740692453	0.010758725	0	0.751451179	3.53414E-07	4.97981E-08	0	4.03212E-07	9.8925E-06	1.54904E-08	0	9.90799E-06	1.15861E-05	0.000125845
Placer (SV)	2035	T6 instate construct	Aggregated	Aggregated	DSL	0.001211995	0.000188943	0	0.001400937	0.014647345	0.00261577	0.001088676	0.015997599	6.222527747	0.051066554	0	6.273594302	4.87568E-06	2.07709E-07	0	5.0838E-06	6.6861E-05	6.85814E-08	0	6.69296E-05	0.000746533	
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	0.005637508	0.001271948	0	0.006909456	0.063351611	0.001740288	0.007390958	0.07482858	29.87346789	0.320340918	0	30.19398881	2.09921E-05	1.39546E-06	0	2.23876E-05	0.000264581	4.35428E-07	0	0.000265016	0.000363308	0.00394613
Placer (SV)	2035	T6 instate small	Aggregated	Aggregated	DSL	0.015124654	0.002650218	0	0.017774873	0.214010465	0.003622717	0.031325272	0.248958455	114.0443745	0.663622755	0	114.7079973	6.05662E-05	2.90698E-06	0	6.46437E-05	0.00108708	9.04257E-07	0	0.00108708	0.019288231	0.019288231
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	0.021047348	0.009010469	0	0.030057817	0.295504034	0.012316887	0.106597116	0.414418017	172.103623	2.209163701	0	174.317867	8.59139E-05	9.88345E-06	0	9.57963E-05	0.001383062	3.07438E-06	0	0.001383062	0.002498556	0.027141741
Placer (SV)	2035	T6 OOS heavy	Aggregated	Aggregated	DSL	0.000176946	3.44058E-05	0	0.000210352	0.002523246	4.56641E-05	0.000307075	0.002875985	1.907055079	0.007931686	0	1.914986765	9.91662E-07	3.66424E-08	0	1.0283E-06	2.70559E-05	1.13981E-08	0	2.70673E-05	3.30444E-05	0.000358918
Placer (SV)	2035	T6 OOS small	Aggregated	Aggregated	DSL	2.50824E-05	1.8186E-05	0	4.32683E-05	0.000364228	2.48593E-05	0.000167165	0.000556253	0.294342649	0.004326151	0	2.48593E-05	1.4057E-07	3.95424E-06	0	1.60518E-07	3.95424E-06	6.20571E-09	0	3.96045E-06	4.9891E-05	
Placer (SV)	2035	T6 Public	Aggregated	Aggregated	DSL	0.000861466	0.004454141	0	0.005315607	0.011496021	0.00784703	0.00380923	0.023152281	6.295738189	1.223892789	0	7.519630978	6.08243E-06	5.24619E-06	0	1.13286E-05	4.68717E-05	3.33327E-06	0	5.0205E-05	8.12083E-05	0.000882057
Placer (SV)	2035	T6 utility	Aggregated	Aggregated	DSL	5.27246E-05	0.000213307	0	0.000266031	0.000584357	0.00029158	0.000842544	0.001718481	0.500602284	0.050579732	0	0.551182017	2.09244E-07	2.33973E-07	0	4.43216E-07	2.10175E-06	7.27804E-08	0	2.17453E-06	7.43769E-06	8.07857E-05
Placer (SV)	2035	T7 CAIRP	Aggregated	Aggregated	DSL	0.00897537	0.035250075	0	0.04425445	0.099874384	0.028191188	0.007454993	0.135520165	47.3343127	4.702477386	0	52.03679008	4.48607E-05	0.000110808	0	0.000155668	0.001354485	1.01529E-05	0	0.001354485	0.001742188	0.002987852
Placer (SV)	2035	T7 CAIRP construct	Aggregated	Aggregated	DSL	0.002023874	0.000529514	0	0.002533888	0.016465395	0.000423478	0.000643911	0.017352783	5.414621388	0.069815473	0	5.484436861	6.74696E-06	1.66451E-06	0	8.41147E-06	8.58744E-05	1.52514E-07	0	8.58744E-05	0.00014811	0.000254009
Placer (SV)	2035	T7 NNODS	Aggregated	Aggregated	DSL	0.01021428	0.065650071	0	0.075864353	0.109859959	0.052503534	0.011187287	0.17355078	56.84668686	8.610620959	0	65.45728982	5.1053E-05	0.000206369	0	0.000257422	0.001430572	1.89089E-05	0	0.001449481	0.002124046	0.003642739
Placer (SV)	2035	T7 NNODS	Aggregated	Aggregated	DSL	0.003528192	0.017392314	0	0.003920506	0.039294875	0.013909474	0.002963405	0.056167753	18.61433327	2.325225775	0	20.9395904	1.76346E-05	5.46723E-05	0	7.23068E-06	0.00053318	5.00944E-06	0	0.00053318	0.00083904	0.001172895
Placer (SV)	2035	T7 other port	Aggregated	Aggregated	DSL	0.000202721	7.53647E-05	0	0.000278086	0.001953858	6.02728E-05	4.21275E-05	0.000205603	0.595167746	0.010054545	0	0.605222291	6.59585E-07	2.36907E-07	0	8.96492E-07	7.6759E-06	2.1707E-08	0	7.6973E-06	1.76098E-05	3.02008E-05
Placer (SV)	2035	T7 POAK	Aggregated	Aggregated	DSL	0.00097433	0.00057637	0	0.0015507	0.009437141	0.000460951	0.000201997	0.010100889	2.863275655	0.077155241	0	2.940430896	3.17013E-06	1.81181E-06	0	4.98193E-06	3.72795E-05	1.6601E-07	0	3.74455E-05	8.36289E-05	0.000143424
Placer (SV)	2035	T7 Public	Aggregated	Aggregated	DSL	0.002022222	0.005094523	0	0.007116744	0.027601904	0.00679774	0.004427974	0.038827331	9.344205422	0.890323796	0	10.23452922	1.71679E-05	1.75198E-05	0	3.46877E-05	0.000110856	5.76568E-06	0	0.000110856	0.000239808	0.000411271
Placer (SV)	2035	T7 Single	Aggregated	Aggregated	DSL	0.007890453	0.014752084	0	0.022642537	0.076990474	0.011797954	0.019107665	0.107896093	44.17941368	2.1155907	0	46.29500438	2.99755E-05	4.63728E-05	0	7.63483E-05	0.000461243	4.24899E-06	0	0.000465492	0.01302328	0.002233492
Placer (SV)	2035	T7 single construct	Aggregated	Aggregated	DSL	0.004410472	0.003221764	0	0.007632237	0.034015281	0.002585673	0.002808453	0.039409408	15.17098729	0.471089843	0	15.64207713	1.54686E-05	1.01317E-05	0	2.56003E-05	0.000163281	9.41401E-07	0	0.000164222	0.000367434	0.00063015
Placer (SV)	2035	T7 SWCV	Aggregated	Aggregated	DSL	0.000594605	0.00373082	0	0.004325425	0.013999724	0.004180789	0.003536586	0.021717098	23.2135413	0.604289885	0	23.81783119	1.03707E-05	1.23485E-05	0	2.27192E-05	0.000127165	2.6202E-06	0	0.000127165	0.000270105	0.00046323
Placer (SV)	2035	T7 tractor	Aggregated	Aggregated	DSL	0.005764263	0.0083																				

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: Placer (SV)

Calendar Year: 2035

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	PM10_TOTAL	PM2_5_RUNEX	PM2_5_IDLEX	PM2_5_STREX	PM2_5_TOTEX	PM2_5_PMTW	PM2_5_PMBW	PM2_5_TOTAL	SOx_RUNEX	SOx_IDLEX	SOx_STREX	SOx_TOTEX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	N2O_TOTEX	Fuel Consumption	Consumption per	
Placer (SV)	2035	All Other Buses	Aggregated	Aggregated	DSL	0.000291385	1.07123E-05	2.67244E-08	0	1.0739E-05	5.90475E-06	0.000109946	0.00012659	1.75172E-05	2.09478E-07	0	1.7727E-05	0.000291449	3.48526E-06	0	0.000294934	0.167224826	0.093653706	
Placer (SV)	2035	LDA	Aggregated	Aggregated	DSL	0.002442604	6.11171E-05	0	0	6.11171E-05	0.000106312	0.000837204	0.001004633	7.6956E-05	0	0	7.6956E-05	0.001279556	0	0	0.001279556	0.725496169	0.01504487	
Placer (SV)	2035	LDT1	Aggregated	Aggregated	DSL	4.66741E-06	5.95999E-07	0	0	5.95999E-07	1.80758E-07	1.42347E-06	2.20023E-06	2.56359E-07	0	0	2.56359E-07	4.26251E-06	0	0	4.26251E-06	0.002416802	0.029476578	
Placer (SV)	2035	LDT2	Aggregated	Aggregated	DSL	0.001047941	8.63003E-05	0	0	8.63003E-05	4.28039E-05	0.000337081	0.000466185	4.15351E-05	0	0	4.15351E-05	0.00069061	0	0	0.00069061	0.391569271	0.020167828	
Placer (SV)	2035	LHD1	Aggregated	Aggregated	DSL	0.012413388	0.001670726	9.8507E-05	0	0.001769233	0.00035835	0.003913182	0.006040765	0.000537828	4.28329E-06	0	0	0.000542111	0.008942526	7.12188E-05	0	0.009013745	5.110709063	0.047162766
Placer (SV)	2035	LHD2	Aggregated	Aggregated	DSL	0.005633469	0.000876212	3.87588E-05	0	0.000914971	0.000138677	0.001766751	0.002820399	0.00023354	2.68184E-06	0	0	0.000236222	0.003883097	4.45912E-05	0	0.003927689	2.2269626	0.053104661
Placer (SV)	2035	MDV	Aggregated	Aggregated	DSL	0.001981448	6.68953E-05	0	0	6.68953E-05	8.54314E-05	0.000672773	0.000825099	0.000110321	0	0	0.000110321	0.001834322	0	0	0.001834322	1.040043371	0.026839104	
Placer (SV)	2035	MH	Aggregated	Aggregated	DSL	0.000647656	0.000207649	0	0	0.000207649	1.17703E-05	0.000164373	0.000383792	2.59919E-05	0	0	2.59919E-05	0.00043217	0	0	0.00043217	0.245036142	0.091792081	
Placer (SV)	2035	Motor Coach	Aggregated	Aggregated	DSL	0.0002887	3.96767E-05	2.36672E-07	0	3.99134E-05	5.20546E-06	9.69256E-05	0.000142044	2.04219E-05	1.25686E-06	0	0	2.16788E-05	0.00039777	2.09115E-05	0	0.000360688	0.204506875	0.129919578
Placer (SV)	2035	PTO	Aggregated	Aggregated	DSL	3.44228E-05	3.29337E-05	0	0	3.29337E-05	0	0	3.29337E-05	0.00011726	0	0	0.00011726	0.001858887	0	0	0.001858887	1.053971784	0.161740349	
Placer (SV)	2035	SBUS	Aggregated	Aggregated	DSL	0.006166767	0.000192515	4.252E-06	0	0.000196767	2.36302E-05	0.00251425	0.002734647	7.24038E-05	7.6928E-06	0	0	8.00966E-05	0.001204642	0.000127992	0	0.001332634	0.755590835	0.105741493
Placer (SV)	2035	T6 CAIRP heavy	Aggregated	Aggregated	DSL	0.000748265	4.63505E-05	1.4591E-08	0	4.63701E-05	1.47492E-05	0.000274629	0.000335749	3.22012E-05	1.3485E-07	0	0	3.2361E-05	0.000535759	2.24361E-06	0	0.000538003	0.305042397	0.068394103
Placer (SV)	2035	T6 CAIRP small	Aggregated	Aggregated	DSL	0.000147339	9.6455E-06	1.48203E-08	0	9.47937E-06	2.89653E-06	5.39334E-05	6.63093E-05	6.9977E-06	1.01643E-07	0	0	7.09934E-06	0.000116427	1.69112E-06	0	0.000118118	0.066971606	0.076460634
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	0.000882194	6.39686E-05	6.56146E-08	0	6.40342E-05	1.71828E-05	0.000319943	0.000401116	5.87874E-05	4.82451E-07	0	0	5.92698E-05	0.000978095	8.02695E-06	0	0.000986122	0.559121736	0.107606674
Placer (SV)	2035	T6 instate constr	Aggregated	Aggregated	DSL	0.004574455	0.000253135	4.16591E-07	0	0.000253552	9.0827E-05	0.001691199	0.002035578	0.000282331	3.02642E-06	0	0	0.000285258	0.004695721	5.03531E-05	0	0.004746075	2.690979784	0.09797629
Placer (SV)	2035	T6 instate heavy	Aggregated	Aggregated	DSL	0.022073651	0.000965972	8.65139E-07	0	0.000965972	0.00443952	0.008266385	0.009676274	0.001077435	6.26958E-06	0	0	0.001083704	0.017926188	0.000104312	0	0.0180305	10.22312433	0.076150581
Placer (SV)	2035	T6 instate small	Aggregated	Aggregated	DSL	0.031026734	0.001323232	2.94138E-06	0	0.001326173	0.000624714	0.011632175	0.01383062	0.00162595	2.08711E-05	0	0	0.001646821	0.027052293	0.00034725	0	0.027399543	15.5352838	0.082262882
Placer (SV)	2035	T6 OOS heavy	Aggregated	Aggregated	DSL	0.000419029	2.58855E-05	1.0905E-08	0	2.58964E-05	8.26111E-06	0.000153822	0.000187979	1.80169E-05	7.49346E-08	0	0	1.80918E-05	0.000299763	1.24675E-06	0	0.000301009	0.170669424	0.068319228
Placer (SV)	2035	T6 OOS small	Aggregated	Aggregated	DSL	5.84448E-05	3.78318E-06	5.93664E-09	0	3.78912E-06	1.14833E-06	2.13819E-05	2.63193E-05	2.7808E-06	4.08713E-08	0	0	2.82167E-06	4.62666E-05	6.80011E-07	0	4.69466E-05	0.026618269	0.076654782
Placer (SV)	2035	T6 Public	Aggregated	Aggregated	DSL	0.001013471	4.48441E-05	3.18907E-06	0	4.80331E-05	2.03021E-05	0.000378025	0.00044636	5.9479E-05	1.15627E-05	0	0	7.10417E-05	0.000989602	0.000192379	0	0.001181981	0.670172301	0.109162044
Placer (SV)	2035	T6 utility	Aggregated	Aggregated	DSL	9.0398E-05	2.01083E-06	6.89632E-08	0	2.08046E-06	1.85942E-06	3.85623E-05	4.72944E-06	4.27852E-07	0	0	5.20729E-06	7.86877E-05	7.95043E-06	0	0	8.66381E-05	0.049123012	0.087363957
Placer (SV)	2035	T7 CAIRP	Aggregated	Aggregated	DSL	0.006094677	0.001295891	9.71374E-06	0	0.001305604	0.000435547	0.001280508	0.003021659	0.000447191	4.44267E-05	0	0	0.000491618	0.007440259	0.000739164	0	0.008179459	4.637676426	0.105636083
Placer (SV)	2035	T7 CAIRP constr	Aggregated	Aggregated	DSL	0.000488146	8.21595E-05	1.4591E-07	0	8.23701E-05	1.47492E-05	0.000274629	0.000335749	3.22012E-05	1.3485E-07	0	0	5.18142E-05	0.000535759	2.24361E-06	0	0.000538003	0.305042397	0.068394103
Placer (SV)	2035	T7 NNOOS	Aggregated	Aggregated	DSL	0.007216266	0.001368686	1.8091E-05	0	0.001386777	0.000531011	0.001561174	0.003478962	0.000537059	8.13487E-05	0	0	0.000618408	0.000935508	0.001353467	0	0.010288974	5.833752033	0.108991051
Placer (SV)	2035	T7 NNOOS	Aggregated	Aggregated	DSL	0.002394988	0.000510114	4.79274E-06	0	0.000514907	0.000170976	0.001188552	0.000175859	0.000175859	2.19676E-05	0	0	0.000197827	0.002925914	0.000365493	0	0.003291407	1.866196958	0.10828523
Placer (SV)	2035	T7 other port	Aggregated	Aggregated	DSL	5.55079E-05	7.34355E-06	2.0768E-08	0	7.36432E-06	4.40245E-06	1.29432E-05	2.471E-05	5.62285E-06	9.49904E-08	0	0	5.71784E-06	9.35521E-05	1.58043E-06	0	9.51325E-05	0.053939245	0.121550691
Placer (SV)	2035	T7 POAK	Aggregated	Aggregated	DSL	0.000264498	3.56668E-05	1.58828E-07	0	3.58256E-05	2.09072E-05	6.14673E-05	0.0001182	2.70508E-05	7.28924E-07	0	0	2.77797E-05	0.000450067	1.21277E-05	0	0.000462195	0.262060112	0.124351529
Placer (SV)	2035	T7 Public	Aggregated	Aggregated	DSL	0.000767702	0.000106061	5.51625E-06	0	0.000111577	5.99521E-05	0.000176259	0.000347888	8.82794E-05	8.41134E-06	0	0	9.66908E-05	0.001468779	0.000139947	0	0.001608725	0.912132259	0.150938536
Placer (SV)	2035	T7 Single	Aggregated	Aggregated	DSL	0.004001312	0.00041289	4.06518E-06	0	0.000445355	0.000325582	0.000957211	0.001728147	0.000417385	1.98771E-05	0	0	0.000437372	0.006483889	0.000332541	0	0.00727693	4.125951085	0.125721776
Placer (SV)	2035	T7 single construct	Aggregated	Aggregated	DSL	0.001161806	0.000156217	9.00676E-07	0	0.000157118	9.18586E-05	0.000270064	0.000519041	0.000143328	4.45062E-06	0	0	0.000147779	0.002384668	7.40488E-05	0	0.0002458717	1.394069316	0.150560662
Placer (SV)	2035	T7 SUV	Aggregated	Aggregated	DSL	0.000863121	0.000121664	2.50685E-06	0	0.000124171	6.75263E-05	0.000198527	0.000390224	0.00021931	5.70903E-06	0	0	0.000225019	0.003648845	9.4986E-05	0	0.003748381	2.122717294	0.311864663
Placer (SV)	2035	T7 tractor	Aggregated	Aggregated	DSL	0.004538083	0.000952126	2.30542E-06	0	0.000954432	0.000326013	0.000958477	0.002238921	0.00034706	1.13614E-05	0	0	0.000358422	0.005774334	0.000189029	0	0.005963363	3.381170883	0.102891531
Placer (SV)	2035	T7 tractor constr	Aggregated	Aggregated	DSL	0.001016932	0.000184879	7.40828E-07	0	0.00018562	7.57752E-05	0.000227779	0.000484174	0.000116907	3.62777E-06	0	0	0.000120535	0.001945079	6.03582E-05	0	0.0002005437	1.137064261	0.148869098
Placer (SV)	2035	T7 utility	Aggregated	Aggregated	DSL	1.5113E-05	9.53309E-07	1.84177E-08	0	9.71727E-07	1.29809E-06	3.81646E-06	6.08622E-06	1.77611E-06	9.32139E-08	0	0	1.86932E-06	2.95506E-05	1.55088E-06	0	3.11015E-05	0.017634234	0.134771271
Placer (SV)	2035	UBUS	Aggregated	Aggregated	DSL	0.001598511	5.57524E-05	0	0	5.57524E-05	6.31276E-05	0.000552457	0.000671337	0.0001409	0	0	0.0001409	0.002342754	0	0	0.002342754	1.328319314	0.119880113	
Placer (SV)	2035	LDA	Aggregated	Aggregated	ELEC	0.012448754	0	0	0	0	0.000556369	0.004381405	0.004937774	0	0	0	0	0	0	0	0	0	0	0
Placer (SV)	2035	LDT1	Aggregated	Aggregated	ELEC	0.000965616	0	0	0	0	4.3156E-05	0.000339854	0.00038301	0	0	0	0	0	0	0	0	0	0	0
Placer (SV)	2035	LDT2	Aggregated	Aggregated	ELEC	0.002577629	0	0	0	0	0.00015201	0.00090721	0.001022412	0	0	0	0	0	0	0	0	0	0	0
Placer (SV)	2035	MDV	Aggregated	Aggregated	ELEC	0.001794179	0	0	0	0	8.01868E-05	0.000631471	0.000711658	0	0	0	0	0	0	0	0	0	0	0
Placer (SV)	2035	LDA	Aggregated	Aggregated	GAS	0.195218214	0.002629463	0	0.00053972	0.003169184	0.00857079	0.067494975	0.079234949	0.008395429	0	0.000245024	0.008640453	0.012708095	0	0.011333284	0.024041379	92.16299073	0.023706636	
Placer (SV)	2035	LDT1	Aggregated	Aggregated	GAS	0.029650341	0.000414111																	

Maximum Land Use Development in a Single Year

Buildout Duration (years) **16**
 Work Days in 1 year (5 days/week) **260**
 Max percent of total land use development
 in a single year: **10%**

Proposed Land Uses

LandUseType	LandUseSubType	Total General Plan Land Use (Existing + Proposed Buildout)	Additional LandUseUnitAmount under the General Plan Buildout	LandUseSizeMetric	Additional LotAcreage in General Plan Buildout	Additional LandUseSquareFeet in General Plan Buildout	Additional Population in General Plan Buildout	10% of Porposed Additional Land Use Unit Amount	10% of Proposed Additional Acreage	Additional Population with 10% Buildout
Residential	Single Family Housing	50,403 (population = 146,169)	14,288.00	Dwelling Units	4638.96	25,718,400	41435	1429	463.896	4143.5
Residential	Apartments Low Rise	20538 (population = 43,130)	9,008.00	Dwelling Units	563	900,800	18917	901	56.3	1891.7
Residential	Retirement Community	4245 (population = 7,981)	905.00	Dwelling Units	181	905,000	1701	91	18.2	170.1
Retail	Strip Mall	18,677	8,904.70	Thousand Square Feet (KSF)	204.42	8,904,700		890.47	20.442	
Retail	Regional Shopping Center	1,755	572.20	Thousand Square Feet (KSF)	13.14	572,200		57.22	1.314	
Commercial	Office Park	13,352	6,152.10	Thousand Square Feet (KSF)	141.23	6,152,100		615.21	14.123	
Industrial	Industrial Park	13,208	6,818.80	Thousand Square Feet (KSF)	156.54	6,818,800		681.88	15.654	
Industrial	General Light Industry	5,025	2,649.20	Thousand Square Feet (KSF)	60.82	2,649,200		264.92	6.082	
Recreational	Arena	0	0	Thousand Square Feet (KSF)				0	0	
Educational	Place of Worship	1,006	266.30	Thousand Square Feet (KSF)	6.11	26,300		26.63	0.611	
Recreational	Motel	49	0	Thousand Square Feet (KSF)				0	0	
Commercial	Medical Office Building	1,007	86.50	Thousand Square Feet (KSF)	1.99	86,500		8.65	0.199	
Commercial	Hospital	1,803	0	Thousand Square Feet (KSF)				0	0	
Residential	Congregate Care (Assisted I	340 (population = 972)	60.80	CalEEMod)	3.8	60,800	174	6	0.38	17.4
Recreational	Hotel	1,862	388.00	Thousand Square Feet (KSF) (268 rooms in CalEEMod)	8.9	387,684		27	0.9	
Commercial	Government Civic Center	1,771	1,012.70	Thousand Square Feet (KSF)	23.25	1,012,700		101.27	2.325	
Commercial	Government Civic Center	0	0.00	Thousand Square Feet (KSF)				0	0	
Educational	Elementary School	32,422	9,800.00	Students	18.81	819,313		980	1.881	
Recreational	Golf Course	812	0	Acres				0	0	
Recreational	City Park	1,450	307.30	Acres	307.3	13,385,988		30.73	30.73	
Recreational	City Park		0	Acres				0	0	
Recreational	Arena	34	4.60	Acres	4.6	200,376		0.46	0.46	
Educational	Junior College	0	0	Students				0	0	
Total					6333.87	68,600,861	62,227	6,111	633	6,223

Total Square Feet of Land Use
 Development in Planning
 Area with Buildout **278087217**

Roseville Electric Utility GHG Emission Factor Forecasted

RPS reduces share in other energy sources on weighted basis from their 2018 contribution to power content la

Roseville Electric - Power Content Label	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
RPS*	32.0%	28.0%	40.0%	40.0%	40.0%	42.0%	44.0%	46.0%	48.0%	50.0%	52.0%	54.0%	56.0%	58.0%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%
Large Hydroelectric*	14.0%	29.0%	13.0%	13.0%	13.0%	12.6%	12.1%	11.7%	11.3%	10.8%	10.4%	10.0%	9.5%	9.1%	8.7%	8.7%	8.7%	8.7%	8.7%	8.7%
Natural Gas	33.0%	3.0%	22.0%	22.0%	22.0%	21.3%	20.5%	19.8%	19.1%	18.3%	17.6%	16.9%	16.1%	15.4%	14.7%	14.7%	14.7%	14.7%	14.7%	14.7%
Nuclear*	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unspecified	21.0%	40.0%	25.0%	25.0%	25.0%	24.2%	23.3%	22.5%	21.7%	20.8%	20.0%	19.2%	18.3%	17.5%	16.7%	16.7%	16.7%	16.7%	16.7%	16.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
GHG-Free Energy Sources	46.00%	57.00%	53.00%	53.00%	53.00%	54.57%	56.13%	57.70%	59.27%	60.83%	62.40%	63.97%	65.53%	67.10%	68.67%	68.67%	68.67%	68.67%	68.67%	68.67%
Non-Renewable	54.0%	43.0%	47.0%	47.0%	47.0%	45.4%	43.9%	42.3%	40.7%	39.2%	37.6%	36.0%	34.5%	32.9%	31.33%	31.33%	31.33%	31.33%	31.33%	31.33%
Non-Renewable																				
MT CO2e/MWh	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Power Mix MT CO2e/MWh	0.23	0.18	0.20	0.20	0.20	0.19	0.19	0.18	0.17	0.17	0.16	0.15	0.15	0.14	0.13	0.13	0.13	0.13	0.13	0.13
Power Mix lbs CO2e/MWh	509.94	406.07	443.84	443.84	443.84	429.04	414.25	399.45	384.66	369.87	355.07	340.28	325.48	310.69	295.89	295.89	295.89	295.89	295.89	295.89

*GHG-free energy sources are considered to include those sources eligible under the RPS standards (biomass & biowaste; geothermal; eligible hydroelectric; solar; and wind), large hydroelectric, and nuclear

Conversion Factor

MT/lbs	
0.000453592	
	2204.62

RPS Contribution over Time:

	2020	2030	2045
	40%	60%	60%

Roseville Electric Power Mix & GHG Emission Factor

2016

Electricity Portofilo	Roseville Electric
Eligibile Renewables	32%
Coal	0%
Large Hydro	14%
Natural Gas	33%
Nuclear	0%
Other	0%
Unspecified	21%
Total	100%
Total Renewable	46%
Total Coal	0%
Total "Gas"	54%
Emissions Factors	Roseville Electric
lb CO2e/MWh	509.94
MT CO2e/MWh	0.231

2017

Electricity Portofilo	Roseville Electric
Eligibile Renewables	28%
Coal	0%
Large Hydro	29%
Natural Gas	3%
Nuclear	0%
Other	0%
Unspecified	40%
Total	100%
Total Renewable	57%
Total Coal	0%
Total "Gas"	43%

2018

Electricity Portofilo	Roseville Electric
Eligibile Renewables	40%
Coal	0%
Large Hydro	13%
Natural Gas	22%
Nuclear	0%
Other	0%
Unspecified	25%
Total	100%
Total Renewable	53%
Total Coal	0%
Total "Gas"	47%

Total Gas calculation assumes 'unspecified' is combined cycle natural gas generation.

Electricity Portfolio Sources:

CEC Power Content Labels https://ww2.energy.ca.gov/pcl/2016_labels/Roseville.html

Emissions Factor Sources:

Emissions factors from Brian Zard email to Josh Lathan on

Conversion Factor

MT/lbs
0.000453592

Land Use Baseline and GP Update Type and Size

Region	Scenario	Total TAZ	SFDU	MFDU	ARDU	RET	MALL	OFF	IND	HTI	CC	CHURCH	LODGE	MED	HOSP	CONV	HOTEL	POPL	POPH	SCHOOL	GOLF	PARK	CEM	FAIR	UNIV
Region	Base	1,113	97,548	21,133	10,084	18,285	1,183	10,066	20,257	2,376	0	1,844	317	1,413	1,988	1,219	2,430	514	2,247	65,531	3,104	1,779	200	29	21,107
	GP Update	1,344	149,766	50,507	13,532	39,913	1,755	25,856	35,711	6,129	0	2,957	315	2,027	2,153	1,456	3,837	1,108	3,307	109,781	3,111	2,621	210	39	76,410
Roseville	Base	402	36,115	11,530	3,340	9,772	1,183	7,200	6,389	2,376	0	740	50	921	1,863	279	1,474	183	576	22,622	812	1,123	20	29	3,007
	GP Update	505	50,403	20,538	4,245	18,677	1,755	13,352	13,208	5,025	0	1,006	49	1,007	1,803	340	1,862	409	1,362	32,422	812	1,430	20	34	0
	Delta = new construction.	103.00	14,288.00	9,008.00	905.00	8,904.70	572.20	6,152.10	6,818.80	2,649.20	0.00	266.30	-1.20	86.50	-60.20	60.80	388.00	226.50	786.20	9,800.00	0.30	307.30	-0.10	4.60	-3,007.00
	Linear (to 2035)	6.44	893.00	563.00	56.56	556.54	35.76	384.51	426.18	165.58	0.00	16.64	-0.08	5.41	-3.76	3.80	24.25	14.16	49.14	613.00	0.02	19.21	-0.01	0.29	-188.00
Units		DU	DU	Du	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	KSF	Students	Acres	Acres	Acres	Acres	Students
Land Use Description		Single Family DU	Multi-Family DU	Age-Restricted DU	Retail	Mall	Office	Industrial	High-Tech Industrial	Convention Center	Church/Worship Center	Lodging	Medical Office/Clinic	Hospital	Convalescent Home	Hotel Rooms	Public/Quasi-Public Low Commercial	Public/Quasi-Public High Commercial	School (K-12)	Golf Course	Park	Cemetery	Fairgrounds	University	
CalEEMod Land Use Type		Residential	Residential	Residential	Retail	Retail	Commercial	Industrial	Industrial	Recreational	Educational	Recreational	Commercial	Commercial	Residential	Recreational	Commercial	Commercial	Educational	Recreational	Recreational	Recreational	Recreational	Educational	
CalEEMod Land Use Subtype		Single Family Housing	Apartments Low Rise	Retirement Community	Strip Mall	Regional Shopping Center	Office Park	Industrial Park	General Light Industry	Arena	Place of Worship	Motel	Medical Office Building	Hospital	Congregate Care (Assisted Living)	Hotel	Government Civic Center	Government Civic Center	Elementary School	Golf Course	City Park	City Park	Arena	Junior College	
Final Buildout Year		2035																							
Construction Start Year		2020																							
Total Construction Duration for		16																							
Maximum annual construction (%)		10%																							
*Notes: DU = Dwelling Units; KSF = Thousand Square Feet																									

Average Household Size	
Single-Family Units	2.9
Multi-Family Units	2.1
Age-Restricted	1.88

Added Population Estimates:

LandUse Baseline_GPU Type	CalEEMod Land Use	Size	Units	Lot Acreage	Land Use Square Feet	Population	Assumption
Single Family	Single Family Housing	14,288	DU	4638.96	25,718,400	41,435	2.9 persons per dwelling unit
Multi-Family	Apartments Low Rise	9,008	DU	563	900,800	18,917	2.1 persons per dwelling unit
Age-Restricted	Retirement Community	905	DU	181	905,000	1,701	1.88 persons per dwelling unit
Convalescent Home	Congregate Care (Assisted Living)	60.8	KSF	3.8	60,800	174	350 square feet per resident
							62,227

Total Population Estimates (Existing + Buildout):

LandUse Baseline_GPU Type	CalEEMod Land Use	Size	Units	Lot Acreage	Land Use Square Feet	Population	Assumption
Single Family	Single Family Housing	50,403	DU	16,364.61	90,725,400	146,169	2.9 persons per dwelling unit
Multi-Family	Apartments Low Rise	20,538	DU	1,283.63	20,538,000	43,130	2.1 persons per dwelling unit
Age-Restricted	Retirement Community	4,245	DU	849.00	4,245,000	7,981	1.88 persons per dwelling unit
Convalescent Home	Congregate Care (Assisted Living)	340	KSF	21.24	340,000	972	350 square feet per resident
							198,251

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Sub-Area

Region: Placer (SV)

Calendar Year: 2035

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for II

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Populatio	VMT	Trips	ROG_RUN	ROG_IDLE	ROG_STRE
Placer (SV)	2035	All Other F	Aggregate	Aggregate	DSL	35.5526	1785.566	298.6419	0.010798	0.049332	0
Placer (SV)	2035	LDA	Aggregate	Aggregate	GAS	115557.8	3887645	544977.5	0.002392	0	0.092174
Placer (SV)	2035	LDA	Aggregate	Aggregate	DSL	1418.863	48222.16	6719.668	0.004752	0	0
Placer (SV)	2035	LDA	Aggregate	Aggregate	ELEC	6629.065	252364.7	32009.11	0	0	0
Placer (SV)	2035	LDT1	Aggregate	Aggregate	GAS	17097.75	589347.1	78699.61	0.002857	0	0.112138
Placer (SV)	2035	LDT1	Aggregate	Aggregate	DSL	2.548698	81.99059	11.35262	0.017398	0	0
Placer (SV)	2035	LDT1	Aggregate	Aggregate	ELEC	518.8695	19575.24	2498.44	0	0	0
Placer (SV)	2035	LDT2	Aggregate	Aggregate	GAS	55493.52	1924882	256038.3	0.003355	0	0.137328
Placer (SV)	2035	LDT2	Aggregate	Aggregate	DSL	530.6868	19415.54	2494.523	0.013381	0	0
Placer (SV)	2035	LDT2	Aggregate	Aggregate	ELEC	2015.07	52254.43	9681.928	0	0	0
Placer (SV)	2035	LHD1	Aggregate	Aggregate	GAS	2974.297	98644.19	44312.6	0.012052	0.329934	0.066196
Placer (SV)	2035	LHD1	Aggregate	Aggregate	DSL	3436.262	108363.2	43223.85	0.138978	0.10976	0
Placer (SV)	2035	LHD2	Aggregate	Aggregate	GAS	462.7912	15239.16	6894.899	0.007994	0.328726	0.055977
Placer (SV)	2035	LHD2	Aggregate	Aggregate	DSL	1341.059	41935.35	16868.84	0.135206	0.10976	0
Placer (SV)	2035	MCY	Aggregate	Aggregate	GAS	7738.661	39709.56	15477.32	2.121704	0	1.89639
Placer (SV)	2035	MDV	Aggregate	Aggregate	GAS	35780.23	1087699	163100.7	0.004678	0	0.163284
Placer (SV)	2035	MDV	Aggregate	Aggregate	DSL	1228.364	38751.05	5696.152	0.005843	0	0
Placer (SV)	2035	MDV	Aggregate	Aggregate	ELEC	1387.218	36372.11	6690.445	0	0	0
Placer (SV)	2035	MH	Aggregate	Aggregate	GAS	557.9828	5055.704	55.8206	0.01377	0	0.106172
Placer (SV)	2035	MH	Aggregate	Aggregate	DSL	358.3321	2669.469	35.83321	0.108855	0	0
Placer (SV)	2035	Motor Co	Aggregate	Aggregate	DSL	13.19952	1574.104	192.713	0.018515	3.994912	0
Placer (SV)	2035	OBUS	Aggregate	Aggregate	GAS	83.63229	3119.149	1673.315	0.017435	0.749934	0.127712
Placer (SV)	2035	PTO	Aggregate	Aggregate	DSL	0	6516.443	0	0.025296	0	0
Placer (SV)	2035	SBUS	Aggregate	Aggregate	GAS	45.07108	1687.541	180.2843	0.012021	10.64152	0.296908
Placer (SV)	2035	SBUS	Aggregate	Aggregate	DSL	225.371	7145.642	2600.75	0.061147	0.266885	0
Placer (SV)	2035	T6 CAIRP F	Aggregate	Aggregate	DSL	26.06266	4460.069	380.5148	0.007762	0.049332	0
Placer (SV)	2035	T6 CAIRP s	Aggregate	Aggregate	DSL	19.71602	875.8966	287.8538	0.007881	0.049332	0
Placer (SV)	2035	T6 instate	Aggregate	Aggregate	DSL	82.25659	5195.976	371.8788	0.018327	0.049319	0
Placer (SV)	2035	T6 instate	Aggregate	Aggregate	DSL	552.4827	27465.62	2497.753	0.014928	0.049333	0
Placer (SV)	2035	T6 instate	Aggregate	Aggregate	DSL	1150.929	134248.8	13281.56	0.008982	0.049332	0
Placer (SV)	2035	T6 instate	Aggregate	Aggregate	DSL	3913.041	188910.3	45155.95	0.008883	0.049332	0
Placer (SV)	2035	T6 OOS he	Aggregate	Aggregate	DSL	14.5074	2498.117	211.808	0.007753	0.049332	0
Placer (SV)	2035	T6 OOS srr	Aggregate	Aggregate	DSL	7.897747	347.2486	115.3071	0.007907	0.049332	0
Placer (SV)	2035	T6 Public	Aggregate	Aggregate	DSL	393.8122	6139.243	1194.564	0.019351	0.260189	0
Placer (SV)	2035	T6 utility	Aggregate	Aggregate	DSL	33.70568	562.2801	387.6153	0.007268	0.13558	0
Placer (SV)	2035	T6TS	Aggregate	Aggregate	GAS	341.6607	14676.98	6835.947	0.012887	1.028119	0.152085
Placer (SV)	2035	T7 CAIRP	Aggregate	Aggregate	DSL	207.4169	43902.39	3028.286	0.019958	10.43423	0
Placer (SV)	2035	T7 CAIRP c	Aggregate	Aggregate	DSL	20.39027	3732.315	92.18361	0.035307	1.594405	0
Placer (SV)	2035	T7 NNOOS	Aggregate	Aggregate	DSL	311.2435	53525.06	4544.155	0.018629	12.95028	0
Placer (SV)	2035	T7 NOOS	Aggregate	Aggregate	DSL	82.45604	17234.09	1203.858	0.019985	12.95028	0
Placer (SV)	2035	T7 other p	Aggregate	Aggregate	DSL	2.817993	443.7593	21.41675	0.029031	1.641997	0
Placer (SV)	2035	T7 POAK	Aggregate	Aggregate	DSL	13.49755	2107.414	102.5814	0.029381	2.621748	0
Placer (SV)	2035	T7 Public	Aggregate	Aggregate	DSL	298.2996	6043.071	904.842	0.055487	1.147128	0
Placer (SV)	2035	T7 Single	Aggregate	Aggregate	DSL	414.3114	32818.11	4781.096	0.01784	2.186104	0
Placer (SV)	2035	T7 single c	Aggregate	Aggregate	DSL	124.3229	9259.187	562.0591	0.03263	1.591715	0
Placer (SV)	2035	T7 SWCV	Aggregate	Aggregate	DSL	166.9187	6806.534	650.9829	0.029759	1.444922	0
Placer (SV)	2035	T7 tractor	Aggregate	Aggregate	DSL	273.2711	32861.51	3470.543	0.018389	1.879641	0
Placer (SV)	2035	T7 tractor	Aggregate	Aggregate	DSL	103.2217	7638.014	466.6613	0.037574	1.593727	0
Placer (SV)	2035	T7 utility	Aggregate	Aggregate	DSL	6.457847	130.8456	74.26524	0.015734	0.635427	0
Placer (SV)	2035	T7IS	Aggregate	Aggregate	GAS	1.253791	132.9878	25.08585	0.302296	0	0.001408
Placer (SV)	2035	UBUS	Aggregate	Aggregate	GAS	55.98137	4501.1	223.9255	0.021063	0	0.492757
Placer (SV)	2035	UBUS	Aggregate	Aggregate	DSL	106.5037	11080.4	426.0149	0.000797	0	0
Placer (SV)	2035	UBUS	Aggregate	Aggregate	NG	29.58437	3077.888	118.3375	0.063722	0	0

EMFAC2017 (v1.0.2) Emission Rates

Region Type: Sub-Area

Region: Placer (SV)

Calendar Year: 2035

Season: Annual

Vehicle Classification: EMFAC2011 Categories

DLEX, REST Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX

ROG_HOT	ROG_RUN	ROG_REST	ROG_DIUF	TOG_RUN	TOG_IDLE	TOG_STRE	TOG_HOT	TOG_RUN	TOG_REST	TOG_DIUR	CO_RUNE	CO_IDLEX	CO_STREX
0	0	0	0	0.012293	0.056161	0	0	0	0	0	0.139244	2.088954	0
0.049292	0.164862	0.090338	0.12007	0.003491	0	0.100919	0.049292	0.164862	0.090338	0.12007	0.424776	0	1.591123
0	0	0	0	0.00541	0	0	0	0	0	0	0.13843	0	0
0.004888	0	0.007655	0.025178	0	0	0	0.004888	0	0.007655	0.025178	0	0	0
0.074809	0.290567	0.159368	0.207142	0.004169	0	0.122777	0.074809	0.290567	0.159368	0.207142	0.4424	0	1.692967
0	0	0	0	0.019806	0	0	0	0	0	0	0.181699	0	0
0.004888	0	0.007655	0.025178	0	0	0	0.004888	0	0.007655	0.025178	0	0	0
0.073952	0.28521	0.202667	0.248139	0.004895	0	0.150357	0.073952	0.28521	0.202667	0.248139	0.492271	0	2.134643
0	0	0	0	0.015233	0	0	0	0	0	0	0.136877	0	0
0.004888	0	0.007655	0.025178	0	0	0	0.004888	0	0.007655	0.025178	0	0	0
0.089471	0.486547	0.020502	0.04508	0.017586	0.481439	0.072476	0.089471	0.486547	0.020502	0.04508	0.253082	3.773629	1.516885
0	0	0	0	0.158218	0.124954	0	0	0	0	0	0.660739	0.909745	0
0.064828	0.331802	0.017489	0.035349	0.011665	0.479676	0.061288	0.064828	0.331802	0.017489	0.035349	0.170649	3.780518	1.411699
0	0	0	0	0.153923	0.124954	0	0	0	0	0	0.646469	0.909745	0
0.803273	1.376879	1.248792	2.68458	2.654377	0	2.065123	0.803273	1.376879	1.248792	2.68458	17.35823	0	9.363747
0.103336	0.336211	0.298493	0.367145	0.006826	0	0.178776	0.103336	0.336211	0.298493	0.367145	0.532623	0	2.234644
0	0	0	0	0.006651	0	0	0	0	0	0	0.163038	0	0
0.004888	0	0.007655	0.025178	0	0	0	0.004888	0	0.007655	0.025178	0	0	0
0.038392	0.453605	0.020823	0.064209	0.020093	0	0.116245	0.038392	0.453605	0.020823	0.064209	0.231663	0	2.257556
0	0	0	0	0.123924	0	0	0	0	0	0	0.367533	0	0
0	0	0	0	0.021078	4.547903	0	0	0	0	0	0.172056	59.0281	0
0.027902	0.320563	0.01678	0.049937	0.025442	1.094302	0.139828	0.027902	0.320563	0.01678	0.049937	0.335141	5.796677	2.538075
0	0	0	0	0.028797	0	0	0	0	0	0	0.405353	0	0
0.054604	0.379002	0.01108	0.033273	0.017542	15.52808	0.325077	0.054604	0.379002	0.01108	0.033273	0.202385	82.24088	7.417871
0	0	0	0	0.069611	0.303829	0	0	0	0	0	0.214886	8.5091	0
0	0	0	0	0.008836	0.056161	0	0	0	0	0	0.06433	2.088954	0
0	0	0	0	0.008972	0.056161	0	0	0	0	0	0.065313	2.088954	0
0	0	0	0	0.020864	0.056146	0	0	0	0	0	0.211607	2.083795	0
0	0	0	0	0.016994	0.056161	0	0	0	0	0	0.186206	2.088558	0
0	0	0	0	0.010225	0.056161	0	0	0	0	0	0.102205	2.088954	0
0	0	0	0	0.010112	0.056161	0	0	0	0	0	0.101074	2.088954	0
0	0	0	0	0.008827	0.056161	0	0	0	0	0	0.064257	2.088954	0
0	0	0	0	0.009001	0.056161	0	0	0	0	0	0.065527	2.088954	0
0	0	0	0	0.022029	0.296206	0	0	0	0	0	0.127297	10.26055	0
0	0	0	0	0.008274	0.154348	0	0	0	0	0	0.085066	5.74113	0
0.048685	0.237183	0.013101	0.026686	0.018805	1.500229	0.166514	0.048685	0.237183	0.013101	0.026686	0.234014	15.29555	3.054785
0	0	0	0	0.02272	11.87857	0	0	0	0	0	0.185464	154.1743	0
0	0	0	0	0.040195	1.815109	0	0	0	0	0	0.491928	23.55864	0
0	0	0	0	0.021208	14.74291	0	0	0	0	0	0.17312	191.351	0
0	0	0	0	0.022752	14.74291	0	0	0	0	0	0.18572	191.351	0
0	0	0	0	0.033049	1.869289	0	0	0	0	0	0.414427	24.26185	0
0	0	0	0	0.033448	2.984661	0	0	0	0	0	0.419423	38.73848	0
0	0	0	0	0.063168	1.305918	0	0	0	0	0	0.303576	15.4934	0
0	0	0	0	0.020309	2.488713	0	0	0	0	0	0.218114	32.30148	0
0	0	0	0	0.037146	1.812047	0	0	0	0	0	0.432124	23.50923	0
0	0	0	0	0.033878	1.644934	0	0	0	0	0	0.07925	20.2766	0
0	0	0	0	0.020934	2.139828	0	0	0	0	0	0.15913	27.77323	0
0	0	0	0	0.042775	1.814337	0	0	0	0	0	0.516235	23.54414	0
0	0	0	0	0.017912	0.723385	0	0	0	0	0	0.205053	9.388957	0
0.044345	0.220057	0.012938	0.026113	0.44111	0	0.001542	0.044345	0.220057	0.012938	0.026113	28.89756	0	5.043322
0.041263	0.240993	0.007786	0.017429	0.030735	0	0.539507	0.041263	0.240993	0.007786	0.017429	0.343834	0	8.436673
0	0	0	0	0.055	0	0	0	0	0	0	0.087785	0	0
0	0	0	0	4.549648	0	0	0	0	0	0	33.08052	0	0

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Region Type: Sub-Area

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NOx_RUNI	NOx_IDLE	NOx_STRE	CO2_RUNI	CO2_IDLE	CO2_STRE	CH4_RUNI	CH4_IDLE	CH4_STRE	PM10_RUI	PM10_IDL	PM10_STR	PM10_PM	PM10_PM
2.090915	2.855497	2.214387	942.0376	565.778	0	0.000502	0.002291	0	0.005689	0.000713	0	0.012	0.13034
0.018225	0	0.117718	197.9706	0	41.21681	0.000774	0	0.023732	0.000667	0	0.000977	0.008	0.03675
0.012635	0	0	153.142	0	0	0.000221	0	0	0.001202	0	0	0.008	0.03675
0	0	0	0	0	0	0	0	0	0	0	0	0.008	0.03675
0.020449	0	0.137262	230.9207	0	49.18407	0.000892	0	0.027629	0.000739	0	0.001138	0.008	0.03675
0.127675	0	0	300.0426	0	0	0.000808	0	0	0.006893	0	0	0.008	0.03675
0	0	0	0	0	0	0	0	0	0	0	0	0.008	0.03675
0.020184	0	0.141588	231.3485	0	50.845	0.001063	0	0.033681	0.000713	0	0.001073	0.008	0.03675
0.029432	0	0	205.2887	0	0	0.000622	0	0	0.004215	0	0	0.008	0.03675
0	0	0	0	0	0	0	0	0	0	0	0	0.008	0.03675
0.079212	0.02875	0.363355	862.1073	106.8111	16.85163	0.003166	0.09732	0.014043	0.002195	0	0.000329	0.008	0.07644
0.716753	1.481492	0	476.2776	119.6163	0	0.006455	0.005098	0	0.014619	0.027182	0	0.012	0.07644
0.065234	0.028624	0.360616	988.9115	122.7507	19.0616	0.00237	0.098195	0.012437	0.002073	0	0.000297	0.008	0.08918
0.552776	1.456975	0	534.4164	191.9036	0	0.00628	0.005098	0	0.019812	0.027405	0	0.012	0.08918
1.136335	0	0.269341	207.7511	0	59.73273	0.315846	0	0.247278	0.002135	0	0.002713	0.004	0.01176
0.026783	0	0.162799	287.2777	0	63.06969	0.001343	0	0.037856	0.000759	0	0.001133	0.008	0.03675
0.015134	0	0	273.1957	0	0	0.000271	0	0	0.001637	0	0	0.008	0.03675
0	0	0	0	0	0	0	0	0	0	0	0	0.008	0.03675
0.135059	0	0.39072	1517.676	0	22.20224	0.004506	0	0.028685	0.001334	0	0.000283	0.012	0.13034
3.708801	0	0	934.3533	0	0	0.005056	0	0	0.073757	0	0	0.016	0.13034
1.881471	47.20762	2.229987	1245.782	9143.424	0	0.00086	0.185553	0	0.0239	0.017002	0	0.012	0.13034
0.138725	0.065306	0.306217	1470.705	329.9705	22.42988	0.004257	0.19944	0.025395	0.001349	0	0.000268	0.012	0.13034
4.562671	0	0	1646.358	0	0	0.001175	0	0	0.004792	0	0	0	0
0.114226	0.92653	0.477224	727.4955	2203.343	41.29533	0.002722	2.410246	0.05232	0.001549	0	0.000703	0.008	0.7448
3.193018	29.64875	1.451233	972.9682	3277.668	0	0.00284	0.012396	0	0.025546	0.017889	0	0.012	0.7448
0.91848	2.855497	1.31518	693.2816	496.8328	0	0.000361	0.002291	0	0.009854	0.000713	0	0.012	0.13034
0.944544	2.855497	1.315365	767.1512	495.0368	0	0.000366	0.002291	0	0.010246	0.000713	0	0.012	0.13034
2.557335	2.884863	2.655787	1086.414	563.1988	0	0.000851	0.002291	0	0.011674	0.000756	0	0.012	0.13034
2.092493	2.85758	2.6844	986.7217	526.0047	0	0.000693	0.002291	0	0.008739	0.000715	0	0.012	0.13034
1.446174	2.855497	2.139644	770.6538	523.0805	0	0.000417	0.002291	0	0.006816	0.000713	0	0.012	0.13034
1.419069	2.855497	2.141541	826.4758	512.1644	0	0.000413	0.002291	0	0.006642	0.000713	0	0.012	0.13034
0.916311	2.855497	1.315217	692.5423	495.9889	0	0.00036	0.002291	0	0.009825	0.000713	0	0.012	0.13034
0.951544	2.855497	1.31518	768.9684	496.9289	0	0.000367	0.002291	0	0.01033	0.000713	0	0.012	0.13034
1.698747	18.0764	2.892835	930.31	2819.357	0	0.000899	0.012085	0	0.006926	0.007679	0	0.012	0.13034
0.942804	7.847841	1.971911	807.6738	1361.349	0	0.000338	0.006297	0	0.003391	0.001959	0	0.012	0.13034
0.10246	0.089524	0.326679	1455.323	456.2143	31.23557	0.003321	0.274581	0.031114	0.001406	0	0.000423	0.012	0.13034
2.063772	123.3006	2.233176	978.1012	20567.36	0	0.000927	0.484643	0	0.027989	0.044406	0	0.036	0.06174
4.002116	18.84098	4.565374	1316.09	3106.166	0	0.00164	0.074056	0	0.020873	0.006786	0	0.036	0.06174
1.861994	153.0327	2.233405	963.4826	25097.42	0	0.000865	0.601507	0	0.024246	0.055114	0	0.036	0.06174
2.068443	153.0327	2.233117	979.8398	25582.24	0	0.000928	0.601507	0	0.028066	0.055114	0	0.036	0.06174
3.994307	19.40337	1.786372	1216.712	3236.819	0	0.001348	0.076267	0	0.015691	0.006988	0	0.036	0.06174
4.062436	30.98104	1.786372	1232.563	5185.689	0	0.001365	0.121773	0	0.016048	0.011158	0	0.036	0.06174
4.143594	20.67321	4.439152	1402.751	2707.642	0	0.002577	0.053281	0	0.016642	0.017535	0	0.036	0.06174
2.128234	25.83305	3.625568	1221.243	4632.343	0	0.000829	0.101539	0	0.01275	0.009304	0	0.036	0.06174
3.332707	18.86767	4.532952	1486.404	3437.545	0	0.001516	0.073931	0	0.015998	0.006869	0	0.036	0.06174
1.865904	22.72213	4.928451	3093.936	3284.25	0	0.001382	0.067113	0	0.016949	0.01424	0	0.036	0.06174
1.835003	22.2116	1.870108	1014.136	3992.244	0	0.000854	0.087304	0	0.027473	0.007999	0	0.036	0.06174
4.295398	18.8502	4.548944	1469.734	3374.792	0	0.001745	0.074024	0	0.022951	0.006805	0	0.036	0.06174
1.75135	7.508802	3.320832	1303.432	1386.027	0	0.000731	0.029514	0	0.006908	0.002704	0	0.036	0.06174
3.008323	0	0.006834	1585.325	0	37.73186	0.068736	0	0.000272	0.001151	0	0.00042	0.02	0.06174
0.263473	0	0.823343	1668.348	0	77.11405	0.006323	0	0.114833	0.002385	0	0.000931	0.01161	0.126331
0.615161	0	0	1220.262	0	0	0.053861	0	0	0.004771	0	0	0.020674	0.10554
0.372977	0	0	1609.735	0	0	4.457903	0	0	0.002605	0	0	0.020674	0.10554

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PM2_5_RI	PM2_5_ID	PM2_5_ST	PM2_5_P1	PM2_5_P2	SOx_RUNE	SOx_IDLEX	SOx_STRE	N2O_RUN	N2O_IDLE	N2O_STREX
0.005443	0.000682	0	0.003	0.05586	0.0089	0.005345	0	0.148075	0.088932	0
0.000614	0	0.000898	0.002	0.01575	0.001959	0	0.000408	0.002965	0	0.018866
0.00115	0	0	0.002	0.01575	0.001448	0	0	0.024072	0	0
0	0	0	0.002	0.01575	0	0	0	0	0	0
0.000679	0	0.001046	0.002	0.01575	0.002285	0	0.000487	0.003182	0	0.020894
0.006594	0	0	0.002	0.01575	0.002836	0	0	0.047163	0	0
0	0	0	0.002	0.01575	0	0	0	0	0	0
0.000656	0	0.000986	0.002	0.01575	0.002289	0	0.000503	0.003091	0	0.021322
0.004032	0	0	0.002	0.01575	0.001941	0	0	0.032269	0	0
0	0	0	0.002	0.01575	0	0	0	0	0	0
0.002019	0	0.000302	0.002	0.03276	0.008531	0.001057	0.000167	0.005879	0.002703	0.032612
0.013987	0.026006	0	0.003	0.03276	0.004503	0.001131	0	0.074864	0.018802	0
0.001906	0	0.000274	0.002	0.03822	0.009786	0.001215	0.000189	0.005708	0.002693	0.032455
0.018955	0.026219	0	0.003	0.03822	0.005052	0.001814	0	0.084003	0.030165	0
0.001991	0	0.002535	0.001	0.00504	0.002056	0	0.000591	0.06519	0	0.015161
0.000698	0	0.001042	0.002	0.01575	0.002843	0	0.000624	0.003467	0	0.022512
0.001566	0	0	0.002	0.01575	0.002583	0	0	0.042943	0	0
0	0	0	0.002	0.01575	0	0	0	0	0	0
0.001227	0	0.000261	0.003	0.05586	0.015019	0	0.00022	0.013877	0	0.044348
0.070567	0	0	0.004	0.05586	0.008833	0	0	0.146867	0	0
0.022866	0.016266	0	0.003	0.05586	0.01177	0.086383	0	0.19582	1.437219	0
0.00124	0	0.000246	0.003	0.05586	0.014554	0.003265	0.000222	0.01054	0.005724	0.025792
0.004585	0	0	0	0	0.015554	0	0	0.258785	0	0
0.001424	0	0.000647	0.002	0.3192	0.007199	0.021804	0.000409	0.011336	0.095585	0.047705
0.024441	0.017116	0	0.003	0.3192	0.009192	0.030966	0	0.152937	0.515204	0
0.009428	0.000682	0	0.003	0.05586	0.00655	0.004694	0	0.108974	0.078095	0
0.009803	0.000682	0	0.003	0.05586	0.007248	0.004677	0	0.120585	0.077813	0
0.011169	0.000724	0	0.003	0.05586	0.010264	0.005321	0	0.170769	0.088527	0
0.008361	0.000684	0	0.003	0.05586	0.009322	0.004969	0	0.155099	0.082681	0
0.006521	0.000682	0	0.003	0.05586	0.007281	0.004942	0	0.121136	0.082221	0
0.006354	0.000682	0	0.003	0.05586	0.007808	0.004839	0	0.12991	0.080505	0
0.0094	0.000682	0	0.003	0.05586	0.006543	0.004686	0	0.108858	0.077963	0
0.009884	0.000682	0	0.003	0.05586	0.007265	0.004695	0	0.120871	0.07811	0
0.006627	0.007346	0	0.003	0.05586	0.008789	0.026636	0	0.146232	0.443164	0
0.003244	0.001874	0	0.003	0.05586	0.007631	0.012861	0	0.126955	0.213985	0
0.001293	0	0.000389	0.003	0.05586	0.014402	0.004515	0.000309	0.008889	0.008266	0.029832
0.026778	0.042485	0	0.009	0.02646	0.009241	0.19431	0	0.153744	3.232902	0
0.01997	0.006492	0	0.009	0.02646	0.012434	0.029346	0	0.206871	0.488246	0
0.023198	0.05273	0	0.009	0.02646	0.009103	0.237108	0	0.151446	3.944965	0
0.026852	0.05273	0	0.009	0.02646	0.009257	0.241688	0	0.154017	4.021172	0
0.015013	0.006686	0	0.009	0.02646	0.011495	0.03058	0	0.19125	0.508783	0
0.015354	0.010675	0	0.009	0.02646	0.011645	0.048992	0	0.193742	0.815118	0
0.015922	0.016776	0	0.009	0.02646	0.013252	0.02558	0	0.220493	0.425604	0
0.012198	0.008901	0	0.009	0.02646	0.011538	0.043764	0	0.191962	0.72814	0
0.015306	0.006572	0	0.009	0.02646	0.014043	0.032476	0	0.233642	0.540334	0
0.016216	0.013624	0	0.009	0.02646	0.02923	0.031028	0	0.486324	0.516238	0
0.026285	0.007653	0	0.009	0.02646	0.009581	0.037717	0	0.159408	0.627525	0
0.021959	0.006511	0	0.009	0.02646	0.013885	0.031883	0	0.231022	0.53047	0
0.00661	0.002587	0	0.009	0.02646	0.012314	0.013094	0	0.204881	0.217864	0
0.001058	0	0.000386	0.005	0.02646	0.015688	0	0.000373	0.131454	0	0.000333
0.002193	0	0.000856	0.002903	0.054142	0.01651	0	0.000763	0.02287	0	0.072351
0.004565	0	0	0.005168	0.045231	0.011536	0	0	0.191808	0	0
0.002492	0	0	0.005168	0.045231	0	0	0	0.328155	0	0