

Sonoma County Transportation Authority 2009 Comprehensive Transportation Plan EIR Energy Computations Based on County VMT Reconciled with Fleet Data and Consumption Rates from EMFAC

Total VMT

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	12,296,600		2008 VMT	11,441,811			
2008 Gas (gal)	672,000	0.054649	2008 Gas (gal)	672,000	0.054649	625286.42	625,286
2009 Diesel (gal)	74,760	0.00608	2009 Diesel (gal)	74,760	0.00608	69563.11422	69,563
EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	
2035 VMT	16,861,000		2035 VMT	14,417,956			
2035 Gas (gal)	906,980	0.053792	2035 Gas (gal)	906,980	0.053792	775564.7787	775,565
2035 Diesel (gal)	86,260	0.005116	2035 Diesel (gal)	86,260	0.005116	73761.51382	73,762
			Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	
			No Project 2035 VMT	14,768,411			
			No Project 2035 Gas (gal)	906,980	0.054372	802988.6343	803,000
			No Project 2035 Diesel (gal)	86,260	0.005171	76369.71002	76,370

2008 Passenger Cars

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	5,401,000		2008 VMT	5,025,799			
2008 Gas (gal)	263,000	0.048695	2008 Gas (gal)	263,000	0.048695	244729.692	244,730
2008 Diesel (gal)	1,000	0.000185	2008 Diesel (gal)	1,000	0.000185	930.5311483	931

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	5025799
5,401,000	0.4392485	

2008 Light Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	2,254,000		2008 VMT	2,097,417			
2008 Gas (gal)	127,000	0.056344	2008 Gas (gal)	127,000	0.056344	118177.4558	118,177
2008 Diesel (gal)	5,000	0.002218	2008 Diesel (gal)	5,000	0.002218	4652.655742	4,652

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	2097417
2,254,000	0.1833116	

2008 Light Duty Trucks 2

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	2,536,000		2008 VMT	2,359,827			
2008 Gas (gal)	150,000	0.059148	2008 Gas (gal)	150,000	0.059148	139579.6723	139,579
2008 Diesel (gal)	0	0	2008 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	2359827
2,536,000	0.2062459	

2008 Medium Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	1,057,000		2008 VMT	983,571			
2008 Gas (gal)	85,000	0.080416	2008 Gas (gal)	85,000	0.080416	79095.14761	79,000
2008 Diesel (gal)	0	0	2008 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	983571.4
1,057,000	0.0859629	

2008 Heavy Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	822,000		2008 VMT	764,897			
2008 Gas (gal)	38,000	0.046229	2008 Gas (gal)	85,000	0.046229	35360.18364	35,400
2008 Diesel (gal)	61,000	0.074209	2008 Diesel (gal)	61,000	0.074209	56762.40005	57,000

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	764896.6
822,000	0.066851	

2008 Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	18,000		2008 VMT	16,750			
2008 Gas (gal)	1,000	0.055556	2008 Gas (gal)	1,000	0.055556	930.5311483	931
2008 Diesel (gal)	1,000	0.055556	2008 Diesel (gal)	1,000	0.055556	930.5311483	931

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	16749.56
18,000	0.0014639	

2008 School Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	12,000		2008 VMT	11,166			
2008 Gas (gal)	0	0	2008 Gas (gal)	0	0	0	0
2008 Diesel (gal)	2,000	0.166667	2008 Diesel (gal)	2,000	0.166667	1861.062297	1,861

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	11166.37
12,000	0.0009759	

2008 Urban Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	19,000		2008 VMT	17,680			
2008 Gas (gal)	1,000	0.052632	2008 Gas (gal)	1,000	0.052632	930.5311483	931
2008 Diesel (gal)	3,000	0.157895	2008 Diesel (gal)	3,000	0.157895	2791.593445	2,792

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	17680.09
19,000	0.0015452	

2008 Motor Homes

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	45,000		2008 VMT	41,874			
2008 Gas (gal)	3,000	0.066667	2008 Gas (gal)	3,000	0.066667	2791.593445	2,792
2008 Diesel (gal)	1,000	0.022222	2008 Diesel (gal)	1,000	0.022222	930.5311483	931

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	41873.9
45,000	0.0036597	

2008 Motorcycles

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2008 VMT	132,000		2008 VMT	122,830			
2008 Gas (gal)	4,000	0.030303	2008 Gas (gal)	4,000	0.030303	3722.124593	3,722
2008 Diesel (gal)	0	0	2008 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
12,296,000	11,441,811	122830.1
132,000	0.0107352	

Totals		
2008 VMT	11,441,811	
2008 Gas (gal)	625,262	
2008 Diesel (gal)	69,098	

2035 Passenger Cars

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	7,595,000		2035 VMT	6,494,536			
2035 Gas (gal)	351,000	0.046215	2035 Gas (gal)	351,000	0.046215	300142.4919	303,381
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	6494536
7,595,000	0.4504478	

2035 Light Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	3,215,000		2035 VMT	2,749,168			
2035 Gas (gal)	186,000	0.057854	2035 Gas (gal)	186,000	0.057854	159049.8675	160,766
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	2749168
3,215,000	0.1906767	

2035 Light Duty Trucks 2

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	3,381,000		2035 VMT	2,891,116			
2035 Gas (gal)	201,000	0.05945	2035 Gas (gal)	201,000	0.05945	171876.4697	173,731
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	2891116
3,381,000	0.2005219	

2035 Medium Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	1,326,000		2035 VMT	1,133,872			
2035 Gas (gal)	107,000	0.080694	2035 Gas (gal)	107,000	0.080694	91496.42916	92,485
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	1133872
1,326,000	0.078643	

2035 Heavy Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	1,032,000		2035 VMT	882,470			
2035 Gas (gal)	51,000	0.049419	2035 Gas (gal)	51,000	0.049419	43610.44754	44,081
2035 Diesel (gal)	77,000	0.074612	2035 Diesel (gal)	77,000	0.074612	65843.22472	66,554

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	882470.2
1,032,000	0.0612063	

2035 Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	24,000		2035 VMT	20,523			
2035 Gas (gal)	0	0	2035 Gas (gal)	0	0	0	0
2035 Diesel (gal)	3,000	0.125	2035 Diesel (gal)	3,000	0.125	2565.320444	2,593

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	20522.56
24,000	0.0014234	

2035 School Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	16,000		2035 VMT	13,682			
2035 Gas (gal)	0	0	2035 Gas (gal)	0	0	0	0
2035 Diesel (gal)	2,000	0.125	2035 Diesel (gal)	2,000	0.125	1710.213629	1,729

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	13681.71
16,000	0.0009489	

2035 Urban Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	24,000		2035 VMT	20,523			
2035 Gas (gal)	1,000	0.041667	2035 Gas (gal)	1,000	0.041667	855.1068145	864
2035 Diesel (gal)	3,000	0.125	2035 Diesel (gal)	3,000	0.125	2565.320444	2,593

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	20522.56
24,000	0.0014234	

2035 Motor Homes

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	63,000		2035 VMT	53,872			
2035 Gas (gal)	4,000	0.063492	2035 Gas (gal)	4,000	0.063492	3420.427258	3,457
2035 Diesel (gal)	1,000	0.015873	2035 Diesel (gal)	1,000	0.015873	855.1068145	864

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	53871.73
63,000	0.0037364	

2035 Motorcycles

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	183,000		2035 VMT	156,485			
2035 Gas (gal)	5,000	0.027322	2035 Gas (gal)	5,000	0.027322	4275.534073	4,322
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,861,000	14,417,956	156484.5
183,000	0.0108534	

Totals		
2035 VMT	14,416,246	14416246
2035 Gas (gal)	783,087	
2035 Diesel (gal)	74,333	

2035 No Project Passenger Cars

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	7,595,000		2035 VMT	6,724,182			
2035 Gas (gal)	351,000	0.046215	2035 Gas (gal)	351,000	0.046215	310755.4859	310,755
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	6724182
7,595,000	0.4553084	

2035 No Project Light Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	3,215,000		2035 VMT	2,846,379			
2035 Gas (gal)	186,000	0.057854	2035 Gas (gal)	186,000	0.057854	164673.8473	164,674
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	2846379
3,215,000	0.1927342	

2035 No Project Light Duty Trucks 2

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	3,381,000		2035 VMT	2,993,346			
2035 Gas (gal)	201,000	0.05945	2035 Gas (gal)	201,000	0.05945	177953.9962	177,954
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	2993346
3,381,000	0.2026857	

2035 No Project Medium Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	1,326,000		2035 VMT	1,173,965			
2035 Gas (gal)	107,000	0.080694	2035 Gas (gal)	107,000	0.080694	94731.72933	94,732
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	1173965
1,326,000	0.0794916	

2035 No Project Heavy Duty Trucks

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	1,032,000		2035 VMT	913,674			
2035 Gas (gal)	51,000	0.049419	2035 Gas (gal)	51,000	0.049419	45152.5065	45,153
2035 Diesel (gal)	77,000	0.074612	2035 Diesel (gal)	77,000	0.074612	68171.43139	68,171

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	913674.2
1,032,000	0.0618668	

2035 No Project Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	24,000		2035 VMT	21,248			
2035 Gas (gal)	0	0	2035 Gas (gal)	0	0	0	0
2035 Diesel (gal)	3,000	0.125	2035 Diesel (gal)	3,000	0.125	2656.029794	2,656

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	21248.24
24,000	0.0014388	

2035 No Project School Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	16,000		2035 VMT	14,165			
2035 Gas (gal)	0	0	2035 Gas (gal)	0	0	0	0
2035 Diesel (gal)	2,000	0.125	2035 Diesel (gal)	2,000	0.125	1770.68653	1,771

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	14165.49
16,000	0.0009592	

2035 No Project Urban Buses

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	24,000		2035 VMT	21,248			
2035 Gas (gal)	1,000	0.041667	2035 Gas (gal)	1,000	0.041667	885.3432648	885
2035 Diesel (gal)	3,000	0.125	2035 Diesel (gal)	3,000	0.125	2656.029794	2,656

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	21248.24
24,000	0.0014388	

2035 No Project Motor Homes

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	63,000		2035 VMT	55,777			
2035 Gas (gal)	4,000	0.063492	2035 Gas (gal)	4,000	0.063492	3541.373059	3,541
2035 Diesel (gal)	1,000	0.015873	2035 Diesel (gal)	1,000	0.015873	885.3432648	885

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	55776.63
63,000	0.0037768	

2035 No Project Motorcycles

EMFAC		Multiplier	Sonoma Co. Model		Multiplier	New Consumption Based on new VMT	Rounded Figures
2035 VMT	183,000		2035 VMT	162,018			
2035 Gas (gal)	5,000	0.027322	2035 Gas (gal)	5,000	0.027322	4426.716324	4,427
2035 Diesel (gal)	0	0	2035 Diesel (gal)	0	0	0	0

VMT Conversion

EMFAC	So Co.	
16,681,000	14,768,411	162017.8
183,000	0.0109706	

Totals		
2008 VMT	14,926,002	
2008 Gas (gal)	802,121	
2008 Diesel (gal)	76,139	