

Emission Growth Attributed to Indirect Sources in the South Coast Air Basin^{A, C}

	% attributed to new development ^B	Nox		PM2.5		VOC	
		2014	2023	2014	2023	2014	2023
Construction							
Equipment ^C	48%	30.22	11.16	0.92	0.32	4.56	2.89
Activity ^C	72%	0.00	0.00	4.23	5.03	0.00	0.00
Architectural Coatings	100%	0.00	0.00	0.00	0.00	0.71	2.38
Asphalt Paving/Roofing	72%	0.00	0.00	0.00	0.01	0.10	0.29
Area Operational							
Residential Fuel Combustion	100%	0.41	1.09	0.24	0.75	0.13	0.43
Manufacturing & Industrial Fuel Combustion	26%	0.02	0.05	0.00	0.00	0.00	0.00
Service & Commercial Fuel Combustion	100%	0.05	0.00	0.01	0.00	0.00	0.00
Landscape Equipment	100%	0.23	0.81	0.02	0.08	1.53	4.73
Consumer Products	100%	0.00	0.00	0.00	0.00	3.78	10.77
Re-entrained Paved Road Dust	75%	0.00	0.00	0.29	0.91	0.00	0.00
Motor Vehicles^D							
Light Duty, Motorcycles, Motorhomes	95%	4.09	5.23	0.28	1.05	8.36	11.69
Medium & Heavy Duty, Non School Buses	80%	4.08	6.96	0.08	0.32	1.36	2.40
Transport Refrigeration Units ^A	80%	1.16	3.36	0.08	0.01	0.17	0.50
Total		40.27	28.65	6.15	8.47	20.69	36.08

A Emission values derived from controlled emission inventory in 2007 Final AQMD as provided by SCAQMD.

Full implementation of all measures is assumed.

Emissions values are interpolated based on 0 emissions growth in 2002.

B Percentages are derived from the Supplement to the Methodology

C Since the purpose of construction activity is to construct new development, all emissions are included.

D Motor vehicle emissions are derived from comparing EMFAC runs using 2002 and 2010 usage data.

NOx Emissions Attributed to Indirect Sources in the South Coast Air Basin

	2014						2023					
	growth	no growth	differ- ence	% attributed to ISR	growth from 2002	growth from 2010	growth	no growth	differ- ence	% attributed to ISR	growth from 2002	growth from 2010
Construction and Demolition	0.00	all based on growth	0.00	72%	0.00	0.00	0.00	all based on growth	0.00	72%	0.00	0.00
Construction and Mining Equipment	62.97		62.97	48%	30.22	30.22	23.25		23.25	48%	11.16	11.16
Asphalt Paving	0.00	0.00	0.00	100%	0.00	0.00	0.00	0.00	0.00	100%	0.00	0.00
Architectural Coatings	0.00	0.00	0.00	72%	0.00	0.00	0.00	0.00	0.00	72%	0.00	0.00
Manufacturing and Industrial Fuel Combustion	3.45	3.21	0.24	26%	0.06	0.02	3.25	2.95	0.30	26%	0.08	0.05
Service and Commercial Fuel Combustion	5.78	5.62	0.16	100%	0.16	0.05	4.80	5.10	-0.30	100%	0.00	0.00
Residential Fuel Combustion	19.66	18.43	1.24	100%	1.24	0.41	16.53	14.77	1.76	100%	1.76	1.09
Consumer Products	0.00	0.00	0.00	100%	0.00	0.00	0.00	0.00	0.00	100%	0.00	0.00
Structural Pesticides	0.00	0.00	0.00	100%	0.00	0.00	0.00	0.00	0.00	100%	0.00	0.00
Lawn & Garden Equipment	5.10	4.40	0.69	100%	0.69	0.23	5.43	4.13	1.30	100%	1.30	0.81
Light Duty (Passenger, trucks up to 5750 lbs., motorcycles, motorhomes)	75.20	70.90	4.30	95%	EMFAC based on 2010	4.09	39.40	33.90	5.50	95%	EMFAC based on 2010	5.23
Medium & Heavy Duty (trucks between 5751 - 33,000+ lbs, non-school buses)	117.40	112.30	5.10	80%		4.08	76.50	67.80	8.70	80%		6.96
Transport Refrigeration Units	9.60	5.25	4.35	80%	3.48	1.16	10.44	3.66	6.78	80%	5.42	3.36
Paved Road Dust	0.00	0.00	0.00	75%	0.00	0.00	0.00	0.00	0.00	75%	0.00	0.00
Total			79.05		35.86	40.27			47.30		19.73	28.65

Source: Environmental Defense Fund
July 10, 2008

PM2.5 Emissions Attributed to Indirect Source in the South Coast Air Basin

	2014						2023					
	growth	no growth	differ- ence	% attributed to ISR	growth from 2002	growth from 2010	growth	no growth	differ- ence	% attributed to ISR	growth from 2002	growth from 2010
Construction and Demolition	5.88	all based on growth	5.88	72%	4.23	4.23	6.99	all based on growth	6.99	72%	5.03	5.03
Construction Equipment	1.92		1.92	48%	0.92	0.92	0.67		0.67	48%	0.32	0.32
Asphalt Paving	0.03	0.02	0.01	100%	0.01	0.00	0.03	0.02	0.01	100%	0.01	0.01
Architectural Coatings	0.00	0.00	0.00	72%	0.00	0.00	0.00	0.00	0.00	72%	0.00	0.00
Manufacturing and Industrial Fuel Combustion	0.30	0.29	0.01	26%	0.00	0.00	0.29	0.29	0.00	26%	0.00	0.00
Service and Commercial Fuel Combustion	0.89	0.87	0.02	100%	0.02	0.01	0.81	0.87	-0.06	100%	0.00	0.00
Residential Fuel Combustion	7.54	6.82	0.72	100%	0.72	0.24	7.65	6.43	1.21	100%	1.21	0.75
Consumer Products	0.00	0.00	0.00	100%	0.00	0.00	0.00	0.00	0.00	100%	0.00	0.00
Structural Pesticides	0.00	0.00	0.00	100%	0.00	0.00	0.00	0.00	0.00	100%	0.00	0.00
Lawn & Garden Equipment	0.51	0.44	0.07	100%	0.07	0.02	0.55	0.43	0.13	100%	0.13	0.08
Light Duty (Passenger, trucks up to 5750 lbs., motorcycles, motorhomes)	8.70	8.40	0.30	95%	EMFAC based on 2010	0.28	10.00	8.90	1.10	95%	EMFAC based on 2010	1.05
Medium & Heavy Duty (trucks between 5751 - 33,000+ lbs, non-school buses)	2.90	2.80	0.10	80%		0.08	4.00	3.60	0.40	80%		0.32
Transport Refrigeration Units	0.27	0.15	0.12	80%	0.10	0.08	0.05	0.02	0.03	80%	0.02	0.01
Paved Road Dust	18.99	17.84	1.15	75%	0.86	0.29	19.79	17.84	1.95	75%	1.46	0.91
Total			10.29			6.93	6.15		12.43		8.19	8.47

VOC Emissions Attributed to Indirect Sources in the South Coast Air Basin

	2014						2023					
	growth	no growth	differ-ence	% attributed to ISR	growth from 2002	growth from 2010	growth	no growth	differ-ence	% attributed to ISR	growth from 2002	growth from 2010
Construction and Demolition	0.00	all based on growth	0.00	72%	0.00	0.00	0.00	all based on growth	0.00	72%	0.00	0.00
Construction Equipment	9.50	all based on growth	9.50	48%	4.56	4.56	6.03	all based on growth	6.03	48%	2.89	2.89
Asphalt Paving	1.02	0.73	0.29	100%	0.29	0.10	1.20	0.73	0.47	100%	0.47	0.29
Architectural Coatings	24.20	21.22	2.97	72%	2.14	0.71	26.55	21.22	5.33	72%	3.84	2.38
Manufacturing and Industrial Fuel Combustion	0.62	0.64	-0.02	26%	0.00	0.00	0.59	0.64	-0.05	26%	0.00	0.00
Service and Commercial Fuel Combustion	0.38	0.37	0.01	100%	0.01	0.00	0.35	0.37	-0.02	100%	0.00	0.00
Residential Fuel Combustion	4.27	3.89	0.39	100%	0.39	0.13	4.59	3.89	0.70	100%	0.70	0.43
Consumer Products	89.66	78.33	11.33	100%	11.33	3.78	95.83	78.42	17.41	100%	17.41	10.77
Structural Pesticides	0.79	0.79	0.00	100%	0.00	0.00	0.87	0.87	0.00	100%	0.00	0.00
Lawn & Garden Equipment	33.84	29.25	4.59	100%	4.59	1.53	31.77	24.13	7.64	100%	7.64	4.73
Light Duty (Passenger, trucks up to 5750 lbs., motorcycles, motorhomes)	89.30	80.50	8.80	95%	EMFAC based on 2010	8.36	62.50	50.20	12.30	95%	EMFAC based on 2010	11.69
Medium & Heavy Duty (trucks between 5751 - 33,000+ lbs, non-school buses)	32.80	31.10	1.70	80%		1.36	24.20	21.20	3.00	80%		2.40
Transport Refrigeration Units	1.38	0.76	0.62	80%	0.50	0.17	1.57	0.56	1.01	80%	0.81	0.50
Paved Road Dust	0.00	0.00	0.00	75%	0.00	0.00	0.00	0.00	0.00	75%	0.00	0.00
Total			40.18		23.80	20.69			53.81		33.75	36.08