



Appendix B

EMFAC Modeling

Off Model Adjustment Factors for EMFAC2021 to Remove Advanced Clean Truck and Low NOx Omnibus Emission Improvements

Calendar Year	Exhaust NOx	Total PM2.5 (exhaust, brake wear, and tire wear)	Total PM10 (exhaust, brake wear, and tire wear)	Total ROG (evaporative and exhaust)
2025	1.01	1.02	1.01	1
2026	1.01	1.03	1.01	1
2027	1.02	1.03	1.01	1
2028	1.03	1.03	1.02	1
2029	1.04	1.03	1.02	1
2030	1.05	1.04	1.02	1
2031	1.06	1.04	1.02	1
2032	1.08	1.05	1.03	1
2033	1.09	1.05	1.03	1
2034	1.1	1.06	1.04	1.01
2035	1.12	1.06	1.04	1.01
2036	1.13	1.07	1.04	1.01
2037	1.14	1.07	1.05	1.01
2038	1.15	1.08	1.05	1.01
2039	1.16	1.08	1.05	1.01
2040	1.17	1.08	1.06	1.01
2041	1.18	1.09	1.06	1.01
2042	1.19	1.09	1.06	1.02
2043	1.2	1.1	1.06	1.02
2044	1.2	1.1	1.07	1.02
2045	1.21	1.1	1.07	1.02
2046	1.22	1.1	1.07	1.02
2047	1.22	1.11	1.07	1.02
2048	1.23	1.11	1.07	1.02
2049	1.23	1.11	1.07	1.03
2050	1.23	1.11	1.08	1.03

Based on adjustment factors developed in the CARB document *Off-Model Adjustment Factors to Account for Recently Adopted Regulations After Release of the EMFAC2017 Model*

Source: EMFAC2021 (v1.0.2) **Emission Rates After Applying 17 percent increase to NOx, 8 percent increase to Adjustment to PM2.5, 6 percent increase to PM10, and 1 percent increase to Total ROG.**

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Summer

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOA

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips
Riverside (SC)	2040	HHDT	Aggregate	Aggregate	Gasoline	1.337656	112.2437	112.2437	0	26.76381
Riverside (SC)	2040	HHDT	Aggregate	Aggregate	Diesel	17540.83	2445706	2445706	0	287837.6
Riverside (SC)	2040	HHDT	Aggregate	Aggregate	Electricity	3909.672	423571	0	423571	50061.43
Riverside (SC)	2040	HHDT	Aggregate	Aggregate	Natural Ga	986.078	63457.49	63457.49	0	8705.557
Riverside (SC)	2040	LDA	Aggregate	Aggregate	Gasoline	493021.6	21095279	21095279	0	2289259
Riverside (SC)	2040	LDA	Aggregate	Aggregate	Diesel	397.9763	14228.46	14228.46	0	1727.725
Riverside (SC)	2040	LDA	Aggregate	Aggregate	Electricity	63036.03	2559309	0	2559309	299117.5
Riverside (SC)	2040	LDA	Aggregate	Aggregate	Plug-in Hyb	22755.26	986987.7	407957.3	579030.4	94092.99
Riverside (SC)	2040	LDT1	Aggregate	Aggregate	Gasoline	34608.39	1372532	1372532	0	154704.2
Riverside (SC)	2040	LDT1	Aggregate	Aggregate	Diesel	0.334543	14.6632	14.6632	0	1.579331
Riverside (SC)	2040	LDT1	Aggregate	Aggregate	Electricity	786.1805	33324.72	0	33324.72	3784.764
Riverside (SC)	2040	LDT1	Aggregate	Aggregate	Plug-in Hyb	610.7978	27966.08	11405.28	16560.81	2525.649
Riverside (SC)	2040	LDT2	Aggregate	Aggregate	Gasoline	265183.8	11274854	11274854	0	1229684
Riverside (SC)	2040	LDT2	Aggregate	Aggregate	Diesel	987.059	42589.23	42589.23	0	4618.531
Riverside (SC)	2040	LDT2	Aggregate	Aggregate	Electricity	9284.388	268729.5	0	268729.5	44502.65
Riverside (SC)	2040	LDT2	Aggregate	Aggregate	Plug-in Hyb	6619.114	292267.5	119842	172425.5	27370.04
Riverside (SC)	2040	LHDT1	Aggregate	Aggregate	Gasoline	13385.54	464388.9	464388.9	0	199424.7
Riverside (SC)	2040	LHDT1	Aggregate	Aggregate	Diesel	10210.99	332703.9	332703.9	0	128441.4
Riverside (SC)	2040	LHDT1	Aggregate	Aggregate	Electricity	9066.737	432819.6	0	432819.6	127036.9
Riverside (SC)	2040	LHDT2	Aggregate	Aggregate	Gasoline	1680.732	55921.53	55921.53	0	25040.4
Riverside (SC)	2040	LHDT2	Aggregate	Aggregate	Diesel	5089.126	158981.5	158981.5	0	64014.8
Riverside (SC)	2040	LHDT2	Aggregate	Aggregate	Electricity	2276.319	104811.6	0	104811.6	30142.99
Riverside (SC)	2040	MCY	Aggregate	Aggregate	Gasoline	23998.46	131623.2	131623.2	0	47996.91
Riverside (SC)	2040	MDV	Aggregate	Aggregate	Gasoline	165115.7	6642989	6642989	0	752743.6
Riverside (SC)	2040	MDV	Aggregate	Aggregate	Diesel	1915.939	75158.88	75158.88	0	8650.01
Riverside (SC)	2040	MDV	Aggregate	Aggregate	Electricity	8810.36	251999.6	0	251999.6	42062.21
Riverside (SC)	2040	MDV	Aggregate	Aggregate	Plug-in Hyb	4282.455	182778.9	75143.42	107635.4	17707.95
Riverside (SC)	2040	MH	Aggregate	Aggregate	Gasoline	2098.561	19579.08	19579.08	0	209.9401
Riverside (SC)	2040	MH	Aggregate	Aggregate	Diesel	1421.114	11601.92	11601.92	0	142.1114
Riverside (SC)	2040	MHDT	Aggregate	Aggregate	Gasoline	845.2192	32228.33	32228.33	0	16911.15
Riverside (SC)	2040	MHDT	Aggregate	Aggregate	Diesel	12022.28	474470.1	474470.1	0	142791.7
Riverside (SC)	2040	MHDT	Aggregate	Aggregate	Electricity	7490.516	350670.1	0	350670.1	92848.56
Riverside (SC)	2040	MHDT	Aggregate	Aggregate	Natural Ga	215.0978	8446.861	8446.861	0	1928.264
Riverside (SC)	2040	OBUS	Aggregate	Aggregate	Gasoline	220.664	5599.193	5599.193	0	4415.046
Riverside (SC)	2040	OBUS	Aggregate	Aggregate	Diesel	250.1899	16385.9	16385.9	0	2863.086
Riverside (SC)	2040	OBUS	Aggregate	Aggregate	Electricity	83.87198	4559.154	0	4559.154	1678.111
Riverside (SC)	2040	OBUS	Aggregate	Aggregate	Natural Ga	55.29742	3041.907	3041.907	0	492.1471
Riverside (SC)	2040	SBUS	Aggregate	Aggregate	Gasoline	266.0281	10340.9	10340.9	0	1064.112
Riverside (SC)	2040	SBUS	Aggregate	Aggregate	Diesel	192.6021	3959.028	3959.028	0	2788.879
Riverside (SC)	2040	SBUS	Aggregate	Aggregate	Electricity	305.0813	8462.376	0	8462.376	3941.755
Riverside (SC)	2040	SBUS	Aggregate	Aggregate	Natural Ga	512.3891	10481.51	10481.51	0	7419.395
Riverside (SC)	2040	UBUS	Aggregate	Aggregate	Gasoline	101.621	9388.479	9388.479	0	406.4839
Riverside (SC)	2040	UBUS	Aggregate	Aggregate	Electricity	337.2146	42266.51	0	42266.51	1348.859
Riverside (SC)	2040	UBUS	Aggregate	Aggregate	Natural Ga	55.99443	9935.165	9935.165	0	223.9777

Source: EMFAC2021 (v1.0.2) Emission Rat

6 percent increase to PM10, and 1 percent

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Summer

Vehicle Classification: EMFAC2007 Category

Units: miles/day for Combustion VMT and VK and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Year	Vehicle Category	NOx_RUN	NOx_IDLEX	NOx_STREET	PM2.5_RUN	PM2.5_IDLEX	PM2.5_STREET	PM2.5_PMI	PM2.5_PME	PM10_RUN
Riverside (SC)	2040	HHDT	2.236396	0	0.073031	0.001004	0	0.000465	0.0054	0.030878	0.001071
Riverside (SC)	2040	HHDT	1.320213	65.63224	3.049471	0.027913	0.023369	0	0.009582	0.030065	0.029175
Riverside (SC)	2040	HHDT	0	0	0	0	0	0	0.009137	0.014754	0
Riverside (SC)	2040	HHDT	0.212766	13.51202	0	0.001792	0.044851	0	0.00972	0.036997	0.001949
Riverside (SC)	2040	LDA	0.020322	0	0.179623	0.00056	0	0.000978	0.00216	0.00264	0.000609
Riverside (SC)	2040	LDA	0.039068	0	0	0.002358	0	0	0.00216	0.002667	0.002464
Riverside (SC)	2040	LDA	0	0	0	0	0	0	0.00216	0.00166	0
Riverside (SC)	2040	LDA	0.002508	0	0.119613	0.000232	0	0.001002	0.00216	0.001483	0.000253
Riverside (SC)	2040	LDT1	0.03073	0	0.218102	0.000669	0	0.001175	0.00216	0.003135	0.000727
Riverside (SC)	2040	LDT1	0.028653	0	0	0.004043	0	0	0.00216	0.00306	0.004225
Riverside (SC)	2040	LDT1	0	0	0	0	0	0	0.00216	0.001659	0
Riverside (SC)	2040	LDT1	0.002475	0	0.119613	0.0002	0	0.000841	0.00216	0.001484	0.000218
Riverside (SC)	2040	LDT2	0.025621	0	0.223137	0.000573	0	0.000977	0.00216	0.00308	0.000623
Riverside (SC)	2040	LDT2	0.03002	0	0	0.004111	0	0	0.00216	0.003071	0.004297
Riverside (SC)	2040	LDT2	0	0	0	0	0	0	0.00216	0.001659	0
Riverside (SC)	2040	LDT2	0.002488	0	0.119613	0.000213	0	0.000898	0.00216	0.001484	0.000231
Riverside (SC)	2040	LHDT1	0.027066	0.030865	0.476798	0.001091	0	0.000127	0.00216	0.029484	0.001187
Riverside (SC)	2040	LHDT1	0.494111	1.504722	0	0.014809	0.028277	0	0.00324	0.029484	0.015478
Riverside (SC)	2040	LHDT1	0	0	0	0	0	0	0.00216	0.014742	0
Riverside (SC)	2040	LHDT2	0.033176	0.028866	0.45678	0.001058	0	1.05E-04	0.00216	0.034398	0.00115
Riverside (SC)	2040	LHDT2	0.67445	1.598181	0	0.017681	0.028215	0	0.00324	0.034398	0.018481
Riverside (SC)	2040	LHDT2	0	0	0	0	0	0	0.00216	0.017199	0
Riverside (SC)	2040	MCY	0.475061	0	0.086002	0.002092	0	0.003489	0.00108	0.004536	0.002244
Riverside (SC)	2040	MDV	0.032409	0	0.25861	0.000617	0	0.00107	0.00216	0.003151	0.000671
Riverside (SC)	2040	MDV	0.027492	0	0	0.001856	0	0	0.00216	0.00318	0.001939
Riverside (SC)	2040	MDV	0	0	0	0	0	0	0.00216	0.001661	0
Riverside (SC)	2040	MDV	0.002495	0	0.119613	0.000223	0	0.000942	0.00216	0.001486	0.000242
Riverside (SC)	2040	MH	0.11439	0	0.580875	0.000955	0	0.000331	0.00324	0.015957	0.001039
Riverside (SC)	2040	MH	2.699874	0	0	0.072662	0	0	0.00432	0.015931	0.075948
Riverside (SC)	2040	MHDT	0.083664	0.075194	0.364149	0.001017	0	0.000484	0.00324	0.015957	0.001106
Riverside (SC)	2040	MHDT	0.299276	7.986976	1.514194	0.005295	0.002829	0	0.00324	0.015968	0.005535
Riverside (SC)	2040	MHDT	0	0	0	0	0	0	0.00324	0.007984	0
Riverside (SC)	2040	MHDT	0.062287	7.48879	0	0.000977	0.02368	0	0.00324	0.015955	0.001062
Riverside (SC)	2040	OBUS	0.194108	0.060901	0.381691	0.000909	0	0.000284	0.00324	0.015924	0.000989
Riverside (SC)	2040	OBUS	0.964586	7.031009	1.247313	0.02114	0.006457	0	0.00324	0.021479	0.022096
Riverside (SC)	2040	OBUS	0	0	0	0	0	0	0.00324	0.007962	0
Riverside (SC)	2040	OBUS	0.068381	1.750381	0	0.000933	0.005277	0	0.00324	0.015924	0.001015
Riverside (SC)	2040	SBUS	0.195674	0.966857	1.07806	0.001299	0	0.000659	0.00216	0.017707	0.001413
Riverside (SC)	2040	SBUS	1.756029	13.0248	0.647522	0.010175	0.004303	0	0.00324	0.017707	0.010635
Riverside (SC)	2040	SBUS	0	0	0	0	0	0	0.003015	0.008854	0
Riverside (SC)	2040	SBUS	0.570811	5.998214	0	0.004452	0.015981	0	0.00324	0.017707	0.004842
Riverside (SC)	2040	UBUS	0.022493	0	0.332314	0.001114	0	0.000146	0.002163	0.034417	0.001212
Riverside (SC)	2040	UBUS	0	0	0	0	0	0	0.00649	0.02079	0
Riverside (SC)	2040	UBUS	0.135548	0	0	0.000444	0	0	0.00967	0.04158	0.000464

Source: EMFAC2021 (v1.0.2) **Emission Rat**
6 percent increase to PM10, and 1 percent

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Summer

Vehicle Classification: EMFAC2007 Category

Units: miles/day for Combustion VMT and

Region	Calendar Year	Vehicle Category	PM10_IDLE	PM10_STREET	PM10_PMT	PM10_PMB	CO2_RUNE	CO2_IDLE	CO2_STREET	CH4_RUNE
Riverside (SC)	2040	HHDT	0	0.000497	0.0212	0.086589	1677.499	0	44.45086	0.072451
Riverside (SC)	2040	HHDT	0.024426	0	0.038329	0.085901	1298.767	11221.03	0	0.000491
Riverside (SC)	2040	HHDT	0	0	0.036548	0.042153	0	0	0	0
Riverside (SC)	2040	HHDT	0.048779	0	0.03888	0.105705	1028.032	9658.458	0	0.814033
Riverside (SC)	2040	LDA	0	0.001063	0.00864	0.007542	249.7999	0	54.27587	0.001149
Riverside (SC)	2040	LDA	0	0	0.00864	0.00762	191.2585	0	0	0.00029
Riverside (SC)	2040	LDA	0	0	0.00864	0.004742	0	0	0	0
Riverside (SC)	2040	LDA	0	0.00109	0.00864	0.004237	124.0174	0	55.77343	0.000369
Riverside (SC)	2040	LDT1	0	0.001278	0.00864	0.008958	291.566	0	65.00748	0.001688
Riverside (SC)	2040	LDT1	0	0	0.00864	0.008742	341.1278	0	0	0.00053
Riverside (SC)	2040	LDT1	0	0	0.00864	0.004739	0	0	0	0
Riverside (SC)	2040	LDT1	0	0.000915	0.00864	0.004241	122.4595	0	63.13925	0.000365
Riverside (SC)	2040	LDT2	0	0.001063	0.00864	0.0088	295.4437	0	66.51793	0.001533
Riverside (SC)	2040	LDT2	0	0	0.00864	0.008775	254.5411	0	0	0.000534
Riverside (SC)	2040	LDT2	0	0	0.00864	0.004741	0	0	0	0
Riverside (SC)	2040	LDT2	0	0.000977	0.00864	0.004241	123.077	0	66.70068	0.000366
Riverside (SC)	2040	LHDT1	0	0.000138	0.00864	0.08424	497.7374	109.1452	23.69535	0.000551
Riverside (SC)	2040	LHDT1	0.029556	0	0.01296	0.08424	466.1363	120.4791	0	0.002327
Riverside (SC)	2040	LHDT1	0	0	0.00864	0.04212	0	0	0	0
Riverside (SC)	2040	LHDT2	0	0.000115	0.00864	0.09828	563.2861	126.7792	23.27195	0.000522
Riverside (SC)	2040	LHDT2	0.02949	0	0.01296	0.09828	547.1763	196.6246	0	0.002807
Riverside (SC)	2040	LHDT2	0	0	0.00864	0.04914	0	0	0	0
Riverside (SC)	2040	MCY	0	0.003738	0.00432	0.01296	184.7773	0	36.4658	0.13592
Riverside (SC)	2040	MDV	0	0.001164	0.00864	0.009002	357.1824	0	82.36629	0.001756
Riverside (SC)	2040	MDV	0	0	0.00864	0.009085	341.3373	0	0	0.000258
Riverside (SC)	2040	MDV	0	0	0.00864	0.004747	0	0	0	0
Riverside (SC)	2040	MDV	0	0.001025	0.00864	0.004244	123.3745	0	81.53393	0.000365
Riverside (SC)	2040	MH	0	0.00036	0.01296	0.04559	1760.587	0	29.65035	0.003172
Riverside (SC)	2040	MH	0	0	0.01728	0.045518	985.1232	0	0	0.002095
Riverside (SC)	2040	MHDT	0	0.000527	0.01296	0.04559	1421.237	498.4299	37.8431	0.002481
Riverside (SC)	2040	MHDT	0.002957	0	0.01296	0.045623	993.0754	1933.755	0	0.000261
Riverside (SC)	2040	MHDT	0	0	0.01296	0.022812	0	0	0	0
Riverside (SC)	2040	MHDT	0.025754	0	0.01296	0.045586	744.595	5406.718	0	0.485694
Riverside (SC)	2040	OBUS	0	0.000309	0.01296	0.045497	1447.492	355.9554	28.55477	0.004725
Riverside (SC)	2040	OBUS	0.006749	0	0.01296	0.061369	1138.857	1992.918	0	0.00116
Riverside (SC)	2040	OBUS	0	0	0.01296	0.022748	0	0	0	0
Riverside (SC)	2040	OBUS	0.005739	0	0.01296	0.045497	690.4087	1162.809	0	0.483432
Riverside (SC)	2040	SBUS	0	0.000717	0.00864	0.050593	860.2132	2510.117	48.6932	0.002692
Riverside (SC)	2040	SBUS	0.004498	0	0.01296	0.050593	1160.994	2057.774	0	0.002426
Riverside (SC)	2040	SBUS	0	0	0.012059	0.025296	0	0	0	0
Riverside (SC)	2040	SBUS	0.017381	0	0.01296	0.050593	1560.263	4205.216	0	3.871907
Riverside (SC)	2040	UBUS	0	0.000158	0.008651	0.098333	538.3105	0	33.48882	0.000585
Riverside (SC)	2040	UBUS	0	0	0.02596	0.0594	0	0	0	0
Riverside (SC)	2040	UBUS	0	0	0.038679	0.1188	2049.112	0	0	4.632161

Source: EMFAC2021 (v1.0.2) **Emission Rat**
6 percent increase to PM10, and 1 percent

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Summer

Vehicle Classification: EMFAC2007 Category

Units: miles/day for Combustion VMT and

Region	Calendar Yr	Vehicle Cat	CH4_IDLEX	CH4_STRE	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLEX	ROG_STRE
Riverside (SC)	2040	HHDT	0	0.000127	0.094145	0	0.003615	0.325818	0	0.000655
Riverside (SC)	2040	HHDT	0.290011	0	0.204621	1.767878	0	0.010684	6.306298	0
Riverside (SC)	2040	HHDT	0	0	0	0	0	0	0	0
Riverside (SC)	2040	HHDT	27.35488	0	0.209571	1.96894	0	0.01307	0.399445	0
Riverside (SC)	2040	LDA	0	0.030277	0.002889	0	0.025043	0.00342	0	0.116496
Riverside (SC)	2040	LDA	0	0	0.030133	0	0	0.006306	0	0
Riverside (SC)	2040	LDA	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDA	0	0.033547	0.000386	0	0.018234	0.001174	0	0.137945
Riverside (SC)	2040	LDT1	0	0.03762	0.003532	0	0.027677	0.005746	0	0.155294
Riverside (SC)	2040	LDT1	0	0	0.053745	0	0	0.011528	0	0
Riverside (SC)	2040	LDT1	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT1	0	0.033736	0.000384	0	0.018442	0.001159	0	0.137945
Riverside (SC)	2040	LDT2	0	0.037915	0.003206	0	0.029442	0.00477	0	0.149789
Riverside (SC)	2040	LDT2	0	0	0.040103	0	0	0.011615	0	0
Riverside (SC)	2040	LDT2	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT2	0	0.033605	0.000383	0	0.018297	0.001165	0	0.137945
Riverside (SC)	2040	LHDT1	0.089143	0.020722	0.001989	0.002584	0.038735	0.001909	0.306018	0.093673
Riverside (SC)	2040	LHDT1	0.005098	0	0.07344	0.018982	0	0.050602	0.110857	0
Riverside (SC)	2040	LHDT1	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LHDT2	0.083266	0.019017	0.002614	0.002368	0.036234	0.001786	0.2862	0.085341
Riverside (SC)	2040	LHDT2	0.005098	0	0.086208	0.030978	0	0.061034	0.110857	0
Riverside (SC)	2040	LHDT2	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MCY	0	0.121606	0.031802	0	0.004932	0.822222	0	0.860816
Riverside (SC)	2040	MDV	0	0.043047	0.00356	0	0.031334	0.005765	0	0.179675
Riverside (SC)	2040	MDV	0	0	0.053778	0	0	0.005613	0	0
Riverside (SC)	2040	MDV	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MDV	0	0.033489	0.000381	0	0.018168	0.001168	0	0.137945
Riverside (SC)	2040	MH	0	0.032913	0.011475	0	0.059289	0.00899	0	0.117458
Riverside (SC)	2040	MH	0	0	0.155207	0	0	0.045566	0	0
Riverside (SC)	2040	MHDT	0.248158	0.035522	0.006255	0.005929	0.026836	0.009936	0.964805	0.180393
Riverside (SC)	2040	MHDT	0.008848	0	0.156459	0.304664	0	0.005666	0.192396	0
Riverside (SC)	2040	MHDT	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MHDT	15.5704	0	0.151791	1.102195	0	0.007009	0.224695	0
Riverside (SC)	2040	OBUS	0.184478	0.029649	0.00938	0.00391	0.022241	0.022364	0.756956	0.165407
Riverside (SC)	2040	OBUS	0.03787	0	0.179427	0.313985	0	0.02523	0.82349	0
Riverside (SC)	2040	OBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	OBUS	3.726213	0	0.140744	0.237046	0	0.006976	0.053773	0
Riverside (SC)	2040	SBUS	2.420452	0.056214	0.014558	0.075155	0.080269	0.011953	10.74793	0.320727
Riverside (SC)	2040	SBUS	0.008417	0	0.182915	0.324203	0	0.052754	0.183025	0
Riverside (SC)	2040	SBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	SBUS	13.47606	0	0.31807	0.857261	0	0.055875	0.194472	0
Riverside (SC)	2040	UBUS	0	0.026739	0.003292	0	0.049577	0.001462	0	0.085606
Riverside (SC)	2040	UBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	UBUS	0	0	0.417725	0	0	0.066846	0	0

Source: EMFAC2021 (v1.0.2) Emission Rat

6 percent increase to PM10, and 1 percent

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Summer

Vehicle Classification: EMFAC2007 Category

Units: miles/day for Combustion VMT and

Region	Calendar Year	Vehicle Category	ROG_HOTS	ROG_RUNL	ROG_DIURNAL	TOG_RUNE	TOG_IDLE	TOG_STREET	TOG_HOTS	TOG_RUNL
Riverside (SC)	2040	HHDT	0.018149	0.193511	2.497037	0.470726	0	0.00071	0.01797	0.191595
Riverside (SC)	2040	HHDT	0	0	0	0.012043	7.108159	0	0	0
Riverside (SC)	2040	HHDT	0	0	0	0	0	0	0	0
Riverside (SC)	2040	HHDT	0	0	0	0.832272	27.92296	0	0	0
Riverside (SC)	2040	LDA	0.048634	0.17387	1.279454	0.00494	0	0.126286	0.048153	0.172148
Riverside (SC)	2040	LDA	0	0	0	0.007108	0	0	0	0
Riverside (SC)	2040	LDA	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDA	0.043941	0.085762	0.99738	0.001696	0	0.149537	0.043506	0.084912
Riverside (SC)	2040	LDT1	0.079622	0.283563	2.105879	0.008301	0	0.168344	0.078834	0.280755
Riverside (SC)	2040	LDT1	0	0	0	0.012994	0	0	0	0
Riverside (SC)	2040	LDT1	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT1	0.031179	0.03849	0.589817	0.001674	0	0.149537	0.03087	0.038109
Riverside (SC)	2040	LDT2	0.048628	0.175235	1.284579	0.006891	0	0.162376	0.048147	0.1735
Riverside (SC)	2040	LDT2	0	0	0	0.013092	0	0	0	0
Riverside (SC)	2040	LDT2	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT2	0.034927	0.052889	0.717541	0.001683	0	0.149537	0.034581	0.052366
Riverside (SC)	2040	LHDT1	0.02552	0.19204	2.451585	0.002758	0.442119	0.101545	0.025268	0.190139
Riverside (SC)	2040	LHDT1	0	0	0	0.057036	0.124954	0	0	0
Riverside (SC)	2040	LHDT1	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LHDT2	0.028546	0.218242	2.774268	0.00258	0.413488	0.092513	0.028263	0.216081
Riverside (SC)	2040	LHDT2	0	0	0	0.068795	0.124954	0	0	0
Riverside (SC)	2040	LHDT2	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MCY	3.766732	4.059459	6.313415	1.012839	0	0.927855	3.729437	4.019266
Riverside (SC)	2040	MDV	0.062719	0.231033	1.681742	0.008328	0	0.194774	0.062098	0.228745
Riverside (SC)	2040	MDV	0	0	0	0.006327	0	0	0	0
Riverside (SC)	2040	MDV	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MDV	0.037975	0.065086	0.816631	0.001687	0	0.149537	0.037599	0.064442
Riverside (SC)	2040	MH	6.018272	0.18123	3.85165	0.012988	0	0.127329	5.958686	0.179436
Riverside (SC)	2040	MH	0	0	0	0.05136	0	0	0	0
Riverside (SC)	2040	MHDT	0.016712	0.192461	2.424446	0.014355	1.393902	0.195552	0.016547	0.190555
Riverside (SC)	2040	MHDT	0	0	0	0.006386	0.21686	0	0	0
Riverside (SC)	2040	MHDT	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MHDT	0	0	0	0.495686	15.89073	0	0	0
Riverside (SC)	2040	OBUS	0.035611	0.213558	4.82037	0.03231	1.093613	0.179306	0.035258	0.211443
Riverside (SC)	2040	OBUS	0	0	0	0.028439	0.928199	0	0	0
Riverside (SC)	2040	OBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	OBUS	0	0	0	0.493377	3.802874	0	0	0
Riverside (SC)	2040	SBUS	0.205244	0.880614	6.082038	0.01727	15.52808	0.347679	0.203211	0.871895
Riverside (SC)	2040	SBUS	0	0	0	0.059462	0.206297	0	0	0
Riverside (SC)	2040	SBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	SBUS	0	0	0	3.951565	13.75331	0	0	0
Riverside (SC)	2040	UBUS	0.02678	0.095653	0.47404	0.002113	0	0.0928	0.026515	0.094706
Riverside (SC)	2040	UBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	UBUS	0	0	0	4.72746	0	0	0	0

Source: EMFAC2021 (v1.0.2) **Emission Rat**
6 percent increase to PM10, and 1 percent

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Summer

Vehicle Classification: EMFAC2007 Category

Units: miles/day for Combustion VMT and

Region	Calendar Year	Vehicle Category	TOG_DIURNAL	NH3_RUNEX	CO_RUNEX	CO_IDLE	CO_STREX	SOx_RUNEX	SOx_IDLE	SOx_STREX
Riverside (SC)	2040	HHDT	2.472314	0.045	26.02029	0	4.162738	0.016584	0	0.000439
Riverside (SC)	2040	HHDT	0	0.219745	0.037376	85.87406	0	0.012299	0.106256	0
Riverside (SC)	2040	HHDT	0	0	0	0	0	0	0	0
Riverside (SC)	2040	HHDT	0	0.993831	3.394802	87.44584	0	0	0	0
Riverside (SC)	2040	LDA	1.266786	0.041653	0.675596	0	1.400858	0.00247	0	0.000537
Riverside (SC)	2040	LDA	0	0.0031	0.155799	0	0	0.001812	0	0
Riverside (SC)	2040	LDA	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDA	0.987505	0.017306	0.248438	0	1.012854	0.001226	0	0.000551
Riverside (SC)	2040	LDT1	2.085029	0.040916	0.817393	0	1.652141	0.002882	0	0.000643
Riverside (SC)	2040	LDT1	0	0.0031	0.117492	0	0	0.003232	0	0
Riverside (SC)	2040	LDT1	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT1	0.583977	0.017129	0.245637	0	1.012854	0.001211	0	0.000624
Riverside (SC)	2040	LDT2	1.271861	0.04159	0.791851	0	1.741898	0.002921	0	0.000658
Riverside (SC)	2040	LDT2	0	0.0031	0.119493	0	0	0.002412	0	0
Riverside (SC)	2040	LDT2	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT2	0.710437	0.017221	0.246714	0	1.012854	0.001217	0	0.000659
Riverside (SC)	2040	LHDT1	2.427312	0.045	0.591377	3.781397	2.981411	0.004921	0.001079	0.000234
Riverside (SC)	2040	LHDT1	0	0.209225	0.116831	0.909745	0	0.004417	0.001142	0
Riverside (SC)	2040	LHDT1	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LHDT2	2.7468	0.045	0.599432	3.781397	3.004113	0.005569	0.001253	0.00023
Riverside (SC)	2040	LHDT2	0	0.205605	0.148208	0.909745	0	0.005185	0.001863	0
Riverside (SC)	2040	LHDT2	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MCY	6.250906	0.009124	10.06376	0	6.475566	0.001827	0	0.000361
Riverside (SC)	2040	MDV	1.665091	0.041349	0.852419	0	1.859825	0.003531	0	0.000814
Riverside (SC)	2040	MDV	0	0.0031	0.151054	0	0	0.003234	0	0
Riverside (SC)	2040	MDV	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MDV	0.808545	0.017267	0.247227	0	1.012854	0.00122	0	0.000806
Riverside (SC)	2040	MH	3.813515	0.045	0.16441	0	2.327287	0.017405	0	0.000293
Riverside (SC)	2040	MH	0	0.183427	0.188512	0	0	0.009335	0	0
Riverside (SC)	2040	MHDT	2.400442	0.045	0.202041	10.54925	3.276663	0.01405	0.004927	0.000374
Riverside (SC)	2040	MHDT	0	0.219558	0.033841	7.412264	0	0.009404	0.018312	0
Riverside (SC)	2040	MHDT	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MHDT	0	1.06	1.522475	43.24616	0	0	0	0
Riverside (SC)	2040	OBUS	4.772643	0.045	0.572816	5.79381	3.12449	0.01431	0.003519	0.000282
Riverside (SC)	2040	OBUS	0	0.214776	0.099682	12.17443	0	0.010784	0.018872	0
Riverside (SC)	2040	OBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	OBUS	0	1.06	1.578135	9.577512	0	0	0	0
Riverside (SC)	2040	SBUS	6.02182	0.045	0.223229	82.24088	5.476908	0.008504	0.024815	0.000481
Riverside (SC)	2040	SBUS	0	0.188353	0.165931	5.827916	0	0.010994	0.019486	0
Riverside (SC)	2040	SBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	SBUS	0	1.06	12.22529	28.5029	0	0	0	0
Riverside (SC)	2040	UBUS	0.469346	0.045	0.568831	0	5.218019	0.005322	0	0.000331
Riverside (SC)	2040	UBUS	0	0	0	0	0	0	0	0
Riverside (SC)	2040	UBUS	0	0.97	54.8784	0	0	0	0	0

Source: EMFAC2021 (v1.0.2) Emission Rates After Applying 17 percent increase to NOx, 8 percent increase to Adjustment to PM2.5, 6 percent increase to PM10, and 1 percent increase to Total ROG.

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Winter

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK a

Region	Calendar Y	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE
Riverside (S	2040	HHDT	Aggregate	Aggregate	Gasoline	1.337656	112.2437	112.2437	0	26.76381	2.473339
Riverside (S	2040	HHDT	Aggregate	Aggregate	Diesel	17540.83	2445706	2445706	0	287837.6	1.375452
Riverside (S	2040	HHDT	Aggregate	Aggregate	Electricity	3909.672	423571	0	423571	50061.43	0
Riverside (S	2040	HHDT	Aggregate	Aggregate	Natural Ga	986.078	63457.49	63457.49	0	8705.557	0.222004
Riverside (S	2040	LDA	Aggregate	Aggregate	Gasoline	493021.6	21095279	21095279	0	2289259	0.022861
Riverside (S	2040	LDA	Aggregate	Aggregate	Diesel	397.9763	14228.46	14228.46	0	1727.725	0.040723
Riverside (S	2040	LDA	Aggregate	Aggregate	Electricity	63036.03	2559309	0	2559309	299117.5	0
Riverside (S	2040	LDA	Aggregate	Aggregate	Plug-in Hyb	22755.26	986987.7	407957.3	579030.4	94092.99	0.00282
Riverside (S	2040	LDT1	Aggregate	Aggregate	Gasoline	34608.39	1372532	1372532	0	154704.2	0.034569
Riverside (S	2040	LDT1	Aggregate	Aggregate	Diesel	0.334543	14.6632	14.6632	0	1.579331	0.029871
Riverside (S	2040	LDT1	Aggregate	Aggregate	Electricity	786.1805	33324.72	0	33324.72	3784.764	0
Riverside (S	2040	LDT1	Aggregate	Aggregate	Plug-in Hyb	610.7978	27966.08	11405.28	16560.81	2525.649	0.002783
Riverside (S	2040	LDT2	Aggregate	Aggregate	Gasoline	265183.8	11274854	11274854	0	1229684	0.028821
Riverside (S	2040	LDT2	Aggregate	Aggregate	Diesel	987.059	42589.23	42589.23	0	4618.531	0.031296
Riverside (S	2040	LDT2	Aggregate	Aggregate	Electricity	9284.388	268729.5	0	268729.5	44502.65	0
Riverside (S	2040	LDT2	Aggregate	Aggregate	Plug-in Hyb	6619.114	292267.5	119842	172425.5	27370.04	0.002798
Riverside (S	2040	LHDT1	Aggregate	Aggregate	Gasoline	13385.54	464388.9	464388.9	0	199424.7	0.029834
Riverside (S	2040	LHDT1	Aggregate	Aggregate	Diesel	10210.99	332703.9	332703.9	0	128441.4	0.51429
Riverside (S	2040	LHDT1	Aggregate	Aggregate	Electricity	9066.737	432819.6	0	432819.6	127036.9	0
Riverside (S	2040	LHDT2	Aggregate	Aggregate	Gasoline	1680.732	55921.53	55921.53	0	25040.4	0.036571
Riverside (S	2040	LHDT2	Aggregate	Aggregate	Diesel	5089.126	158981.5	158981.5	0	64014.8	0.701995
Riverside (S	2040	LHDT2	Aggregate	Aggregate	Electricity	2276.319	104811.6	0	104811.6	30142.99	0
Riverside (S	2040	MCY	Aggregate	Aggregate	Gasoline	23998.46	131623.2	131623.2	0	47996.91	0.527662
Riverside (S	2040	MDV	Aggregate	Aggregate	Gasoline	165115.7	6642989	6642989	0	752743.6	0.036458
Riverside (S	2040	MDV	Aggregate	Aggregate	Diesel	1915.939	75158.88	75158.88	0	8650.01	0.028658
Riverside (S	2040	MDV	Aggregate	Aggregate	Electricity	8810.36	251999.6	0	251999.6	42062.21	0
Riverside (S	2040	MDV	Aggregate	Aggregate	Plug-in Hyb	4282.455	182778.9	75143.42	107635.4	17707.95	0.002805
Riverside (S	2040	MH	Aggregate	Aggregate	Gasoline	2098.561	19579.08	19579.08	0	209.9401	0.126509
Riverside (S	2040	MH	Aggregate	Aggregate	Diesel	1421.114	11601.92	11601.92	0	142.1114	2.813678
Riverside (S	2040	MHDT	Aggregate	Aggregate	Gasoline	845.2192	32228.33	32228.33	0	16911.15	0.092528
Riverside (S	2040	MHDT	Aggregate	Aggregate	Diesel	12022.28	474470.1	474470.1	0	142791.7	0.312355
Riverside (S	2040	MHDT	Aggregate	Aggregate	Electricity	7490.516	350670.1	0	350670.1	92848.56	0
Riverside (S	2040	MHDT	Aggregate	Aggregate	Natural Ga	215.0978	8446.861	8446.861	0	1928.264	0.064983
Riverside (S	2040	OBUS	Aggregate	Aggregate	Gasoline	220.664	5599.193	5599.193	0	4415.046	0.21429
Riverside (S	2040	OBUS	Aggregate	Aggregate	Diesel	250.1899	16385.9	16385.9	0	2863.086	1.005053
Riverside (S	2040	OBUS	Aggregate	Aggregate	Electricity	83.87198	4559.154	0	4559.154	1678.111	0
Riverside (S	2040	OBUS	Aggregate	Aggregate	Natural Ga	55.29742	3041.907	3041.907	0	492.1471	0.071263
Riverside (S	2040	SBUS	Aggregate	Aggregate	Gasoline	266.0281	10340.9	10340.9	0	1064.112	0.217524
Riverside (S	2040	SBUS	Aggregate	Aggregate	Diesel	192.6021	3959.028	3959.028	0	2788.879	1.834221
Riverside (S	2040	SBUS	Aggregate	Aggregate	Electricity	305.0813	8462.376	0	8462.376	3941.755	0
Riverside (S	2040	SBUS	Aggregate	Aggregate	Natural Ga	512.3891	10481.51	10481.51	0	7419.395	0.595882
Riverside (S	2040	UBUS	Aggregate	Aggregate	Gasoline	101.621	9388.479	9388.479	0	406.4839	0.024954
Riverside (S	2040	UBUS	Aggregate	Aggregate	Electricity	337.2146	42266.51	0	42266.51	1348.859	0
Riverside (S	2040	UBUS	Aggregate	Aggregate	Natural Ga	55.99443	9935.165	9935.165	0	223.9777	0.135548

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Source: EMFAC2021 (v1.0.2) Emis:

PM2.5, 6 percent increase to PM10

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Winter

Vehicle Classification: EMFAC2007

Units: miles/day for Combustion Vind RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Y	Vehicle Cat	NOx_IDLEX	NOx_STRE	PM2.5_RUN	PM2.5_IDLI	PM2.5_STR	PM2.5_PM1	PM2.5_PM10	PM10_RUN	PM10_IDLE
Riverside (S	2040	HHDT	0	0.075294	0.001004	0	0.000465	0.0054	0.030878	0.001071	0
Riverside (S	2040	HHDT	73.73966	3.049471	0.027913	0.030398	0	0.009582	0.030065	0.029175	0.031773
Riverside (S	2040	HHDT	0	0	0	0	0	0.009137	0.014754	0	0
Riverside (S	2040	HHDT	13.51202	0	0.001792	0.044851	0	0.00972	0.036997	0.001949	0.048779
Riverside (S	2040	LDA	0	0.190934	0.00056	0	0.000978	0.00216	0.00264	0.000609	0
Riverside (S	2040	LDA	0	0	0.002358	0	0	0.00216	0.002667	0.002464	0
Riverside (S	2040	LDA	0	0	0	0	0	0.00216	0.00166	0	0
Riverside (S	2040	LDA	0	0.12978	0.000232	0	0.001002	0.00216	0.001483	0.000253	0
Riverside (S	2040	LDT1	0	0.23185	0.000669	0	0.001175	0.00216	0.003135	0.000727	0
Riverside (S	2040	LDT1	0	0	0.004043	0	0	0.00216	0.00306	0.004225	0
Riverside (S	2040	LDT1	0	0	0	0	0	0.00216	0.001659	0	0
Riverside (S	2040	LDT1	0	0.12978	0.0002	0	0.000841	0.00216	0.001484	0.000218	0
Riverside (S	2040	LDT2	0	0.237127	0.000573	0	0.000977	0.00216	0.00308	0.000623	0
Riverside (S	2040	LDT2	0	0	0.004111	0	0	0.00216	0.003071	0.004297	0
Riverside (S	2040	LDT2	0	0	0	0	0	0.00216	0.001659	0	0
Riverside (S	2040	LDT2	0	0.12978	0.000213	0	0.000898	0.00216	0.001484	0.000231	0
Riverside (S	2040	LHDT1	0.030865	0.488582	0.001091	0	0.000127	0.00216	0.029484	0.001187	0
Riverside (S	2040	LHDT1	1.504722	0	0.014809	0.028277	0	0.00324	0.029484	0.015478	0.029556
Riverside (S	2040	LHDT1	0	0	0	0	0	0.00216	0.014742	0	0
Riverside (S	2040	LHDT2	0.028866	0.468004	0.001058	0	1.05E-04	0.00216	0.034398	0.00115	0
Riverside (S	2040	LHDT2	1.598181	0	0.017681	0.028215	0	0.00324	0.034398	0.018481	0.02949
Riverside (S	2040	LHDT2	0	0	0	0	0	0.00216	0.017199	0	0
Riverside (S	2040	MCY	0	0.090269	0.002092	0	0.003489	0.00108	0.004536	0.002244	0
Riverside (S	2040	MDV	0	0.27485	0.000617	0	0.00107	0.00216	0.003151	0.000671	0
Riverside (S	2040	MDV	0	0	0.001856	0	0	0.00216	0.00318	0.001939	0
Riverside (S	2040	MDV	0	0	0	0	0	0.00216	0.001661	0	0
Riverside (S	2040	MDV	0	0.12978	0.000223	0	0.000942	0.00216	0.001486	0.000242	0
Riverside (S	2040	MH	0	0.598472	0.000955	0	0.000331	0.00324	0.015957	0.001039	0
Riverside (S	2040	MH	0	0	0.072662	0	0	0.00432	0.015931	0.075948	0
Riverside (S	2040	MHDT	0.069038	0.375433	0.001017	0	0.000484	0.00324	0.015957	0.001106	0
Riverside (S	2040	MHDT	8.956642	1.514194	0.005295	0.003742	0	0.00324	0.015968	0.005535	0.003911
Riverside (S	2040	MHDT	0	0	0	0	0	0.00324	0.007984	0	0
Riverside (S	2040	MHDT	7.48879	0	0.000977	0.02368	0	0.00324	0.015955	0.001062	0.025754
Riverside (S	2040	OBUS	0.060901	0.393254	0.000909	0	0.000284	0.00324	0.015924	0.000989	0
Riverside (S	2040	OBUS	7.755363	1.247313	0.02114	0.008836	0	0.00324	0.021479	0.022096	0.009236
Riverside (S	2040	OBUS	0	0	0	0	0	0.00324	0.007962	0	0
Riverside (S	2040	OBUS	1.750381	0	0.000933	0.005277	0	0.00324	0.015924	0.001015	0.005739
Riverside (S	2040	SBUS	0.966857	1.159483	0.001299	0	0.000659	0.00216	0.017707	0.001413	0
Riverside (S	2040	SBUS	13.28605	0.647522	0.010175	0.005908	0	0.00324	0.017707	0.010635	0.006175
Riverside (S	2040	SBUS	0	0	0	0	0	0.003015	0.008854	0	0
Riverside (S	2040	SBUS	5.998214	0	0.004452	0.015981	0	0.00324	0.017707	0.004842	0.017381
Riverside (S	2040	UBUS	0	0.346276	0.001114	0	0.000146	0.002163	0.034417	0.001212	0
Riverside (S	2040	UBUS	0	0	0	0	0	0.00649	0.02079	0	0
Riverside (S	2040	UBUS	0	0	0.000444	0	0	0.00967	0.04158	0.000464	0
			0	0	0	0	0	0	0	0	0

Source: EMFAC2021 (v1.0.2) Emis:
PM2.5, 6 percent increase to PM10
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2040
Season: Winter
Vehicle Classification: EMFAC2007
Units: miles/day for Combustion V

Region	Calendar Y	Vehicle Cat	PM10_STRE	PM10_PMT	PM10_PMB	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE
Riverside (S	2040	HHDT	0.000497	0.0212	0.086589	1676.624	0	44.77013	0.071176	0	0.000132
Riverside (S	2040	HHDT	0	0.038329	0.085901	1298.767	11572.49	0	0.000491	0.251135	0
Riverside (S	2040	HHDT	0	0.036548	0.042153	0	0	0	0	0	0
Riverside (S	2040	HHDT	0	0.03888	0.105705	1028.032	9658.458	0	0.814033	27.35488	0
Riverside (S	2040	LDA	0.001063	0.00864	0.007542	227.294	0	54.71363	0.001074	0	0.034602
Riverside (S	2040	LDA	0	0.00864	0.00762	191.2585	0	0	0.00029	0	0
Riverside (S	2040	LDA	0	0.00864	0.004742	0	0	0	0	0	0
Riverside (S	2040	LDA	0.00109	0.00864	0.004237	112.0282	0	56.20227	0.000342	0	0.039086
Riverside (S	2040	LDT1	0.001278	0.00864	0.008958	268.322	0	65.54887	0.001579	0	0.043072
Riverside (S	2040	LDT1	0	0.00864	0.008742	341.1278	0	0	0.00053	0	0
Riverside (S	2040	LDT1	0	0.00864	0.004739	0	0	0	0	0	0
Riverside (S	2040	LDT1	0.000915	0.00864	0.004241	110.5513	0	63.56809	0.000339	0	0.03931
Riverside (S	2040	LDT2	0.001063	0.00864	0.0088	273.816	0	67.09225	0.001433	0	0.04342
Riverside (S	2040	LDT2	0	0.00864	0.008775	254.5411	0	0	0.000534	0	0
Riverside (S	2040	LDT2	0	0.00864	0.004741	0	0	0	0	0	0
Riverside (S	2040	LDT2	0.000977	0.00864	0.004241	111.1438	0	67.12951	0.000339	0	0.039154
Riverside (S	2040	LHDT1	0.000138	0.00864	0.08424	497.7188	109.1452	23.91549	0.000538	0.088837	0.021396
Riverside (S	2040	LHDT1	0	0.01296	0.08424	466.1363	120.4791	0	0.002327	0.005098	0
Riverside (S	2040	LHDT1	0	0.00864	0.04212	0	0	0	0	0	0
Riverside (S	2040	LHDT2	0.000115	0.00864	0.09828	563.2673	126.7792	23.49257	0.00051	0.082979	0.019638
Riverside (S	2040	LHDT2	0	0.01296	0.09828	547.1763	196.6246	0	0.002807	0.005098	0
Riverside (S	2040	LHDT2	0	0.00864	0.04914	0	0	0	0	0	0
Riverside (S	2040	MCY	0.003738	0.00432	0.01296	184.3628	0	38.0331	0.133407	0	0.133195
Riverside (S	2040	MDV	0.001164	0.00864	0.009002	335.2094	0	82.99371	0.001641	0	0.049309
Riverside (S	2040	MDV	0	0.00864	0.009085	341.3373	0	0	0.000258	0	0
Riverside (S	2040	MDV	0	0.00864	0.004747	0	0	0	0	0	0
Riverside (S	2040	MDV	0.001025	0.00864	0.004244	111.4307	0	81.96277	0.000339	0	0.039016
Riverside (S	2040	MH	0.00036	0.01296	0.04559	1760.581	0	29.93263	0.003113	0	0.034526
Riverside (S	2040	MH	0	0.01728	0.045518	985.1232	0	0	0.002095	0	0
Riverside (S	2040	MHDT	0.000527	0.01296	0.04559	1421.23	452.3384	38.11672	0.002413	0.283905	0.036558
Riverside (S	2040	MHDT	0	0.01296	0.045623	993.0754	2000.767	0	0.000261	0.007605	0
Riverside (S	2040	MHDT	0	0.01296	0.022812	0	0	0	0	0	0
Riverside (S	2040	MHDT	0	0.01296	0.045586	744.595	5406.718	0	0.485694	15.5704	0
Riverside (S	2040	OBUS	0.000309	0.01296	0.045497	1447.472	355.9554	28.93496	0.004618	0.183746	0.030932
Riverside (S	2040	OBUS	0	0.01296	0.061369	1138.857	2050.409	0	0.00116	0.032911	0
Riverside (S	2040	OBUS	0	0.01296	0.022748	0	0	0	0	0	0
Riverside (S	2040	OBUS	0	0.01296	0.045497	690.4087	1162.809	0	0.483432	3.726213	0
Riverside (S	2040	SBUS	0.000717	0.00864	0.050593	860.2045	2510.117	52.60719	0.002633	2.414779	0.068578
Riverside (S	2040	SBUS	0	0.01296	0.050593	1160.994	2039.698	0	0.002426	0.007751	0
Riverside (S	2040	SBUS	0	0.012059	0.025296	0	0	0	0	0	0
Riverside (S	2040	SBUS	0	0.01296	0.050593	1560.263	4205.216	0	3.871907	13.47606	0
Riverside (S	2040	UBUS	0.000158	0.008651	0.098333	538.291	0	35.04469	0.000568	0	0.029532
Riverside (S	2040	UBUS	0	0.02596	0.0594	0	0	0	0	0	0
Riverside (S	2040	UBUS	0	0.038679	0.1188	2049.112	0	0	4.632161	0	0
			0	0	0						

Source: EMFAC2021 (v1.0.2) Emis:
PM2.5, 6 percent increase to PM10
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2040
Season: Winter
Vehicle Classification: EMFAC2007
Units: miles/day for Combustion V

Region	Calendar Y	Vehicle Cat	N2O_RUNE	N2O_IDLE	N2O_STRE	ROG_RUNE	ROG_IDLE	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIUR
Riverside (S	2040	HHDT	0.101011	0	0.003623	0.319196	0	0.000679	0.017209	0.19281	2.213971
Riverside (S	2040	HHDT	0.204621	1.82325	0	0.010684	5.460947	0	0	0	0
Riverside (S	2040	HHDT	0	0	0	0	0	0	0	0	0
Riverside (S	2040	HHDT	0.209571	1.96894	0	0.01307	0.399445	0	0	0	0
Riverside (S	2040	LDA	0.003161	0	0.025904	0.003239	0	0.134971	0.045828	0.172081	1.130655
Riverside (S	2040	LDA	0.030133	0	0	0.006306	0	0	0	0	0
Riverside (S	2040	LDA	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDA	0.000423	0	0.019264	0.001111	0	0.16407	0.041345	0.084993	0.873539
Riverside (S	2040	LDT1	0.003864	0	0.028626	0.005443	0	0.180239	0.075154	0.281309	1.877716
Riverside (S	2040	LDT1	0.053745	0	0	0.011528	0	0	0	0	0
Riverside (S	2040	LDT1	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDT1	0.000421	0	0.019482	0.001097	0	0.16407	0.029063	0.037741	0.483259
Riverside (S	2040	LDT2	0.003509	0	0.030454	0.004518	0	0.173874	0.045846	0.173477	1.138369
Riverside (S	2040	LDT2	0.040103	0	0	0.011615	0	0	0	0	0
Riverside (S	2040	LDT2	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDT2	0.00042	0	0.019329	0.001103	0	0.16407	0.032681	0.052143	0.606844
Riverside (S	2040	LHDT1	0.002169	0.002559	0.039308	0.001872	0.306018	0.097052	0.024124	0.191021	2.222074
Riverside (S	2040	LHDT1	0.07344	0.018982	0	0.050602	0.110857	0	0	0	0
Riverside (S	2040	LHDT1	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LHDT2	0.00285	0.002344	0.03674	0.001751	0.2862	0.088431	0.027106	0.217323	2.546866
Riverside (S	2040	LHDT2	0.086208	0.030978	0	0.061034	0.110857	0	0	0	0
Riverside (S	2040	LHDT2	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MCY	0.034239	0	0.005014	0.809106	0	0.947499	3.631607	4.212418	4.859597
Riverside (S	2040	MDV	0.003897	0	0.032413	0.005461	0	0.208671	0.059289	0.229169	1.507519
Riverside (S	2040	MDV	0.053778	0	0	0.005613	0	0	0	0	0
Riverside (S	2040	MDV	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MDV	0.000417	0	0.019194	0.001106	0	0.16407	0.035611	0.064332	0.701641
Riverside (S	2040	MH	0.012323	0	0.05936	0.008807	0	0.12302	5.724696	0.180551	3.531882
Riverside (S	2040	MH	0.155207	0	0	0.045566	0	0	0	0	0
Riverside (S	2040	MHDT	0.0068	0.005354	0.027257	0.009734	1.112595	0.187117	0.015844	0.191836	2.167313
Riverside (S	2040	MHDT	0.156459	0.315222	0	0.005666	0.165369	0	0	0	0
Riverside (S	2040	MHDT	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MHDT	0.151791	1.102195	0	0.007009	0.224695	0	0	0	0
Riverside (S	2040	OBUS	0.010155	0.003852	0.022581	0.021927	0.756956	0.173238	0.033825	0.212614	4.290775
Riverside (S	2040	OBUS	0.179427	0.323043	0	0.02523	0.715648	0	0	0	0
Riverside (S	2040	OBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	OBUS	0.140744	0.237046	0	0.006976	0.053773	0	0	0	0
Riverside (S	2040	SBUS	0.015763	0.073225	0.084087	0.011718	10.74793	0.392197	0.196048	0.882328	5.596554
Riverside (S	2040	SBUS	0.182915	0.321355	0	0.052754	0.168542	0	0	0	0
Riverside (S	2040	SBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	SBUS	0.31807	0.857261	0	0.055875	0.194472	0	0	0	0
Riverside (S	2040	UBUS	0.003565	0	0.05044	0.00143	0	0.095404	0.024786	0.096211	0.3538
Riverside (S	2040	UBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	UBUS	0.417725	0	0	0.066846	0	0	0	0	0
						0	0	0	0	0	0

Source: EMFAC2021 (v1.0.2) Emis:
PM2.5, 6 percent increase to PM10
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2040
Season: Winter
Vehicle Classification: EMFAC2007
Units: miles/day for Combustion V

Region	Calendar Y	Vehicle Cat	TOG_RUNE	TOG_IDLE	TOG_STRE	TOG_HOTS	TOG_RUNL	TOG_DIUR	NH3_RUNE	CO_RUNE	CO_IDLE
Riverside (S	2040	HHDT	0.461159	0	0.000736	0.017038	0.190901	2.19205	0.045	25.48673	0
Riverside (S	2040	HHDT	0.012043	6.155319	0	0	0	0	0.219745	0.037376	88.56923
Riverside (S	2040	HHDT	0	0	0	0	0	0	0	0	0
Riverside (S	2040	HHDT	0.832272	27.92296	0	0	0	0	0.993831	3.394802	87.44584
Riverside (S	2040	LDA	0.00468	0	0.146313	0.045374	0.170377	1.119461	0.041653	0.474865	0
Riverside (S	2040	LDA	0.007108	0	0	0	0	0	0.0031	0.155799	0
Riverside (S	2040	LDA	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDA	0.001606	0	0.177857	0.040936	0.084152	0.86489	0.017306	0.174093	0
Riverside (S	2040	LDT1	0.007863	0	0.195385	0.07441	0.278523	1.859125	0.040916	0.575816	0
Riverside (S	2040	LDT1	0.012994	0	0	0	0	0	0.0031	0.117492	0
Riverside (S	2040	LDT1	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDT1	0.001584	0	0.177857	0.028775	0.037368	0.478475	0.017129	0.171855	0
Riverside (S	2040	LDT2	0.006528	0	0.188485	0.045392	0.171759	1.127098	0.04159	0.556616	0
Riverside (S	2040	LDT2	0.013092	0	0	0	0	0	0.0031	0.119493	0
Riverside (S	2040	LDT2	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDT2	0.001593	0	0.177857	0.032358	0.051626	0.600835	0.017221	0.172747	0
Riverside (S	2040	LHDT1	0.002704	0.442119	0.105207	0.023885	0.18913	2.200074	0.045	0.579794	3.781397
Riverside (S	2040	LHDT1	0.057036	0.124954	0	0	0	0	0.209225	0.116831	0.909745
Riverside (S	2040	LHDT1	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LHDT2	0.00253	0.413488	0.095862	0.026838	0.215171	2.521649	0.045	0.58769	3.781397
Riverside (S	2040	LHDT2	0.068795	0.124954	0	0	0	0	0.205605	0.148208	0.909745
Riverside (S	2040	LHDT2	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MCY	0.9961	0	1.021256	3.595651	4.170711	4.811483	0.009124	9.833808	0
Riverside (S	2040	MDV	0.007889	0	0.226206	0.058702	0.2269	1.492593	0.041349	0.599844	0
Riverside (S	2040	MDV	0.006327	0	0	0	0	0	0.0031	0.151054	0
Riverside (S	2040	MDV	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MDV	0.001597	0	0.177857	0.035258	0.063695	0.694694	0.017267	0.173178	0
Riverside (S	2040	MH	0.012724	0	0.133358	5.668016	0.178763	3.496913	0.045	0.161043	0
Riverside (S	2040	MH	0.05136	0	0	0	0	0	0.183427	0.188512	0
Riverside (S	2040	MHDT	0.014063	1.607422	0.202841	0.015688	0.189936	2.145854	0.045	0.197903	20.04879
Riverside (S	2040	MHDT	0.006386	0.186396	0	0	0	0	0.219558	0.033841	7.668498
Riverside (S	2040	MHDT	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MHDT	0.495686	15.89073	0	0	0	0	1.06	1.522475	43.24616
Riverside (S	2040	OBUS	0.031679	1.093613	0.187796	0.03349	0.210509	4.248292	0.045	0.561835	5.79381
Riverside (S	2040	OBUS	0.028439	0.806644	0	0	0	0	0.214776	0.099682	12.62916
Riverside (S	2040	OBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	OBUS	0.493377	3.802874	0	0	0	0	1.06	1.578135	9.577512
Riverside (S	2040	SBUS	0.01693	15.52808	0.425154	0.194107	0.873592	5.541143	0.045	0.21839	82.24088
Riverside (S	2040	SBUS	0.059462	0.189973	0	0	0	0	0.188353	0.165931	6.245634
Riverside (S	2040	SBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	SBUS	3.951565	13.75331	0	0	0	0	1.06	12.22529	28.5029
Riverside (S	2040	UBUS	0.002067	0	0.103421	0.02454	0.095258	0.350297	0.045	0.556605	0
Riverside (S	2040	UBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	UBUS	4.72746	0	0	0	0	0	0.97	54.8784	0

Source: EMFAC2021 (v1.0.2) Emis:
PM2.5, 6 percent increase to PM10
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2040
Season: Winter
Vehicle Classification: EMFAC2007
Units: miles/day for Combustion V

Region	Calendar Y	Vehicle Cat	CO_STREX	SOx_RUNE	SOx_IDLE	SOx_STREX
Riverside (SC)	2040	HHDT	4.36391	0.016575	0	0.000443
Riverside (SC)	2040	HHDT	0	0.012299	0.109585	0
Riverside (SC)	2040	HHDT	0	0	0	0
Riverside (SC)	2040	HHDT	0	0	0	0
Riverside (SC)	2040	LDA	1.638022	0.002247	0	0.000541
Riverside (SC)	2040	LDA	0	0.001812	0	0
Riverside (SC)	2040	LDA	0	0	0	0
Riverside (SC)	2040	LDA	1.228358	0.001108	0	0.000556
Riverside (SC)	2040	LDT1	1.941062	0.002653	0	0.000648
Riverside (SC)	2040	LDT1	0	0.003232	0	0
Riverside (SC)	2040	LDT1	0	0	0	0
Riverside (SC)	2040	LDT1	1.228358	0.001093	0	0.000628
Riverside (SC)	2040	LDT2	2.053369	0.002707	0	0.000663
Riverside (SC)	2040	LDT2	0	0.002412	0	0
Riverside (SC)	2040	LDT2	0	0	0	0
Riverside (SC)	2040	LDT2	1.228358	0.001099	0	0.000664
Riverside (SC)	2040	LHDT1	3.113072	0.00492	0.001079	0.000236
Riverside (SC)	2040	LHDT1	0	0.004417	0.001142	0
Riverside (SC)	2040	LHDT1	0	0	0	0
Riverside (SC)	2040	LHDT2	3.136683	0.005568	0.001253	0.000232
Riverside (SC)	2040	LHDT2	0	0.005185	0.001863	0
Riverside (SC)	2040	LHDT2	0	0	0	0
Riverside (SC)	2040	MCY	7.283347	0.001823	0	0.000376
Riverside (SC)	2040	MDV	2.194471	0.003314	0	0.00082
Riverside (SC)	2040	MDV	0	0.003234	0	0
Riverside (SC)	2040	MDV	0	0	0	0
Riverside (SC)	2040	MDV	1.228358	0.001102	0	0.00081
Riverside (SC)	2040	MH	2.493536	0.017405	0	0.000296
Riverside (SC)	2040	MH	0	0.009335	0	0
Riverside (SC)	2040	MHDT	3.435014	0.01405	0.004472	0.000377
Riverside (SC)	2040	MHDT	0	0.009404	0.018946	0
Riverside (SC)	2040	MHDT	0	0	0	0
Riverside (SC)	2040	MHDT	0	0	0	0
Riverside (SC)	2040	OBUS	3.347688	0.01431	0.003519	0.000286
Riverside (SC)	2040	OBUS	0	0.010784	0.019416	0
Riverside (SC)	2040	OBUS	0	0	0	0
Riverside (SC)	2040	OBUS	0	0	0	0
Riverside (SC)	2040	SBUS	7.793894	0.008504	0.024815	0.00052
Riverside (SC)	2040	SBUS	0	0.010994	0.019315	0
Riverside (SC)	2040	SBUS	0	0	0	0
Riverside (SC)	2040	SBUS	0	0	0	0
Riverside (SC)	2040	UBUS	6.178081	0.005322	0	0.000346
Riverside (SC)	2040	UBUS	0	0	0	0
Riverside (SC)	2040	UBUS	0	0	0	0

Source: EMFAC2021 (v1.0.2) **Emission Rates After Applying 17 percent increase to NOx, 8 percent increase to Adjustment to PM2.5, 6 percent increase to PM10, and 1 percent increase to Total ROG.**

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and

Region	Calendar Yr	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	NOx_RUNE
Riverside (S	2040	HHDT	Aggregate	Aggregate	Gasoline	1.337656	112.2437	112.2437	0	26.76381	2.558567
Riverside (S	2040	HHDT	Aggregate	Aggregate	Diesel	17540.83	2445706	2445706	0	287837.6	1.395724
Riverside (S	2040	HHDT	Aggregate	Aggregate	Electricity	3909.672	423571	0	423571	50061.43	0
Riverside (S	2040	HHDT	Aggregate	Aggregate	Natural Gas	986.078	63457.49	63457.49	0	8705.557	0.225378
Riverside (S	2040	LDA	Aggregate	Aggregate	Gasoline	493021.6	21095279	21095279	0	2289259	0.023718
Riverside (S	2040	LDA	Aggregate	Aggregate	Diesel	397.9763	14228.46	14228.46	0	1727.725	0.041408
Riverside (S	2040	LDA	Aggregate	Aggregate	Electricity	63036.03	2559309	0	2559309	299117.5	0
Riverside (S	2040	LDA	Aggregate	Aggregate	Plug-in Hyb	22755.26	986987.7	407957.3	579030.4	94092.99	0.002926
Riverside (S	2040	LDT1	Aggregate	Aggregate	Gasoline	34608.39	1372532	1372532	0	154704.2	0.035866
Riverside (S	2040	LDT1	Aggregate	Aggregate	Diesel	0.334543	14.6632	14.6632	0	1.579331	0.030373
Riverside (S	2040	LDT1	Aggregate	Aggregate	Electricity	786.1805	33324.72	0	33324.72	3784.764	0
Riverside (S	2040	LDT1	Aggregate	Aggregate	Plug-in Hyb	610.7978	27966.08	11405.28	16560.81	2525.649	0.002887
Riverside (S	2040	LDT2	Aggregate	Aggregate	Gasoline	265183.8	11274854	11274854	0	1229684	0.029902
Riverside (S	2040	LDT2	Aggregate	Aggregate	Diesel	987.059	42589.23	42589.23	0	4618.531	0.031823
Riverside (S	2040	LDT2	Aggregate	Aggregate	Electricity	9284.388	268729.5	0	268729.5	44502.65	0
Riverside (S	2040	LDT2	Aggregate	Aggregate	Plug-in Hyb	6619.114	292267.5	119842	172425.5	27370.04	0.002903
Riverside (S	2040	LHDT1	Aggregate	Aggregate	Gasoline	13385.54	464388.9	464388.9	0	199424.7	0.030862
Riverside (S	2040	LHDT1	Aggregate	Aggregate	Diesel	10210.99	332703.9	332703.9	0	128441.4	0.522156
Riverside (S	2040	LHDT1	Aggregate	Aggregate	Electricity	9066.737	432819.6	0	432819.6	127036.9	0
Riverside (S	2040	LHDT2	Aggregate	Aggregate	Gasoline	1680.732	55921.53	55921.53	0	25040.4	0.037829
Riverside (S	2040	LHDT2	Aggregate	Aggregate	Diesel	5089.126	158981.5	158981.5	0	64014.8	0.712734
Riverside (S	2040	LHDT2	Aggregate	Aggregate	Electricity	2276.319	104811.6	0	104811.6	30142.99	0
Riverside (S	2040	MCY	Aggregate	Aggregate	Gasoline	23998.46	131623.2	131623.2	0	47996.91	0.54513
Riverside (S	2040	MDV	Aggregate	Aggregate	Gasoline	165115.7	6642989	6642989	0	752743.6	0.037825
Riverside (S	2040	MDV	Aggregate	Aggregate	Diesel	1915.939	75158.88	75158.88	0	8650.01	0.02914
Riverside (S	2040	MDV	Aggregate	Aggregate	Electricity	8810.36	251999.6	0	251999.6	42062.21	0
Riverside (S	2040	MDV	Aggregate	Aggregate	Plug-in Hyb	4282.455	182778.9	75143.42	107635.4	17707.95	0.00291
Riverside (S	2040	MH	Aggregate	Aggregate	Gasoline	2098.561	19579.08	19579.08	0	209.9401	0.130869
Riverside (S	2040	MH	Aggregate	Aggregate	Diesel	1421.114	11601.92	11601.92	0	142.1114	2.860672
Riverside (S	2040	MHDT	Aggregate	Aggregate	Gasoline	845.2192	32228.33	32228.33	0	16911.15	0.095717
Riverside (S	2040	MHDT	Aggregate	Aggregate	Diesel	12022.28	474470.1	474470.1	0	142791.7	0.317342
Riverside (S	2040	MHDT	Aggregate	Aggregate	Electricity	7490.516	350670.1	0	350670.1	92848.56	0
Riverside (S	2040	MHDT	Aggregate	Aggregate	Natural Gas	215.0978	8446.861	8446.861	0	1928.264	0.066037
Riverside (S	2040	OBUS	Aggregate	Aggregate	Gasoline	220.664	5599.193	5599.193	0	4415.046	0.221672
Riverside (S	2040	OBUS	Aggregate	Aggregate	Diesel	250.1899	16385.9	16385.9	0	2863.086	1.020933
Riverside (S	2040	OBUS	Aggregate	Aggregate	Electricity	83.87198	4559.154	0	4559.154	1678.111	0
Riverside (S	2040	OBUS	Aggregate	Aggregate	Natural Gas	55.29742	3041.907	3041.907	0	492.1471	0.072457
Riverside (S	2040	SBUS	Aggregate	Aggregate	Gasoline	266.0281	10340.9	10340.9	0	1064.112	0.224199
Riverside (S	2040	SBUS	Aggregate	Aggregate	Diesel	192.6021	3959.028	3959.028	0	2788.879	1.862143
Riverside (S	2040	SBUS	Aggregate	Aggregate	Electricity	305.0813	8462.376	0	8462.376	3941.755	0
Riverside (S	2040	SBUS	Aggregate	Aggregate	Natural Gas	512.3891	10481.51	10481.51	0	7419.395	0.605197
Riverside (S	2040	UBUS	Aggregate	Aggregate	Gasoline	101.621	9388.479	9388.479	0	406.4839	0.025749
Riverside (S	2040	UBUS	Aggregate	Aggregate	Electricity	337.2146	42266.51	0	42266.51	1348.859	0
Riverside (S	2040	UBUS	Aggregate	Aggregate	Natural Gas	55.99443	9935.165	9935.165	0	223.9777	0.135548

Source: EMFAC2021 (v1.0.2) Emissions

PM2.5, 6 percent increase to PM10

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC2007

Units: miles/day for Combustion and RUNLOSS, g/vehicle/day for IDLEX and DIURN.

Region	Calendar Year	Vehicle Cat	NOx_IDLEX	NOx_STREX	PM2.5_RUN	PM2.5_IDLEX	PM2.5_STR	PM2.5_PM1	PM2.5_PME	PM10_RUN	PM10_IDLEX
Riverside (S	2040	HHDT	0	0.076254	0.001004	0	0.000465	0.0054	0.030878	0.001071	0
Riverside (S	2040	HHDT	69.03736	3.049471	0.027913	0.026321	0	0.009582	0.030065	0.029175	0.027511
Riverside (S	2040	HHDT	0	0	0	0	0	0.009137	0.014754	0	0
Riverside (S	2040	HHDT	13.51202	0	0.001792	0.044851	0	0.00972	0.036997	0.001949	0.048779
Riverside (S	2040	LDA	0	0.1928	0.00056	0	0.000978	0.00216	0.00264	0.000609	0
Riverside (S	2040	LDA	0	0	0.002358	0	0	0.00216	0.002667	0.002464	0
Riverside (S	2040	LDA	0	0	0	0	0	0.00216	0.00166	0	0
Riverside (S	2040	LDA	0	0.130141	0.000232	0	0.001002	0.00216	0.001483	0.000253	0
Riverside (S	2040	LDT1	0	0.234109	0.000669	0	0.001175	0.00216	0.003135	0.000727	0
Riverside (S	2040	LDT1	0	0	0.004043	0	0	0.00216	0.00306	0.004225	0
Riverside (S	2040	LDT1	0	0	0	0	0	0.00216	0.001659	0	0
Riverside (S	2040	LDT1	0	0.130141	0.0002	0	0.000841	0.00216	0.001484	0.000218	0
Riverside (S	2040	LDT2	0	0.239468	0.000573	0	0.000977	0.00216	0.00308	0.000623	0
Riverside (S	2040	LDT2	0	0	0.004111	0	0	0.00216	0.003071	0.004297	0
Riverside (S	2040	LDT2	0	0	0	0	0	0.00216	0.001659	0	0
Riverside (S	2040	LDT2	0	0.130141	0.000213	0	0.000898	0.00216	0.001484	0.000231	0
Riverside (S	2040	LHDT1	0.030865	0.496116	0.001091	0	0.000127	0.00216	0.029484	0.001187	0
Riverside (S	2040	LHDT1	1.504722	0	0.014809	0.028277	0	0.00324	0.029484	0.015478	0.029556
Riverside (S	2040	LHDT1	0	0	0	0	0	0.00216	0.014742	0	0
Riverside (S	2040	LHDT2	0.028866	0.475245	0.001058	0	1.05E-04	0.00216	0.034398	0.00115	0
Riverside (S	2040	LHDT2	1.598181	0	0.017681	0.028215	0	0.00324	0.034398	0.018481	0.02949
Riverside (S	2040	LHDT2	0	0	0	0	0	0.00216	0.017199	0	0
Riverside (S	2040	MCY	0	0.091128	0.002092	0	0.003489	0.00108	0.004536	0.002244	0
Riverside (S	2040	MDV	0	0.277553	0.000617	0	0.00107	0.00216	0.003151	0.000671	0
Riverside (S	2040	MDV	0	0	0.001856	0	0	0.00216	0.00318	0.001939	0
Riverside (S	2040	MDV	0	0	0	0	0	0.00216	0.001661	0	0
Riverside (S	2040	MDV	0	0.130141	0.000223	0	0.000942	0.00216	0.001486	0.000242	0
Riverside (S	2040	MH	0	0.60625	0.000955	0	0.000331	0.00324	0.015957	0.001039	0
Riverside (S	2040	MH	0	0	0.072662	0	0	0.00432	0.015931	0.075948	0
Riverside (S	2040	MHDT	0.072629	0.380219	0.001017	0	0.000484	0.00324	0.015957	0.001106	0
Riverside (S	2040	MHDT	8.394236	1.514194	0.005295	0.003213	0	0.00324	0.015968	0.005535	0.003358
Riverside (S	2040	MHDT	0	0	0	0	0	0.00324	0.007984	0	0
Riverside (S	2040	MHDT	7.48879	0	0.000977	0.02368	0	0.00324	0.015955	0.001062	0.025754
Riverside (S	2040	OBUS	0.060901	0.398365	0.000909	0	0.000284	0.00324	0.015924	0.000989	0
Riverside (S	2040	OBUS	7.335237	1.247313	0.02114	0.007457	0	0.00324	0.021479	0.022096	0.007794
Riverside (S	2040	OBUS	0	0	0	0	0	0.00324	0.007962	0	0
Riverside (S	2040	OBUS	1.750381	0	0.000933	0.005277	0	0.00324	0.015924	0.001015	0.005739
Riverside (S	2040	SBUS	0.966857	1.155672	0.001299	0	0.000659	0.00216	0.017707	0.001413	0
Riverside (S	2040	SBUS	13.13452	0.647522	0.010175	0.004977	0	0.00324	0.017707	0.010635	0.005202
Riverside (S	2040	SBUS	0	0	0	0	0	0.003015	0.008854	0	0
Riverside (S	2040	SBUS	5.998214	0	0.004452	0.015981	0	0.00324	0.017707	0.004842	0.017381
Riverside (S	2040	UBUS	0	0.349511	0.001114	0	0.000146	0.002163	0.034417	0.001212	0
Riverside (S	2040	UBUS	0	0	0	0	0	0.00649	0.02079	0	0
Riverside (S	2040	UBUS	0	0	0.000444	0	0	0.00967	0.04158	0.000464	0

Source: EMFAC2021 (v1.0.2) Emissions

PM2.5, 6 percent increase to PM10

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC2007

Units: miles/day for Combustion VI

Region	Calendar Year	Vehicle Cat	PM10_STRE	PM10_PMT	PM10_PMB	CO2_RUNE	CO2_IDLE	CO2_STRE	CH4_RUNE	CH4_IDLE	CH4_STRE
Riverside (S	2040	HHDT	0.000497	0.0212	0.086589	1676.545	0	44.84472	0.07104	0	0.000133
Riverside (S	2040	HHDT	0	0.038329	0.085901	1298.767	11368.64	0	0.000491	0.273683	0
Riverside (S	2040	HHDT	0	0.036548	0.042153	0	0	0	0	0	0
Riverside (S	2040	HHDT	0	0.03888	0.105705	1028.032	9658.458	0	0.814033	27.35488	0
Riverside (S	2040	LDA	0.001063	0.00864	0.007542	230.5445	0	54.73974	0.001081	0	0.034633
Riverside (S	2040	LDA	0	0.00864	0.00762	191.2585	0	0	0.00029	0	0
Riverside (S	2040	LDA	0	0.00864	0.004742	0	0	0	0	0	0
Riverside (S	2040	LDA	0.00109	0.00864	0.004237	113.7733	0	56.21764	0.000344	0	0.039122
Riverside (S	2040	LDT1	0.001278	0.00864	0.008958	271.6791	0	65.57745	0.001589	0	0.043106
Riverside (S	2040	LDT1	0	0.00864	0.008742	341.1278	0	0	0.00053	0	0
Riverside (S	2040	LDT1	0	0.00864	0.004739	0	0	0	0	0	0
Riverside (S	2040	LDT1	0.000915	0.00864	0.004241	112.2847	0	63.58347	0.000341	0	0.039346
Riverside (S	2040	LDT2	0.001063	0.00864	0.0088	276.9398	0	67.11969	0.001442	0	0.043447
Riverside (S	2040	LDT2	0	0.00864	0.008775	254.5411	0	0	0.000534	0	0
Riverside (S	2040	LDT2	0	0.00864	0.004741	0	0	0	0	0	0
Riverside (S	2040	LDT2	0.000977	0.00864	0.004241	112.8808	0	67.14489	0.000342	0	0.03919
Riverside (S	2040	LHDT1	0.000138	0.00864	0.08424	497.7165	109.1452	23.9558	0.000536	0.08878	0.021524
Riverside (S	2040	LHDT1	0	0.01296	0.08424	466.1363	120.4791	0	0.002327	0.005098	0
Riverside (S	2040	LHDT1	0	0.00864	0.04212	0	0	0	0	0	0
Riverside (S	2040	LHDT2	0.000115	0.00864	0.09828	563.265	126.7792	23.53257	0.000508	0.082927	0.019753
Riverside (S	2040	LHDT2	0	0.01296	0.09828	547.1763	196.6246	0	0.002807	0.005098	0
Riverside (S	2040	LHDT2	0	0.00864	0.04914	0	0	0	0	0	0
Riverside (S	2040	MCY	0.003738	0.00432	0.01296	184.4054	0	38.27276	0.133336	0	0.134817
Riverside (S	2040	MDV	0.001164	0.00864	0.009002	338.383	0	83.02242	0.001652	0	0.049337
Riverside (S	2040	MDV	0	0.00864	0.009085	341.3373	0	0	0.000258	0	0
Riverside (S	2040	MDV	0	0.00864	0.004747	0	0	0	0	0	0
Riverside (S	2040	MDV	0.001025	0.00864	0.004244	113.1693	0	81.97815	0.000341	0	0.039051
Riverside (S	2040	MH	0.00036	0.01296	0.04559	1760.58	0	29.94806	0.003107	0	0.034649
Riverside (S	2040	MH	0	0.01728	0.045518	985.1232	0	0	0.002095	0	0
Riverside (S	2040	MHDT	0.000527	0.01296	0.04559	1421.229	479.2251	38.18013	0.002413	0.262462	0.03691
Riverside (S	2040	MHDT	0	0.01296	0.045623	993.0754	1961.9	0	0.000261	0.008326	0
Riverside (S	2040	MHDT	0	0.01296	0.022812	0	0	0	0	0	0
Riverside (S	2040	MHDT	0	0.01296	0.045586	744.595	5406.718	0	0.485694	15.5704	0
Riverside (S	2040	OBUS	0.000309	0.01296	0.045497	1447.469	355.9554	28.95576	0.004603	0.183697	0.031028
Riverside (S	2040	OBUS	0	0.01296	0.061369	1138.857	2017.064	0	0.00116	0.035787	0
Riverside (S	2040	OBUS	0	0.01296	0.022748	0	0	0	0	0	0
Riverside (S	2040	OBUS	0	0.01296	0.045497	690.4087	1162.809	0	0.483432	3.726213	0
Riverside (S	2040	SBUS	0.000717	0.00864	0.050593	860.2036	2510.117	52.32401	0.002625	2.415386	0.06738
Riverside (S	2040	SBUS	0	0.01296	0.050593	1160.994	2050.182	0	0.002426	0.008137	0
Riverside (S	2040	SBUS	0	0.012059	0.025296	0	0	0	0	0	0
Riverside (S	2040	SBUS	0	0.01296	0.050593	1560.263	4205.216	0	3.871907	13.47606	0
Riverside (S	2040	UBUS	0.000158	0.008651	0.098333	538.2893	0	34.97692	0.000567	0	0.029371
Riverside (S	2040	UBUS	0	0.02596	0.0594	0	0	0	0	0	0
Riverside (S	2040	UBUS	0	0.038679	0.1188	2049.112	0	0	4.632161	0	0

Source: EMFAC2021 (v1.0.2) Emiss

PM2.5, 6 percent increase to PM10

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC2007

Units: miles/day for Combustion VI

Region	Calendar Yr	Vehicle Cat	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNE	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNL	ROG_DIURI
Riverside (S	2040	HHDT	0.10343	0	0.003634	0.318491	0	0.000684	0.017161	0.191012	2.147699
Riverside (S	2040	HHDT	0.204621	1.791135	0	0.010684	5.951251	0	0	0	0
Riverside (S	2040	HHDT	0	0	0	0	0	0	0	0	0
Riverside (S	2040	HHDT	0.209571	1.96894	0	0.01307	0.399445	0	0	0	0
Riverside (S	2040	LDA	0.003256	0	0.025968	0.003261	0	0.135129	0.045719	0.171421	1.118829
Riverside (S	2040	LDA	0.030133	0	0	0.006306	0	0	0	0	0
Riverside (S	2040	LDA	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDA	0.000437	0	0.019263	0.001119	0	0.164256	0.041254	0.084715	0.866123
Riverside (S	2040	LDT1	0.003978	0	0.028696	0.005479	0	0.180436	0.074957	0.280116	1.855193
Riverside (S	2040	LDT1	0.053745	0	0	0.011528	0	0	0	0	0
Riverside (S	2040	LDT1	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDT1	0.000435	0	0.01948	0.001104	0	0.164256	0.029037	0.03761	0.482215
Riverside (S	2040	LDT2	0.003614	0	0.030537	0.004548	0	0.174034	0.045733	0.172817	1.12656
Riverside (S	2040	LDT2	0.040103	0	0	0.011615	0	0	0	0	0
Riverside (S	2040	LDT2	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LDT2	0.000434	0	0.019329	0.00111	0	0.164256	0.032635	0.051971	0.603894
Riverside (S	2040	LHDT1	0.002231	0.002546	0.039707	0.001867	0.306018	0.097705	0.024069	0.189256	2.203357
Riverside (S	2040	LHDT1	0.07344	0.018982	0	0.050602	0.110857	0	0	0	0
Riverside (S	2040	LHDT1	0	0	0	0	0	0	0	0	0
Riverside (S	2040	LHDT2	0.002932	0.002331	0.037106	0.001746	0.2862	0.08901	0.027027	0.215644	2.519048
Riverside (S	2040	LHDT2	0.086208	0.030978	0	0.061034	0.110857	0	0	0	0
Riverside (S	2040	LHDT2	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MCY	0.035037	0	0.005015	0.80941	0	0.961008	3.611587	3.913328	4.566822
Riverside (S	2040	MDV	0.004014	0	0.032501	0.005497	0	0.208847	0.059122	0.22826	1.489561
Riverside (S	2040	MDV	0.053778	0	0	0.005613	0	0	0	0	0
Riverside (S	2040	MDV	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MDV	0.000432	0	0.019194	0.001113	0	0.164256	0.03555	0.064125	0.697282
Riverside (S	2040	MH	0.012621	0	0.059549	0.008787	0	0.123432	5.703532	0.179484	3.481856
Riverside (S	2040	MH	0.155207	0	0	0.045566	0	0	0	0	0
Riverside (S	2040	MHDT	0.006989	0.005598	0.027445	0.009713	1.026384	0.188533	0.015801	0.190112	2.109731
Riverside (S	2040	MHDT	0.156459	0.309098	0	0.005666	0.181045	0	0	0	0
Riverside (S	2040	MHDT	0	0	0	0	0	0	0	0	0
Riverside (S	2040	MHDT	0.151791	1.102195	0	0.007009	0.224695	0	0	0	0
Riverside (S	2040	OBUS	0.01043	0.00383	0.022745	0.021858	0.756956	0.173819	0.033732	0.21143	4.14262
Riverside (S	2040	OBUS	0.179427	0.317789	0	0.02523	0.778196	0	0	0	0
Riverside (S	2040	OBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	OBUS	0.140744	0.237046	0	0.006976	0.053773	0	0	0	0
Riverside (S	2040	SBUS	0.016162	0.07285	0.083377	0.011681	10.74793	0.385248	0.195357	0.879768	5.389601
Riverside (S	2040	SBUS	0.182915	0.323007	0	0.052754	0.176942	0	0	0	0
Riverside (S	2040	SBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	SBUS	0.31807	0.857261	0	0.055875	0.194472	0	0	0	0
Riverside (S	2040	UBUS	0.003653	0	0.050561	0.001427	0	0.094826	0.024787	0.09242	0.35517
Riverside (S	2040	UBUS	0	0	0	0	0	0	0	0	0
Riverside (S	2040	UBUS	0.417725	0	0	0.066846	0	0	0	0	0

Source: EMFAC2021 (v1.0.2) Emissions

PM2.5, 6 percent increase to PM10

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC2007

Units: miles/day for Combustion VI

Region	Calendar Year	Vehicle Cat	TOG_RUNE	TOG_IDLE	TOG_STREET	TOG_HOT	TOG_RUN	TOG_DIURNAL	NH3_RUNE	CO_RUNE	CO_IDLE
Riverside (SC)	2040	HHDT	0.46014	0	0.000742	0.016991	0.189121	2.126435	0.045	25.43895	0
Riverside (SC)	2040	HHDT	0.012043	6.707966	0	0	0	0	0.219745	0.037376	87.00603
Riverside (SC)	2040	HHDT	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	HHDT	0.832272	27.92296	0	0	0	0	0.993831	3.394802	87.44584
Riverside (SC)	2040	LDA	0.004711	0	0.146484	0.045266	0.169724	1.107751	0.041653	0.504247	0
Riverside (SC)	2040	LDA	0.007108	0	0	0	0	0	0.0031	0.155799	0
Riverside (SC)	2040	LDA	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDA	0.001617	0	0.178059	0.040846	0.083876	0.857547	0.017306	0.184991	0
Riverside (SC)	2040	LDT1	0.007916	0	0.195598	0.074215	0.277343	1.836825	0.040916	0.611192	0
Riverside (SC)	2040	LDT1	0.012994	0	0	0	0	0	0.0031	0.117492	0
Riverside (SC)	2040	LDT1	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT1	0.001595	0	0.178059	0.028749	0.037238	0.477441	0.017129	0.182668	0
Riverside (SC)	2040	LDT2	0.006571	0	0.188658	0.045281	0.171106	1.115406	0.04159	0.591048	0
Riverside (SC)	2040	LDT2	0.013092	0	0	0	0	0	0.0031	0.119493	0
Riverside (SC)	2040	LDT2	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LDT2	0.001604	0	0.178059	0.032312	0.051456	0.597914	0.017221	0.183589	0
Riverside (SC)	2040	LHDT1	0.002697	0.442119	0.105916	0.02383	0.187382	2.181542	0.045	0.578349	3.781397
Riverside (SC)	2040	LHDT1	0.057036	0.124954	0	0	0	0	0.209225	0.116831	0.909745
Riverside (SC)	2040	LHDT1	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	LHDT2	0.002523	0.413488	0.09649	0.026759	0.213509	2.494107	0.045	0.586226	3.781397
Riverside (SC)	2040	LHDT2	0.068795	0.124954	0	0	0	0	0.205605	0.148208	0.909745
Riverside (SC)	2040	LHDT2	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MCY	0.996259	0	1.035796	3.575829	3.874582	4.521606	0.009124	9.860362	0
Riverside (SC)	2040	MDV	0.007942	0	0.226398	0.058536	0.226	1.474812	0.041349	0.636824	0
Riverside (SC)	2040	MDV	0.006327	0	0	0	0	0	0.0031	0.151054	0
Riverside (SC)	2040	MDV	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MDV	0.001608	0	0.178059	0.035198	0.06349	0.690378	0.017267	0.184032	0
Riverside (SC)	2040	MH	0.012696	0	0.133805	5.647062	0.177707	3.447383	0.045	0.160739	0
Riverside (SC)	2040	MH	0.05136	0	0	0	0	0	0.183427	0.188512	0
Riverside (SC)	2040	MHDT	0.014032	1.482869	0.204376	0.015644	0.188229	2.088842	0.045	0.19753	14.50739
Riverside (SC)	2040	MHDT	0.006386	0.204065	0	0	0	0	0.219558	0.033841	7.519882
Riverside (SC)	2040	MHDT	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	MHDT	0.495686	15.89073	0	0	0	0	1.06	1.522475	43.24616
Riverside (SC)	2040	OBUS	0.03158	1.093613	0.188426	0.033398	0.209336	4.101604	0.045	0.56016	5.79381
Riverside (SC)	2040	OBUS	0.028439	0.877146	0	0	0	0	0.214776	0.099682	12.36542
Riverside (SC)	2040	OBUS	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	OBUS	0.493377	3.802874	0	0	0	0	1.06	1.578135	9.577512
Riverside (SC)	2040	SBUS	0.016877	15.52808	0.417622	0.193423	0.871058	5.336239	0.045	0.217935	82.24088
Riverside (SC)	2040	SBUS	0.059462	0.199441	0	0	0	0	0.188353	0.165931	6.003357
Riverside (SC)	2040	SBUS	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	SBUS	3.951565	13.75331	0	0	0	0	1.06	12.22529	28.5029
Riverside (SC)	2040	UBUS	0.002062	0	0.102795	0.024542	0.091505	0.351654	0.045	0.555527	0
Riverside (SC)	2040	UBUS	0	0	0	0	0	0	0	0	0
Riverside (SC)	2040	UBUS	4.72746	0	0	0	0	0	0.97	54.8784	0

Source: EMFAC2021 (v1.0.2) Emissions

PM2.5, 6 percent increase to PM10

Region Type: Sub-Area

Region: Riverside (SC)

Calendar Year: 2040

Season: Annual

Vehicle Classification: EMFAC2007

Units: miles/day for Combustion VI

Region	Calendar Year	Vehicle Cat	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Riverside (SC)	2040	HHDT	4.410911	0.016574	0	0.000443
Riverside (SC)	2040	HHDT	0	0.012299	0.107654	0
Riverside (SC)	2040	HHDT	0	0	0	0
Riverside (SC)	2040	HHDT	0	0	0	0
Riverside (SC)	2040	LDA	1.654148	0.002279	0	0.000541
Riverside (SC)	2040	LDA	0	0.001812	0	0
Riverside (SC)	2040	LDA	0	0	0	0
Riverside (SC)	2040	LDA	1.23766	0.001125	0	0.000556
Riverside (SC)	2040	LDT1	1.958656	0.002686	0	0.000648
Riverside (SC)	2040	LDT1	0	0.003232	0	0
Riverside (SC)	2040	LDT1	0	0	0	0
Riverside (SC)	2040	LDT1	1.23766	0.00111	0	0.000629
Riverside (SC)	2040	LDT2	2.070332	0.002738	0	0.000664
Riverside (SC)	2040	LDT2	0	0.002412	0	0
Riverside (SC)	2040	LDT2	0	0	0	0
Riverside (SC)	2040	LDT2	1.23766	0.001116	0	0.000664
Riverside (SC)	2040	LHDT1	3.137109	0.00492	0.001079	0.000237
Riverside (SC)	2040	LHDT1	0	0.004417	0.001142	0
Riverside (SC)	2040	LHDT1	0	0	0	0
Riverside (SC)	2040	LHDT2	3.16068	0.005568	0.001253	0.000233
Riverside (SC)	2040	LHDT2	0	0.005185	0.001863	0
Riverside (SC)	2040	LHDT2	0	0	0	0
Riverside (SC)	2040	MCY	7.406386	0.001823	0	0.000378
Riverside (SC)	2040	MDV	2.212198	0.003345	0	0.000821
Riverside (SC)	2040	MDV	0	0.003234	0	0
Riverside (SC)	2040	MDV	0	0	0	0
Riverside (SC)	2040	MDV	1.23766	0.001119	0	0.00081
Riverside (SC)	2040	MH	2.502394	0.017405	0	0.000296
Riverside (SC)	2040	MH	0	0.009335	0	0
Riverside (SC)	2040	MHDT	3.47201	0.01405	0.004738	0.000377
Riverside (SC)	2040	MHDT	0	0.009404	0.018578	0
Riverside (SC)	2040	MHDT	0	0	0	0
Riverside (SC)	2040	MHDT	0	0	0	0
Riverside (SC)	2040	OBUS	3.35958	0.01431	0.003519	0.000286
Riverside (SC)	2040	OBUS	0	0.010784	0.0191	0
Riverside (SC)	2040	OBUS	0	0	0	0
Riverside (SC)	2040	OBUS	0	0	0	0
Riverside (SC)	2040	SBUS	7.629989	0.008504	0.024815	0.000517
Riverside (SC)	2040	SBUS	0	0.010994	0.019414	0
Riverside (SC)	2040	SBUS	0	0	0	0
Riverside (SC)	2040	SBUS	0	0	0	0
Riverside (SC)	2040	UBUS	6.136581	0.005322	0	0.000346
Riverside (SC)	2040	UBUS	0	0	0	0
Riverside (SC)	2040	UBUS	0	0	0	0

Adjusted Mobile Source Emissions Summary

			ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2024 Annual (Tons/Year) (MT/yr for GHG)	Vehicle	Exhaust, BW, & TW	550.75	662.11	5,141.60	12.70	76.00	28.50
		Dust					695.26	170.65
		Annual Total	550.75	662.11	5,141.60	12.70	771.26	199.15

2024 Summer (Pounds/Day)	Vehicle	Exhaust, BW, & TW	3,298.21	3,628.03	31,941.27	73.25	430.64	166.69
		Dust					3,809.63	935.09
		Summer Total	3,298.21	3,628.03	31,941.27	73.25	4,240.26	1,101.78

2024 Winter (Pounds/Day)	Vehicle	Exhaust, BW, & TW	3,064.98	3,889.81	26,985.45	68.61	430.69	166.73
		Dust					3,809.63	935.09
		Winter Total	3,064.98	3,889.81	26,985.45	68.61	4,240.31	1,101.82

			ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
2040 Annual (Tons/Year) (MT/yr for GHG)	Vehicle	Exhaust, BW, & TW	472.77	499.42	4,466.83	13.56	110.41	37.91
		Dust					996.10	244.50
		Annual Total	472.77	499.42	4,466.83	13.56	1,106.51	282.40

2040 Summer (Pounds/Day)	Vehicle	Exhaust, BW, & TW	2,747.82	2,736.52	27,936.23	78.45	610.80	212.51
		Dust					5,458.07	1,339.71
		Summer Total	2,747.82	2,736.52	27,936.23	78.45	6,068.86	1,552.22

2040 Winter (Pounds/Day)	Vehicle	Exhaust, BW, & TW	2,631.17	2,935.66	23,527.01	73.42	610.82	212.53
		Dust					5,458.07	1,339.71
		Winter Total	2,631.17	2,935.66	23,527.01	73.42	6,068.89	1,552.24

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX		0	0	0	0.002726792	0.001386957	0.014425872	0.091667085	0.027046		0	0	0.496190661
A	CH4_RUNEX	0.00093888	0.001528	0.001379	0.001546	0.000202522	8.88839E-05	0.004970987	0.01802554	0.051218	0.7473046	0.133336	1.221886598	0.002731
A	CH4_STREX	0.0309083	0.042033	0.041724	0.046068	0.009435927	0.00414956	0.00245282	1.02737E-08	0.014499	0.006031846	0.134817	0.004712717	0.020662
A	CO_IDLEX		0	0	0	0.131688431	0.092160132	0.43996712	4.651588917	0.518797		0	0	2.473962587
A	CO_RUNEX	0.43892469	0.588624	0.565961	0.597714	0.218372326	0.102537164	0.040750661	0.105594441	0.323474	8.93716743	9.860362	3.942086813	0.171073
A	CO_STREX	1.45415097	1.901288	1.975025	2.054565	1.37527578	0.663975567	0.230728339	0.000340572	1.569866	1.260241269	7.406386	0.533659121	1.492261
A	CO2_NBIO_IDLEX		0	0	0	5.915940061	10.18244728	98.84694906	602.7714163	68.562977		0	0	211.4702481
A	CO2_NBIO_RUNEX	201.916512	262.2567	266.5575	320.7379	187.9272253	98.52109128	604.3758659	1105.351214	975.6597	412.5981929	184.4054	897.7788615	1472.046
A	CO2_NBIO_STREX	48.6563071	64.00409	64.59606	77.87273	10.50196994	4.9435726	2.537215596	0.003462514	13.53045	7.183049232	38.27276	3.659662636	17.85903
A	NOX_IDLEX		0	0	0	0.034683967	0.068640825	0.403136639	3.531984427	0.205901		0	0	0.385192199
A	NOX_RUNEX	0.02043419	0.034389	0.028569	0.035509	0.011652694	0.006616629	0.178111833	1.168870996	0.614832	0.025790401	0.54513	0.482317598	1.146582
A	NOX_STREX	0.16899445	0.226973	0.228171	0.257234	0.217491951	0.099836379	0.874899699	2.532242062	0.564113	0.071777519	0.091128	0.199526639	0.361527
A	PM10_IDLEX		0	0	0	0.000663429	0.00125908	0.000180402	0.001530946	0.00024		0	0	0.000651215
A	PM10_PMBW	0.00711894	0.008768	0.008596	0.008732	0.046629742	0.033299732	0.036382947	0.080011006	0.050782	0.074916619	0.01296	0.044153325	0.045563
A	PM10_PMTW	0.00864	0.00864	0.00864	0.00864	0.006302793	0.004343669	0.012960004	0.038083315	0.01296	0.025373198	0.00432	0.01138687	0.014567
A	PM10_RUNEX	0.00053243	0.0007	0.000613	0.000649	0.000448124	0.000201214	0.003084552	0.02437144	0.012529	0.000259583	0.002244	0.003232656	0.028911
A	PM10_STREX	0.00094498	0.001243	0.001021	0.001089	6.03194E-05	2.40653E-05	3.5008E-05	3.83586E-08	0.000144	3.25105E-05	0.003738	5.01508E-05	0.000214
A	PM25_IDLEX		0	0	0	0.00063473	0.001204613	0.000171786	0.001459545	0.000228		0	0	0.000601223
A	PM25_PMBW	0.00249163	0.003069	0.003009	0.003056	0.01632041	0.011654906	0.012734032	0.028003874	0.017774	0.026220817	0.004536	0.015453664	0.015947
A	PM25_PMTW	0.00216	0.00216	0.00216	0.00216	0.001575698	0.001085917	0.003240001	0.009520833	0.00324	0.0063433	0.00108	0.002846717	0.003642
A	PM25_RUNEX	0.0004896	0.000644	0.000564	0.000598	0.000412033	0.000185009	0.002949195	0.02331557	0.011976	0.000241468	0.002092	0.003019523	0.027636
A	PM25_STREX	0.00086887	0.001143	0.000939	0.001002	5.54615E-05	2.21271E-05	3.21886E-05	3.59348E-08	0.000133	2.98922E-05	0.003489	4.61118E-05	0.000197
A	ROG_DIURN	0.21284413	0.40058	0.231778	0.30315	0.064833909	0.035519362	0.007007182	8.28801E-06	0.09675	0.018234914	2.283411	0.094240302	20.75517
A	ROG_HTSK	0.04043795	0.072474	0.043739	0.054962	0.010551411	0.005677629	0.001050008	1.32501E-06	0.015762	0.005090461	3.611587	0.013663705	3.401207
A	ROG_IDLEX		0	0	0	0.011492945	0.008768528	0.012151934	0.302291676	0.0386		0	0	0.196723339
A	ROG_RESTL		0	0	0	0	0	0	0	0		0	0	0
A	ROG_RUNEX	0.00283844	0.005267	0.004386	0.005193	0.000704773	0.000305442	0.003534643	0.009204675	0.018828	0.011000626	0.80941	0.027533212	0.022472
A	ROG_RUNLS	0.01623954	0.030289	0.01801	0.02418	0.030689718	0.016889455	0.003713269	1.74309E-06	0.031551	0.000609954	1.42701	0.028160801	0.001208
A	ROG_STREX	0.12100454	0.175939	0.167284	0.194988	0.042832882	0.018698603	0.012528759	5.28341E-08	0.081222	0.019474042	0.961008	0.026945127	0.073607
A	SO2_IDLEX		0	0	0	5.73749E-05	9.72177E-05	0.000893409	0.005447705	0.000588		0	0	0.000679676
A	SO2_RUNEX	0.0019961	0.002593	0.002635	0.003169	0.001857852	0.000973981	0.00567633	0.010256411	0.008681	0.000811187	0.001823	0.003954545	0.014402
A	SO2_STREX	0.00048102	0.000633	0.000639	0.00077	0.000103823	4.88722E-05	2.5083E-05	3.42305E-08	0.000134	7.10118E-05	0.000378	3.61795E-05	0.000177
A	TOG_DIURN	0.21073676	0.396613	0.229483	0.300149	0.064191989	0.035167686	0.006937804	8.20595E-06	0.095792	0.01805437	2.260803	0.09330723	20.54967
A	TOG_HTSK	0.04003757	0.071756	0.043306	0.054418	0.010446941	0.005621415	0.001039612	1.31189E-06	0.015606	0.00504006	3.575829	0.013528421	3.367532
A	TOG_IDLEX		0	0	0	0.015814159	0.011165183	0.02799727	0.41888168	0.071024		0	0	0.73723275
A	TOG_RESTL		0	0	0	0	0	0	0	0		0	0	0
A	TOG_RUNEX	0.00409968	0.007609	0.006324	0.007483	0.001018221	0.000441287	0.008857721	0.028067923	0.072453	0.76290534	0.996259	1.258227821	0.027082
A	TOG_RUNLS	0.01607876	0.02999	0.017832	0.02394	0.030383087	0.016722232	0.003676504	1.72583E-06	0.031239	0.000603914	1.412882	0.027881982	0.001196
A	TOG_STREX	0.13117301	0.190724	0.181341	0.211374	0.046432291	0.020269918	0.013581598	5.7274E-08	0.088048	0.021110519	1.035796	0.029209428	0.079792
A	N2O_IDLEX		0	0	0	0.000500984	0.001355479	0.015552819	0.096239183	0.009892		0	0	0.034234153
A	N2O_RUNEX	0.0028206	0.003817	0.003585	0.004304	0.000842555	0.000512771	0.087481388	0.175172387	0.115818	0.067940454	0.035037	0.127095838	0.065675
A	N2O_STREX	0.02282274	0.027876	0.029154	0.030207	0.017407124	0.007794997	0.001823847	2.8059E-07	0.010629	0.010383386	0.005015	0.005831563	0.035511

S	CH4_IDLEX	0	0	0	0	0.00273747	0.001391737	0.014403026	0.09249333	0.027119	0	0	0.496282785	0
S	CH4_RUNEX	0.00099805	0.001623	0.001466	0.001643	0.000629499	0.001395734	0.004973549	0.018025594	0.051241	0.747307439	0.13592	1.221907351	0.002771
S	CH4_STREX	0.02699844	0.036674	0.036399	0.040182	0.00908419	0.003994965	0.002360559	9.80133E-09	0.013854	0.005491299	0.121606	0.003931745	0.019627
S	CO_IDLEX	0	0	0	0	0.131688431	0.092160132	0.421766118	4.594306972	0.51374	0	0	2.471741596	0
S	CO_RUNEX	0.58806905	0.787237	0.758113	0.799554	0.031604007	0.073697848	0.04091859	0.105616689	0.32587	8.939195475	10.06376	3.943733753	0.173378
S	CO_STREX	1.23024798	1.603263	1.661114	1.726705	1.307019098	0.631085003	0.217746793	0.00032141	1.460013	1.071600556	6.475566	0.383067637	1.387839
S	CO2_NBIO_IDLEX	0	0	0	0	5.915940061	10.18244728	97.581087	595.3017227	67.89039	0	0	211.5663595	0
S	CO2_NBIO_RUNEX	218.801336	281.4917	284.3721	338.4578	126.0946578	272.0892711	604.3761678	1105.351251	975.6639	412.6014334	184.7773	897.7818361	1472.05
S	CO2_NBIO_STREX	48.2451202	63.4495	64.02023	77.26168	10.38779071	4.888823106	2.51481897	0.003432104	13.34308	6.877443857	36.4658	3.405714953	17.68149
S	NOX_IDLEX	0	0	0	0	0.034683967	0.068640825	0.383905155	3.359672914	0.197845	0	0	0.383803182	0
S	NOX_RUNEX	0.01751067	0.029465	0.024488	0.030451	0.133662171	0.335377534	0.167726451	1.105617195	0.577989	0.02529415	0.475061	0.449965832	1.076405
S	NOX_STREX	0.15738744	0.211429	0.212576	0.239642	0.209023235	0.09595736	0.873831799	2.532241813	0.556322	0.068245739	0.086002	0.194098299	0.346395
S	PM10_IDLEX	0	0	0	0	0.000663429	0.00125908	0.000161465	0.001374796	0.000212	0	0	0.000642298	0
S	PM10_PMBW	0.00711894	0.008768	0.008596	0.008732	0.037610282	0.064980296	0.036382947	0.080011006	0.050782	0.074916619	0.01296	0.044153325	0.045563
S	PM10_PMTW	0.00864	0.00864	0.00864	0.00864	0.006546325	0.00927694	0.012960004	0.038083315	0.01296	0.025373198	0.00432	0.01138687	0.014567
S	PM10_RUNEX	0.00053243	0.0007	0.000613	0.000649	0.004186986	0.009189778	0.003084552	0.02437144	0.012529	0.000259583	0.002244	0.003232656	0.028911
S	PM10_STREX	0.00094498	0.001243	0.001021	0.001089	6.03194E-05	2.40653E-05	3.5008E-05	3.83586E-08	0.000144	3.25105E-05	0.003738	5.01508E-05	0.000214
S	PM25_IDLEX	0	0	0	0	0.00063473	0.001204613	0.000153669	0.00131015	0.000202	0	0	0.000592692	0
S	PM25_PMBW	0.00249163	0.003069	0.003009	0.003056	0.013163599	0.022743104	0.012734032	0.028003874	0.017774	0.026220817	0.004536	0.015453664	0.015947
S	PM25_PMTW	0.00216	0.00216	0.00216	0.00216	0.001636581	0.002319235	0.003240001	0.009520833	0.00324	0.0063433	0.00108	0.002846717	0.003642
S	PM25_RUNEX	0.0004896	0.000644	0.000564	0.000598	0.004005859	0.008792232	0.002949195	0.02331557	0.011976	0.000241468	0.002092	0.003019523	0.027636
S	PM25_STREX	0.00086887	0.001143	0.000939	0.001002	5.54615E-05	2.21271E-05	3.21886E-05	3.59348E-08	0.000133	2.98922E-05	0.003489	4.61118E-05	0.000197
S	ROG_DIURN	0.24345974	0.45487	0.264436	0.342415	0.072138033	0.03911805	0.008052465	9.63611E-06	0.112578	0.024337848	3.156708	0.106347962	22.9595
S	ROG_HTSK	0.04301889	0.07699	0.046512	0.058312	0.011187784	0.005996678	0.001110592	1.40132E-06	0.01664	0.005499617	3.766732	0.014355206	3.588897
S	ROG_IDLEX	0	0	0	0	0.011492945	0.008768528	0.012483678	0.320258393	0.039799	0	0	0.196800343	0
S	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
S	ROG_RUNEX	0.00297641	0.005523	0.004598	0.005442	0.013688267	0.030349819	0.003542959	0.009204956	0.018923	0.011005937	0.822222	0.02761778	0.022599
S	ROG_RUNLS	0.01647089	0.030663	0.018263	0.024474	0.031138454	0.017092923	0.003759151	1.76589E-06	0.031869	0.000631291	1.480298	0.028187884	0.00122
S	ROG_STREX	0.10419099	0.15137	0.143908	0.167679	0.041065329	0.017927916	0.011987819	5.0553E-08	0.077291	0.017580496	0.860816	0.022432378	0.070044
S	SO2_IDLEX	0	0	0	0	5.73749E-05	9.72177E-05	0.000881449	0.005376971	0.000582	0	0	0.000680586	0
S	SO2_RUNEX	0.00216303	0.002783	0.002811	0.003345	0.001194811	0.002578184	0.005676333	0.010256411	0.008681	0.000811219	0.001827	0.003954574	0.014402
S	SO2_STREX	0.00047695	0.000627	0.000633	0.000764	0.000102694	4.8331E-05	2.48615E-05	3.39298E-08	0.000132	6.79905E-05	0.000361	3.3669E-05	0.000175
S	TOG_DIURN	0.24104924	0.450366	0.261817	0.339025	0.071423795	0.038730743	0.007972738	9.5407E-06	0.111464	0.02409688	3.125453	0.105295012	22.73217
S	TOG_HTSK	0.04259296	0.076228	0.046052	0.057735	0.011077014	0.005937305	0.001099596	1.38745E-06	0.016475	0.005445166	3.729437	0.014213076	3.553363
S	TOG_IDLEX	0	0	0	0	0.015814159	0.011165183	0.028306238	0.439132907	0.072376	0	0	0.737319545	0
S	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
S	TOG_RUNEX	0.00429902	0.007979	0.006629	0.007844	0.015428893	0.03420916	0.008869736	0.028068328	0.072592	0.762913012	1.012839	1.258350001	0.027265
S	TOG_RUNLS	0.01630781	0.030359	0.018082	0.024232	0.030830153	0.016923686	0.003721932	1.74841E-06	0.031553	0.000625041	1.465642	0.027908797	0.001208
S	TOG_STREX	0.11294655	0.16409	0.156001	0.181177	0.044516204	0.019434467	0.012995201	5.48011E-08	0.083786	0.019057852	0.927855	0.024317456	0.07593
S	N2O_IDLEX	0	0	0	0	0.0005021	0.001356002	0.015344431	0.09506233	0.009793	0	0	0.034289588	0
S	N2O_RUNEX	0.00250467	0.003389	0.003196	0.003881	0.019866265	0.042867775	0.087454035	0.175172031	0.115619	0.067885465	0.031802	0.126596907	0.064955
S	N2O_STREX	0.02199738	0.026881	0.028101	0.029115	0.016981149	0.007611897	0.00178334	2.79085E-07	0.010393	0.010181477	0.004932	0.005614231	0.035356

W	CH4_IDLEX	0	0	0	0	0.002728458	0.001387693	0.014463037	0.09052608	0.026971	0	0	0.496175145	0
W	CH4_RUNEX	0.00093295	0.001518	0.001371	0.001536	0.000629499	0.001395734	0.004971013	0.018025545	0.051221	0.747304724	0.133407	1.221888944	0.002735
W	CH4_STREX	0.03088121	0.042	0.041698	0.046042	0.00937975	0.004125399	0.002429409	1.01937E-08	0.014454	0.006064756	0.133195	0.004796503	0.020589
W	CO_IDLEX	0	0	0	0	0.131688431	0.092160132	0.465422702	4.730682555	0.525781	0	0	2.47702967	0
W	CO_RUNEX	0.41334928	0.554549	0.533011	0.563093	0.031604007	0.073697848	0.040764557	0.105596269	0.323791	8.937331745	9.833808	3.942228484	0.171264
W	CO_STREX	1.44007183	1.884238	1.958861	2.038115	1.364737887	0.658934437	0.228269831	0.000336943	1.564308	1.268764126	7.283347	0.545122977	1.486979
W	CO2_NBIO_IDLEX	0	0	0	0	5.915940061	10.18244728	100.5938293	613.0867074	69.41274	0	0	211.3375228	0
W	CO2_NBIO_RUNEX	199.065602	259.0093	263.5498	317.746	126.0946578	272.0892711	604.3758913	1105.351217	975.6602	412.5984556	184.3628	897.7791348	1472.046
W	CO2_NBIO_STREX	48.6334995	63.9764	64.5699	77.84608	10.48429728	4.935169772	2.533001752	0.003456755	13.52073	7.19696669	38.0331	3.679468478	17.84983
W	NOX_IDLEX	0	0	0	0	0.034683967	0.068640825	0.429694241	3.769938422	0.217026	0	0	0.387110366	0
W	NOX_RUNEX	0.01969569	0.033146	0.027538	0.034231	0.139120799	0.349074513	0.175250039	1.151890131	0.604517	0.025669172	0.527662	0.473979135	1.126359
W	NOX_STREX	0.16739016	0.224796	0.22596	0.254748	0.214189084	0.098315406	0.874581673	2.532241987	0.561725	0.071113102	0.090269	0.199793166	0.356889
W	PM10_IDLEX	0	0	0	0	0.000663429	0.00125908	0.000206553	0.001746581	0.000278	0	0	0.000663528	0
W	PM10_PMBW	0.00711894	0.008768	0.008596	0.008732	0.037610282	0.064980296	0.036382947	0.080011006	0.050782	0.074916619	0.01296	0.044153325	0.045563
W	PM10_PMTW	0.00864	0.00864	0.00864	0.00864	0.006546325	0.00927694	0.012960004	0.038083315	0.01296	0.025373198	0.00432	0.01138687	0.014567
W	PM10_RUNEX	0.00053243	0.0007	0.000613	0.000649	0.004186986	0.009189778	0.003084552	0.02437144	0.012529	0.000259583	0.002244	0.003232656	0.028911
W	PM10_STREX	0.00094498	0.001243	0.001021	0.001089	6.03194E-05	2.40653E-05	3.5008E-05	3.83586E-08	0.000144	3.25105E-05	0.003738	5.01508E-05	0.000214
W	PM25_IDLEX	0	0	0	0	0.00063473	0.001204613	0.000196806	0.001665852	0.000265	0	0	0.000613004	0
W	PM25_PMBW	0.00249163	0.003069	0.003009	0.003056	0.013163599	0.022743104	0.012734032	0.028003874	0.017774	0.026220817	0.004536	0.015453664	0.015947
W	PM25_PMTW	0.00216	0.00216	0.00216	0.00216	0.001636581	0.002319235	0.003240001	0.009520833	0.00324	0.0063433	0.00108	0.002846717	0.003642
W	PM25_RUNEX	0.0004896	0.000644	0.000564	0.000598	0.004005859	0.008792232	0.002949195	0.02331557	0.011976	0.000241468	0.002092	0.003019523	0.027636
W	PM25_STREX	0.00086887	0.001143	0.000939	0.001002	5.54615E-05	2.21271E-05	3.21886E-05	3.59348E-08	0.000133	2.98922E-05	0.003489	4.61118E-05	0.000197
W	ROG_DIURN	0.21507924	0.405425	0.23419	0.306784	0.065384657	0.035911603	0.007198433	8.54375E-06	0.10021	0.018164543	2.429799	0.097858992	21.05337
W	ROG_HTSK	0.04053445	0.072664	0.043846	0.055117	0.010575781	0.005694284	0.001052921	1.32871E-06	0.015806	0.005090146	3.631607	0.01371205	3.413828
W	ROG_IDLEX	0	0	0	0	0.011492945	0.008768528	0.011697707	0.277480495	0.036943	0	0	0.196617001	0
W	ROG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
W	ROG_RUNEX	0.0028196	0.005232	0.004357	0.005158	0.013688267	0.030349819	0.003535441	0.009204702	0.018841	0.011001079	0.809106	0.027544565	0.022484
W	ROG_RUNLS	0.01630186	0.030418	0.018079	0.024276	0.030973216	0.017020986	0.003746946	1.7595E-06	0.031728	0.000634975	1.536075	0.028242742	0.001216
W	ROG_STREX	0.12086355	0.175747	0.167129	0.194822	0.04254648	0.018577058	0.012434651	5.24373E-08	0.080951	0.019592688	0.947499	0.027431132	0.073361
W	SO2_IDLEX	0	0	0	0	5.73749E-05	9.72177E-05	0.000909914	0.005545385	0.000596	0	0	0.000678419	0
W	SO2_RUNEX	0.00196792	0.002561	0.002605	0.00314	0.001194811	0.002578184	0.00567633	0.010256411	0.008681	0.00081119	0.001823	0.003954547	0.014402
W	SO2_STREX	0.00048079	0.000632	0.000638	0.00077	0.000103648	4.87892E-05	2.50413E-05	3.41735E-08	0.000134	7.11493E-05	0.000376	3.63753E-05	0.000176
W	TOG_DIURN	0.21294974	0.40141	0.231872	0.303746	0.064737284	0.035556042	0.007127161	8.45916E-06	0.099217	0.017984696	2.405741	0.096890091	20.84493
W	TOG_HTSK	0.04013312	0.071944	0.043412	0.054572	0.01047107	0.005637905	0.001042496	1.31555E-06	0.015649	0.005039749	3.595651	0.013576287	3.380027
W	TOG_IDLEX	0	0	0	0	0.015814159	0.011165183	0.027576228	0.390915699	0.069157	0	0	0.737112891	0
W	TOG_RESTL	0	0	0	0	0	0	0	0	0	0	0	0	0
W	TOG_RUNEX	0.00407246	0.007558	0.006282	0.007434	0.015428893	0.03420916	0.008858874	0.028067962	0.072472	0.762905994	0.9961	1.258244224	0.0271
W	TOG_RUNLS	0.01614045	0.030117	0.0179	0.024036	0.030666551	0.016852461	0.003709848	1.74208E-06	0.031414	0.000628689	1.520866	0.027963111	0.001204
W	TOG_STREX	0.13102017	0.190515	0.181174	0.211194	0.046121822	0.020138158	0.013479582	5.68438E-08	0.087753	0.021239136	1.021256	0.029736274	0.079526
W	N2O_IDLEX	0	0	0	0	0.000501376	0.001355658	0.015841302	0.097864361	0.010031	0	0	0.034219794	0
W	N2O_RUNEX	0.00273917	0.003707	0.003485	0.004195	0.019866265	0.042867775	0.087474343	0.175172294	0.115766	0.067927052	0.034239	0.126971607	0.065487
W	N2O_STREX	0.02276765	0.027809	0.029076	0.030126	0.017232228	0.007718017	0.001811299	2.79729E-07	0.010552	0.010358635	0.005014	0.00588125	0.035398

2024 Baseline

	Daily	VMT	
	Trips	Daily	Annual
Vehicles:	1,011,253	8,842,663	3,227,571,978

Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.485901	0.0302052	0.2366326	0.15110666	0.027401267	0.0075889	0.0172588	0.0188232	0.0005117	0.000415114	0.020132342	0.001070523	0.002953

*Fleet Mix from CalEEMod for Riverside County

Emissions Summary

Annual

	ROG	NOX	CO	SOX	PM10	PM2.5	TOG
Tons/Year	550.75	662.11	5,141.60	12.70	76.00	28.50	608.45
MT/Year							

Summer

	ROG	NOX	CO	SOX	PM10	PM2.5	TOG
bs/Day	3,298.21	3,628.03	31,941.27	73.25	430.64	166.69	3,611.43

inter

	ROG	NOX	CO	SOX	PM10	PM2.5	TOG
Lbs/Day	3,064.98	3,889.81	26,985.45	68.61	430.69	166.73	3,382.01

2040 Proposed General Plan (Adjusted)

	Daily	VMT	
	Trips	Daily	Annual
Vehicles:	1,402,938	12,668,913	4,624,153,222

Fleet Mix

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.485901	0.0302052	0.2366326	0.151106656	0.027401267	0.0075889	0.0172588	0.0188232	0.0005117	0.0004151	0.020132342	0.001070523	0.002953

*Fleet Mix from CalEEMod for Riverside County

Emissions Summary

Annual							
	ROG	NOX	CO	SOX	PM10	PM2.5	TOG
Tons/Year	472.77	499.42	4,466.83	13.56	110.41	37.91	516.66
MT/Year							

Summer							
	ROG	NOX	CO	SOX	PM10	PM2.5	TOG
lbs/Day	2,747.82	2,736.52	27,936.23	78.45	610.80	212.51	2,987.25

Winter							
	ROG	NOX	CO	SOX	PM10	PM2.5	TOG
Lbs/Day	2,631.17	2,935.66	23,527.01	73.42	610.82	212.53	2,872.80

Paved Road Dust Calculations (EPA AP-42 13.2.1, equation 2)

$$E = (k \cdot (sL)^{0.91} \cdot (W)^{1.02}) \cdot (1 - P/4N)$$

	PM ₁₀	PM _{2.5}	
E =			emission factor
k =	0.0022	0.00054	particle size multiplier (lb/vmt)
sL =	0.08	0.08	surface silt loading (CARB Miscellaneous Process Methodology 7.9, Entrained Road Travel, Paved Road Dust, November 2016)
W =	2	2	average vehicle weight (tons) (based on EMFAC2021 User's Guide Appendix 4: Vehicle Categories)
P =	56	56	Number of days per year with >0.01 inches of rain (Source: WRCC data https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca4259)
N =	365	365	Days per period

VMT/year	2024								Mitigated		CalEEMod Mitigation reduction	
	lb/vmt				lbs/day		tons/year		lbs/day		PM ₁₀	PM _{2.5}
	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}		
2024 Baseline												
3,227,571,978	0.00043	0.00011	0.1954183	0.0479663	3809.6273	935.09033	695.25698	170.65399	3135.343	770.0316	mitigated	39.71 10.59
											unmitigated	48.25 12.86
											reduction	0.823005 0.823484
					Total	3809.6273 935.09033	695.25698 170.65399					
VMT/year	2040								Mitigated		CalEEMod Mitigation reduction	
	lb/vmt				lbs/day		tons/year		lbs/day		PM ₁₀	PM _{2.5}
	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}		
2040 GP												
4,624,153,222	0.00043	0.00011	0.1954183	0.0479663	5458.0658	1339.7071	996.09701	244.49654	4416.208	1084.016	mitigated	167.22 44.6
											unmitigated	206.67 55.12
											reduction	0.809116 0.809144
					Total	5458.0658 1339.7071	996.09701 244.49654					

City of Moreno Valley Total VMT				
VMT Type	Analysis Year			
	2019	2024	2030	2040 PP
Internal-Internal	1,468,198	1,668,273	1,908,363	2,308,512
Internal-External*	1,518,372	1,765,201	2,061,395	2,555,053
External-Internal*	1,571,009	1,821,994	2,123,177	2,625,147
Total	4,557,579	5,255,468	6,092,935	7,488,713

* Only 50% of I-E and E-I VMT is included in this summary table

City of Moreno Valley Total Trips				
VMT Type	Analysis Year			
	2019	2024	2030	2040 PP
Internal-Internal	575,391	640,830	719,357	850,236
Internal-External*	76,813	91,128	108,306	136,937
External-Internal*	79,917	94,083	111,082	139,414
Total	732,121	826,042	938,746	1,126,587

* Only 50% of I-E and E-I VMT is included in this summary table

100% I-E and E-I VMT

Total VMT 2019	Total VMT 2024	Truck VMT 2030	Total VMT 2040
1,468,198	1,668,273	1,908,363	2,308,512
3,036,744	3,530,402	4,122,791	5,110,106
3,142,018	3,643,989	4,246,353	5,250,295
7,646,960	8,842,663	10,277,507	12,668,913

100% I-E and E-I Trips

Total Trips 2019	Total Trips 2024	Total Trips 2030	Total Trips 2040
575,391	640,830	719,357	850,236
153,627	182,257	216,613	273,873
159,835	188,167	222,165	278,829
888,852	1,011,253	1,158,135	1,402,938

From: [ARB EMFAC](#)
To: [Millar, Danielle](#)
Cc: [Forestieri, Sara@ARB](#); [Sardar, Satya@ARB](#)
Subject: RE: EMFAC2025
Date: Tuesday, June 17, 2025 8:46:03 AM
Attachments: [image001.png](#)

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Hi Danielle,

Thank you for your email. Slides 13 and 14 of the link provides the list of light- and heavy-duty regulations incorporated in EMFAC2025 ([4th EMFAC2025 Slides - DRAFT \(1\).pdf](#)). Also, at the present time, CARB is evaluating the impacts of the actions (H.J. Res 88, H.J. Res 89, and H.J. Res 87) under the Congressional Review Act and will provide guidance.

Thanks,
EMFAC Team.

CARB logo



Mohammad Maksim Islam, PhD
Air Resources Engineer
On-Road Model Development Section
Air Quality Planning and Science Division
Pronoun: He/His/Him

From: ARB EMFAC
Sent: Monday, June 16, 2025 12:37 PM
To: Millar, Danielle <Danielle.Millar@kimley-horn.com>; Forestieri, Sara@ARB <Sara.Forestieri@arb.ca.gov>; Sardar, Satya@ARB <satya.sardar@arb.ca.gov>
Subject: RE: EMFAC2025

Hi Danielle,

Thank you for your email. I'm forwarding your question to our section managers who can better answer questions.

Please feel free to reach out if you have further questions.

Best-

CARB logo



Mohammad Maksim Islam, PhD
Air Resources Engineer
On-Road Model Development Section
Air Quality Planning and Science Division
Pronoun: He/His/Him

From: Millar, Danielle <Danielle.Millar@kimley-horn.com>

Sent: Monday, June 16, 2025 11:19 AM

To: ARB EMFAC <Emfac@arb.ca.gov>

Subject: EMFAC2025

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Good Morning,

It is my understanding that Congress passed 3 joint resolutions (H.J. Res 88, H.J. Res 89, and H.J. Res 87) under the Congressional Review Act to overturn federal authorization for California's Advanced Clean Cars II (ACC II), Advanced Clean Trucks (ACT), and Heavy-Duty Low NOx Omnibus regulations. Do the joint resolutions affect EMFAC2025? If so, do you have any guidance for us? Can you also please provide a list of regulations that are included in EMFAC2025?

Thanks,

Danielle Millar

Kimley-Horn | 1100 W. Town & Country Road, Suite 700, Orange, CA 92868

Main: 714-939-1030 | Direct: 657-331-4244

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From: Forestieri, Sara@ARB <Sara.Forestieri@arb.ca.gov>
Sent: Friday, September 5, 2025 12:03 PM
To: Pohlman, Alex <Alex.Pohlman@kimley-horn.com>; Nishandar, Sanika@ARB <Sanika.Nishandar@arb.ca.gov>
Cc: Sardar, Satya@ARB <satya.sardar@arb.ca.gov>; Heo, Jinhyok@ARB <jinh yok.Heo@arb.ca.gov>; Islam, Maksim@ARB <Mohammad.Islam@arb.ca.gov>
Subject: RE: Question about using EMFAC 2025 after Congress' Joint Resolutions 87, 88, and 89

Hi Alex,

Thanks for reaching out to us. We are currently developing factors to remove emissions reductions from Advanced Clean Trucks and Heavy-Duty Omnibus from EMFAC2021. We will be sharing the factors externally in a few months from now.

Best,

Sara

From: Pohlman, Alex <Alex.Pohlman@kimley-horn.com>
Sent: Friday, September 5, 2025 11:44 AM
To: Nishandar, Sanika@ARB <Sanika.Nishandar@arb.ca.gov>
Cc: Sardar, Satya@ARB <satya.sardar@arb.ca.gov>; Forestieri, Sara@ARB <Sara.Forestieri@arb.ca.gov>; Heo, Jinhyok@ARB <jinh yok.Heo@arb.ca.gov>; Islam, Maksim@ARB <Mohammad.Islam@arb.ca.gov>
Subject: RE: Question about using EMFAC 2025 after Congress' Joint Resolutions 87, 88, and 89

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Hello,

We have a CEQA challenger suggesting that we should use EMFAC2021 and not take credit for Advanced Clean Truck Rule Regulation and the Low NOx Omnibus Regulation. Can you suggest how we can make adjustments to exclude those regulations? Are there adjustment factors that we can apply?

Thank you,
Alex Pohlman

From: Nishandar, Sanika@ARB <Sanika.Nishandar@arb.ca.gov>
Sent: Monday, June 23, 2025 6:50 AM
To: Pohlman, Alex <Alex.Pohlman@kimley-horn.com>
Cc: Sardar, Satya@ARB <satya.sardar@arb.ca.gov>; Forestieri, Sara@ARB <Sara.Forestieri@arb.ca.gov>; Heo, Jinhyok@ARB <jinh yok.Heo@arb.ca.gov>; Islam, Mohammad@ARB <Mohammad.Islam@arb.ca.gov>
Subject: FW: Question about using EMFAC 2025 after Congress' Joint Resolutions 87, 88, and 89

You don't often get email from sanika.nishandar@arb.ca.gov. [Learn why this is important](#)

Hello Alex,

Thank you for your inquiry.

We addressed a similar request with Danielle Miller from your organization. We communicated to her earlier this week that at the present time, CARB is evaluating the impacts of the actions (H.J. Res 88, H.J. Res 89, and H.J. Res 87) under the Congressional Review Act and will provide guidance.

Also, Advanced Clean Trucks and Zero Emission Airport Shuttle Bus are included in EMFAC2021 and is also described in our tech doc (ACC II is not included). If you want to be conservative, then you can go back to EMFAC2017, but the emission factors and fleet characterization are old. You can use EMFAC2025 with the caveat that we are still evaluating the impacts of CRA and there could be subsequent updates.

Thanks & Regards,
EMFAC Team.



Sanika Nishandar
Air Pollution Specialist
MSAB - ORLDAS
AQPSD

From: ARB Helpline <helpline@arb.ca.gov>
Sent: Wednesday, June 18, 2025 3:51 PM
To: ARB (MSEI) Mobile Source Emissions Inventory <MSEI.ARB@arb.ca.gov>
Subject: FW: Question about using EMFAC 2025 after Congress' Joint Resolutions 87, 88, and 89

Hello,

This was received via helpline.
Is this something you are able to assist with?

Thank you.

From: Pohlman, Alex <Alex.Pohlman@kimley-horn.com>

Sent: Monday, June 16, 2025 3:22 PM

To: ARB Helpline <helpline@arb.ca.gov>

Subject: Question about using EMFAC 2025 after Congress' Joint Resolutions 87, 88, and 89

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Hello,

My team uses EMFAC to calculate air quality emissions, greenhouse gas emissions, and health risk assessments for cancer. I was wondering if you have any guidance on how to use EMFAC following the adoption of H.J Resolutions 87, 88, and 89. I was also wondering if you have a list of what regulations were included in EMFAC 2025.

Based on what I was reading in the EMFAC 2021 technical documentation it sounds like EMFAC 2021 doesn't include the Advanced Clean Truck Rule, the Zero- Emission Airport Shuttle Bus Rule, or the Advanced Clean Cars II Rule, but does include an early version of the Heavy-Duty Low NOx Omnibus regulation (but not the subsequent amendments).

Which version of EMFAC would you suggest we use, do we need to go all the way back to EMFAC 2017, or are the impacts of the Heavy-Duty Low NOx Omnibus rule included in EMFAC 2021 minor enough that it won't make an impact on our analysis?

Thank you,

Alex Pohlman

Alex Pohlman, LEED AP, EIT (Environmental)

Kimley-Horn | 3801 University Ave Suite. 300. Riverside, CA 92501

Direct: 951-382-0962 |

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