Air Quality Appendix

Air Quality Appendix

Modeling Assumptions

Riverside County GPA 960
Assumptions

Assumptions used in the URBEMIS modeling

County Designation	URBEMIS Category	Acerage	Existing Baseline # dwelling Units	square feet	KFS	Acerage SCAQMD	Land Use SCAQMD	Acerage MDAQMD	Land Use MDAQMD
Residential						61.82%		38.18%	
AG, RR, RM,RD, OS-RUR, EDR, VLDR, LDR, MDR, MHDR	SFR	73,436	112,132	-	-	45,398.14	69,320	28,037.86	42,812
	SFR/urbemis Run[1]	-	-	-	-	-	-	-	-
Mobile Home	Mobile Home	30,668	36,955	-	-	18,958.96	22,846	11,709.04	14,109
HDR, VHDR, HHDR, CC, MUPA	Multi Family Residential	4,024	11,899	-	-	2,487.64	7,356	1,536.36	4,543
Total Residential		108,128	160,986	-	-	66,845	99,522	41,283	61,464
Non-Residential						57.29%		42.71%	
CR	CR	10,987	-	54,732,000	54,732	6,294	31,356.0	4,692.5	23,376
CT	CT	10,957	-	5,055,500	5,056	6,277	2,896.3	4,679.7	2,159
CO	CO	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
CC & MUPA	CC & MUPA	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Other Pub. Fac.	Other Pub. Fac.	5,648.00	-	73,808,064	73,808	3,236	42,284.6	2,412.3	31,523
School	Junior High	2,754.00	-	35,989,272	35,989	1,578	20,618.3	1,176.2	15,371
LI	Light Industrial	13,434	-	14,956,630	14,957	7,696	8,568.7	5,737.7	6,388
	LI/urbemis Run[1]	-	-	-	-	-	-	-	-
HI	Heavy Industrial	1,826	-	13,366,500	13,367	1,046	7,657.7	779.9	5,709
BP	Industrial Park	0	-	0	0	0	0	0.0	0
Warehouse	Warehouse	4,200	-	5,581,570	5,582	2,406	3,197.7	1,793.8	2,384
Total non-residential		49,806	-	203,489,536	203,490	28,534	116,579	21,272	86,910

*Dwelling units and square footages taken from County provided data

File: EXISTING COW DATA to PBSJ 5-4-11 REVISED THIRD (2)

(Used data on "Revised 3 Tab") 5/4/2011

*Percentages attributed to SCAQMD and MDAQMD Jurrisdiction was taken from the current General Plan

[1] Because of the limitation of URBEMIS field lengths, SFR and LI for Urbemis runs had to be divided across two or three fields as follows:

SFR: Two Urbemis runs were required to account for all dwelling units in the SCAQMD jurisdiction. These were accounted for as SFR or Retirement community.

LI Light Industrial was accounted for in totally by modeling as Light industrial or Manufacturing land use types.

	Existing Baseline	% Land Use SCAQMD		% Land Use MDAQMD	
		61.82%	Trip Rate	38.18%	Trip Rate
Average daily trips	1,421,987	879,072	4.07	542,915	3.66
Vehicle miles traveled	23,111,848	14,287,744		8,824,104	
Average Trip length (miles)	16.25				

Average daily trips, vehicle miles traveled, and average trip lengths were provided by the County of Riverside.

*Due to rounding errors in URBEMIS, Trip rates, and trip lengths as shown in the modeling run may differ from the values presented here. This was done to more closely match the URBEMIS output to the average daily trips and vehicle miles traveled presented in the traffic study.

Riverside County GPA 960
Assumptions

County Designation	URBEMIS Category	Acerage	Buildout under GPA 960 # dwelling Units	square feet	KFS	Acerage SCAQMD	Land Use SCAQMD	Acerage MDAQMD	Land Use MDAQMD
Residential						60.64%		39.36%	
AG, RR, RM,RD, OS-RUR, EDR, VLDR, LDR, MDR, MHDR	SFR	215,902	442,015	-	-	130,923	268,037.90	84,979	173,977.10
	SFR/urbemis Run[1]	-	-	-	-	43,641	89,345.97	42,489	86,988.55
Mobile Home	Mobile Home	0	0	-	-	0	0.00	0.00	0.00
HDR, VHDR, HHDR, CC, MUPA	Multi Family Residential	22,615	78,723	-	-	13,714	47,737.63	8,901	30,985.37
Total Residential		238,517	520,738	-	-	144,636.54	315,775.52	93,880.18	204,962.48
Non-Residential						54.95%		45.05%	
CR	CR	3,808	-	29,965,000	29,965	2,092	16,465.77	1,716	13,499.23
CT	CT	2,801	-	13,021,143	13,021	1,539	7,155.12	1,262	5,866.02
CO	CO	485	-	11,176,286	11,176	267	6,141.37	218	5,034.92
CC & MUPA	CC & MUPA	1,203	-	14,322,528	14,323	661	7,870.23	542	6,452.30
Other Pub. Fac.	Other Pub. Fac.	5,006	-	65,416,678	65,417	2,751	35,946.46	2,255	29,470.21
School	Junior High	2,441	-	31,897,580	31,898	1,341	17,527.72	1,100	14,369.86
LI	Light Industrial	20,010	-	264,977,800	264,978	5,498	145,605.30	4,507	119,372.50
	LI/urbemis Run[1]	-	-	-	-	-	72,802.65	-	59,686.25
HI	Heavy Industrial	1,697	-	22,183,500	22,184	466	12,189.83	382	9,993.67
BP	Industrial Park	5,371	-	52,636,800	52,637	1,476	28,923.92	1,210	23,712.88
Warehouse	Warehouse	0	-	0	0	0	0.00	0	0.00
Total non-residential		42,822	-	505,597,315	505,597	16,091	277,825.72	13,191.99	227,771.59

*Dwelling units and square footages taken from County provided data

File: EXISTING COW DATA to PBSJ 5-4-11 REVISED THIRD (2)

(Used data on "Revised 3 Tab") 5/4/2011

*Percentages attributed to SCAQMD and MDAQMD Jurrisdiction was taken from the current General Plan

[1] Because of the limitation of URBEMIS field lengths, SFR and LI for Urbemis runs had to be divided across two or three fields as follows:

SFR: Two Urbemis runs were required to account for all dwelling units in the SCAQMD jurisdiction. These were accounted for as SFR or Retirement community.

LI Light Industrial was accounted for in totally by modeling as Light industrial or Manufacturing land use types.

Note the for the URBEMIS runs a buildout year of 2040 was used as that is the latest year available in the model.

	Buildout Under GPA 960	% Land Use SCAQMD		% Land Use MDAQMD	
		60.64%	Trip Rate	39.36%	Trip Rate
Average daily trips	4,924,604	2,986,280	5.03	1,938,324	4.48
Vehicle miles traveled	104,386,963	63,300,254		41,086,709	
Average Trip length (miles)	21.20				

Average daily trips, vehicle miles traveled, and average trip lengths were provided by the County of Riverside.

*Due to rounding errors in URBEMIS, Trip rates, and trip lengths as shown in the modeling run may differ from the values presented here. This was done to more closely match the URBEMIS output to the average daily trips and vehicle miles traveled presented in the traffic study.

Air Quality Appendix

Calculation Summary

Riverside County GPA 960
SCAQMD Mitigated Summary

Source	CO (lbs/day)	NO_X (lbs/day)	ROG (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Reductions Associated with Mitigation						
Mobile Source	4,069	3,639	153	195	30,177	5,801
Area Source	93,691	2,227	33,944	255	14,467	13,923
Net Mitigated Plan Emissions (Net Plan Emissions - Reduction)						
Mobile Source	-15,458	-13,825	275	351	54,283	10,436
Area source	9,120	4,162	13,950	9	139	139
NG SFR	835	2,127	208	0.03	4.09	4.05
NG MFR	90	230	22	0.00	0.44	0.44
NG Non-Res	223	288	25	0.00	0.52	0.52
Total Natural Gas	1,149	2,645	256	0	5	5
Hearth	603	1,423	83	9	115	114
Landscaping	7,368	94	1,333	0	19	19
Consumer Products	0	0	11,094	0	0	0
Architectural Coatings	0	0	1,185	0	0	0
Total Net Mitigated Plan Emissions	***-6,338***	***-9,663***	***14,225***	***360***	***54,422***	***10,574***
SCAQMD SCAB Thresholds	550	55	55	150	150	55
Significant Impact?	**no**	**no**	**YES**	**YES**	**YES**	**YES**
SCAQMD SSAB Thresholds	550	100	75	150	150	55
Significant Impact?	**no**	**no**	**YES**	**YES**	**YES**	**YES**

Riverside County GPA 960
SCAQMD Unmitigated Summary

Source	CO (lbs/day)	NO_X (lbs/day)	ROG (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Existing Emissions (Baseline)						
Mobile Source	196,876	31,668	18,318	155	25,023	5,103
Area source	44,369	3,476	22,128	122	6,716	6,466
Natural Gas	1,092	2,076	158	0	4	4
Hearth	43,277	1,400	15,601	122	6,712	6,462
Landscaping	4,616	41	831	0	12	12
Consumer Products	0	0	5,105	0	0	0
Architectural Coatings	0	0	1,263	0	0	0
Total Existing Emissions	241,245	35,143	40,445	277	31,739	11,568
Proposed GPA No. 960 Emissions						
Mobile Source	185,488	21,482	18,745	701	109,483	21,340
Area source	139,811	9,771	68,689	386	21,302	42
NG SFR	1,858	4,366	337	0	8	8
NG MFR	199	468	36	0	1	1
NG Non-Res	465	553	40	0	1	1
Natural Gas	2,522	5,388	414	0	10	10
Hearth	137,289	4,384	49,496	386	21,292	20,498
Landscaping	11,984	135	2,164	1	32	31
Consumer Products	0	0	16,199	0	0	0
Architectural Coatings	0	0	2,580	0	0	0
Total GPA 960 Emissions	325,299	31,253	87,434	1,087	130,786	21,381
Net Plan Emissions						
Mobile Source	-11,388	-10,186	428	546	84,460	16,237
Area source	102,810	6,389	47,894	265	14,606	14,062
NG SFR	1,053	2,683	208	0	5	5
NG MFR	113	288	22	0	1	1
NG Non-Res	264	340	25	0	1	1
Natural Gas	1,430	3,311	256	0	6	6
Hearth	94,013	2,984	33,896	264	14,580	14,036
Landscaping	7,368	94	1,333	0	19	19
Consumer Products	0	0	11,094	0	0	0
Architectural Coatings	0	0	1,316	0	0	0
Total Net Plan Emissions	***91,422***	***-3,797***	***48,322***	***811***	***99,066***	***30,299***
SCAQMD SCAB Thresholds	550	55	55	150	150	55
Significant Impact?	**YES**	**no**	**YES**	**YES**	**YES**	**YES**
SCAQMD SSAB Thresholds	550	100	75	150	150	55
Significant Impact?	**YES**	**no**	**YES**	**YES**	**YES**	**YES**

Riverside County GPA 960
SCAQMD Summer Summary

Source	CO (lbs/day)	NO_X (lbs/day)	ROG (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Existing Emissions (Baseline)						
Mobile Source	196,876	26,649	16,458	155	25,023	5,103
Area source	5,708	2,117	7,358	0.24	16.30	16.14
Natural Gas	1,092	2,076	158	0.03	3.92	3.88
Hearth	0	0	0	0.00	0.00	0.00
Landscaping	4,616	41	831	0.21	12.38	12.26
Consumer Products	0	0	5,105	0.00	0.00	0.00
Architectural Coatings	0	0	1,263	0.00	0.00	0.00
Total Existing Emissions	202,584	28,766	23,817	155	25,039	5,119
Proposed GPA No. 960 Emissions						
Mobile Source	185,488	18,037	15,985	701	109,483	21,340
Area source	14,506	5,523	21,356	0.61	41.96	41.58
NG SFR	1,858	4,366	337	0.06	8.36	8.27
NG MFR	199	468	36	0.00	0.90	0.89
NG Non-Res	465	553	40	0.01	1.00	0.99
Natural Gas	2,522	5,388	414	0.07	10.26	10.15
Hearth	0	0	0	0.00	0.00	0.00
Landscaping	11,984	135	2,164	0.54	31.70	31.43
Consumer Products	0	0	16,199	0.00	0.00	0.00
Architectural Coatings	0	0	2,580	0.00	0.00	0.00
Total GPA 960 Emissions	199,993	23,559	37,341	701	109,525	21,381
Net Plan Emissions (Proposed - Existing)						
Mobile Source	-11,388	-8,612	-474	546	84,460	16,237
Area source	8,798	3,405	13,998	0	26	25
Natural Gas	1,430	3,311	256	0	6	6
Hearth	0	0	0	0	0	0
Landscaping	7,368	94	1,333	0	19	19
Consumer Products	0	0	11,094	0	0	0
Architectural Coatings	0	0	1,316	0	0	0
Total Net Plan Emissions	***-2,591***	***-5,207***	***13,524***	***546***	***84,486***	***16,262***

Riverside County GPA 960
SCAQMD Winter Summary

Source	CO (lbs/day)	NO_X (lbs/day)	ROG (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Existing Emissions (Baseline)						
Mobile Source	190,273	31,668	18,318	131	25,023	5,103
Area source	44,369	3,476	22,128	121.82	6,715.99	6,465.60
Natural Gas	1,092	2,076	158	0.03	3.92	3.88
Hearth	43,277	1,400	15,601	121.79	6,712.07	6,461.72
Landscaping	0	0	0	0.00	0.00	0.00
Consumer Products	0	0	5,105	0.00	0.00	0.00
Architectural Coatings	0	0	1,263	0.00	0.00	0.00
Total Existing Emissions	234,642	35,143	40,445	253	31,739	11,568
Proposed GPA No. 960 Emissions						
Mobile Source	171,108	21,482	18,745	595	109,483	21,340
Area source	139,811	9,771	68,689	386.12	21,302.49	20,508.11
NG SFR	1,858	4,366	337	0	8	8
NG MFR	199	468	36	0	1	1
NG Non-Res	465	553	40	0	1	1
Natural Gas	2,522	5,388	414	0.07	10.26	10.15
Hearth	137,289	4,384	49,496	386.05	21,292.23	20,497.96
Landscaping	0	0	0	0.00	0.00	0.00
Consumer Products	0	0	16,199	0.00	0.00	0.00
Architectural Coatings	0	0	2,580	0.00	0.00	0.00
Total GPA 960 Emissions	310,919	31,253	87,434	981	130,786	41,848
Net Plan Emissions (Proposed - Existing)						
Mobile Source	-19,166	-10,186	428	464	84,460	16,237
Area source	95,443	6,295	46,561	264	14,587	14,043
Natural Gas	1,430	3,311	256	0	6	6
Hearth	94,013	2,984	33,896	264	14,580	14,036
Landscaping	0	0	0	0	0	0
Consumer Products	0	0	11,094	0	0	0
Architectural Coatings	0	0	1,316	0	0	0
Total Net Plan Emissions	***76,277***	***-3,891***	***46,989***	***728***	***99,047***	***30,279***

Riverside County GPA 960
MDAQMD Mitigated Summary

Source	CO (tons/year)	NO_X (tons/year)	ROG (tons/year)	SO_X (tons/year)	PM_{10} (tons/year)	$PM_{2.5}$ (tons/year)
Reductions Associated with Mitigation						
Mobile Source	190	329	28	22	3,626	698
Area Source	805	89	339	2	119	115
Net Mitigated Plan Emissions (Net Plan Emissions - Reduction)						
Mobile Source	-721	-1,249	51	40	6,522	1,255
Area source	1,050	346	1,718	0	4	4
NG SFR	100	256	25	0.01	0.50	0.49
NG MFR	11	28	3	0.00	0.06	0.05
NG Non-Res	34	44	4	0.00	0.08	0.08
Natural Gas	145	328	32	0	1	1
Hearth	5	6	1	0	1	1
Landscaping	899	11	163	0	2	2
Consumer Products	0	0	1,343	0	0	0
Architectural Coatings	0	0	179	0	0	0
Total Net Mitigated Plan Emissions	***328***	***-904***	***1,769***	***40***	***6,526***	***1,259***
MDAQMD Thresholds	100	25	25	25	15	15
Significant Impact?	**YES**	**no**	**YES**	**YES**	**YES**	**YES**

Riverside County GPA 960
MDAQMD Unmitigated Summary

Source	CO (tons/year)	NO_X (tons/year)	ROG (tons/year)	SO_X (tons/year)	PM_{10} (tons/year)	$PM_{2.5}$ (tons/year)
Existing Emissions (Baseline)						
Mobile Source	21,949	3,193	1,942	17	2,821	575
Area source	986	256	966	0.93	53.27	51.33
Natural Gas	133	246	19	0.00	0.46	0.46
Hearth	332	6	124	0.91	51.41	49.48
Landscaping	521	5	94	0.02	1.40	1.39
Consumer Products	0	0	575	0.00	0.00	0.00
Architectural Coatings	0	0	154	0.00	0.00	0.00
Total Existing Emissions	22,935	3,449	2,908	18	2,874	627
Proposed GPA No. 960 Emissions						
Mobile Source	21,417	2,273	2,022	79	12,969	2,528
Area source	2,841	691	3,023	3	176	170
NG SFR	220	517	40	0.01	0.99	0.98
NG MFR	24	55	4	0.00	0.11	0.10
NG Non-Res	70	83	6	0.00	0.15	0.15
Natural Gas	313	656	50	0.01	1.25	1.23
Hearth	1,107	19	445	3.03	171.42	164.99
Landscaping	1,421	16	256	0.06	3.76	3.73
Consumer Products	0	0	1,919	0.00	0.00	0.00
Architectural Coatings	0	0	353	0.00	0.00	0.00
Total GPA 960 Emissions	24,258	2,963	5,045	82	13,145	2,698
Net Plan Emissions (Proposed - Existing)						
Mobile Source	-531	-920	79	62	10,147	1,953
Area source	1,855	434	2,057	2	123	119
NG SFR	127	323	25	0.01	0.63	0.61
NG MFR	14	35	3	0.00	0.07	0.06
NG Non-Res	40	52	4	0.00	0.09	0.09
Natural Gas	180	410	32	0.01	0.79	0.77
Hearth	775	13	320	2.12	120.01	115.51
Landscaping	899	11	163	0.04	2.36	2.34
Consumer Products	0	0	1,343	0.00	0.00	0.00
Architectural Coatings	0	0	199	0.00	0.00	0.00
Total Net Plan Emissions	***1,323***	***-486***	***2,136***	***64***	***10,271***	***2,071***
MDAQMD Thresholds	100	25	25	25	15	15
Significant Impact?	**YES**	**no**	**YES**	**YES**	**YES**	**YES**

Air Quality Appendix

Reduction Calculations

Riverside County GPA 960
Mobile Source Reductions

Countywide Transportation Reductions

Transportation Reductions are taken directlyl from GHG Modeling (Appendix EIR-6): CO_2e reductions are directly related to a reduction in VMT.

	2020 BAU		***R1-T9***	***R1-T10***	***IM-T1***	***IM-T2***
	CO2	***CO2e***	***0.06***	***0.004***	***0.126***	***0.105***
Autos and Light Trucks	3,178,748	3,346,050	3,145,287	3,132,706	2,737,985	2,450,497
Medium and Heavy Duty	1,489,405	1,567,795	1,567,795	1,567,795	1,567,795	1,567,795
MotorCycles	14,525	15,290	14,372	14,315	12,511	11,198
Total	4,682,678	4,929,135	4,727,455	4,714,816	4,318,291	4,029,489

	IM-T3	***IM-T4***	***IM-T5***	***IM-T6***	***IM-T7***	***IM-T8***
	0.09	***0.001***	***0.07***	***0.0165***	***0.034905***	***0.0266***
Autos and Light Trucks	2,229,952	2,227,722	2,071,781	2,037,597	1,966,475	1,966,475
Medium and Heavy Duty	1,567,795	1,567,795	1,567,795	1,567,795	1,567,795	1,526,092
MotorCycles	10,190	10,190	10,190	10,022	10,022	10,022
Total	3,807,937	3,805,707	3,649,766	3,615,414	3,544,291	3,502,588

	IM-T9	***IM-T9***
	0.1319565	***0.044***
Autos and Light Trucks	1,706,986	1,631,878
Medium and Heavy Duty	1,526,092	1,526,092
MotorCycles	10,022	10,022
Total	3,243,099	3,167,992

Total Mobile Source Reduction ***35.73% reduction in VMT***

Riverside County GPA 960
SCAQMD Area Source Reductions

SCAQMD Reductions

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Architectural Reduction			10%			

Architectural reduction for using a low VOC paint is based on the default ROG emissions reduction in URBEMIS.

Natural Gas Hearth Only						
Res - Reg Hearth	98,430.96	3,111.54	35,489.87	276.62	15,265.21	14,695.70
Res - NG Hearth Only	631.55	1,484.15	86.84	9.47	119.99	119.73
Res % Reduction	99.36%	52.30%	99.76%	96.58%	99.21%	99.19%

SCAQMD requires that no wood burning stoves or hearths are installed. The reduction is based on the percentage reduction replied in URBEMIS for showing 15% no hearts and 85% natural gas only hearts compared to the default wood and natural gas usage assumptions in the model. Default assumptions were applied for existing conditions.

Natural Gas - Non-Hearth						
% beyond Title 24	25.00%	25.00%	-	25.00%	25.00%	25.00%
% reduction per % beyond T24						
SFR	0.83%	0.83%	-	0.83%	0.83%	0.83%
MFR	0.80%	0.80%	-	0.80%	0.80%	0.80%
Commercial	0.61%	0.61%	-	0.61%	0.61%	0.61%
% reduction for 25% beyond T24						
SFR	20.75%	20.75%	-	20.75%	20.75%	20.75%
MFR	20.00%	20.00%	-	20.00%	20.00%	20.00%
Commercial	15.25%	15.25%	-	15.25%	15.25%	15.25%

Reduction Percentages from CAPCOA 25% above 2005 Title 24 (assumes an average of 10% beyond 2010 Title 24)

Riverside County GPA 960
MDAQMD Area Source Reductions

MDAQMD Reductions

	CO	NO_X	ROG	SO_X	PM_{10}	$PM_{2.5}$
Architectural Reduction			10%			

Architectural reduction for using a low VOC paint is based on the default ROG emissions reduction in URBEMIS.

Natural Gas Hearth Only						
Res - Reg Hearth	1,106.88	19.10	444.53	3.03	171.42	164.99
Res - NG Hearth Only	0.29	0.69	43.95	0.00	0.06	0.05
Res % Reduction	99.97%	96.39%	90.11%	100.00%	99.96%	99.97%

Mitigation measure based on SCAQMD requirement that no wood burning stoves or hearths are installed. The reduction is based on the percentage reduction replied in URBEMIS for showing 15% no hearts and 85% natural gas only hearts compared to the default wood and natural gas usage assumptions in the model. Default assumptions were applied for existing conditions.

Natural Gas - Non-Hearth						
% beyond Title 24	25.00%	25.00%	-	25.00%	25.00%	25.00%
% reduction per % beyond T24						
SFR	0.83%	0.83%	-	0.83%	0.83%	0.83%
MFR	0.80%	0.80%	-	0.80%	0.80%	0.80%
Commercial	0.61%	0.61%	-	0.61%	0.61%	0.61%
Total % reduction						
SFR	20.75%	20.75%	-	20.75%	20.75%	20.75%
MFR	20.00%	20.00%	-	20.00%	20.00%	20.00%
Commercial	15.25%	15.25%	-	15.25%	15.25%	15.25%

Reduction Percentages from CAPCOA 25% above 2005 Title 24 (assumes an average of 10% beyond 2010 Title 24)

URBEMIS Model Output

SCAQMD Existing

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Existing - SCAQMD - Mobile Source.urb924

Project Name: Riverside County GPA 960 County-Existing - SCAQMD - Mobile Source Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	16,458.46	26,648.91	196,876.26	154.85	25,022.76	5,102.88

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	16,458.46	26,648.91	196,876.26	154.85	25,022.76	5,102.88

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	5,347.74	8,541.64	63,838.64	49.70	8,005.40	1,633.39
Apartments mid rise	567.48	906.41	6,774.34	5.27	849.51	173.33
Mobile home park	1,762.47	2,815.09	21,039.49	16.38	2,638.37	538.32
Junior high school	1,558.91	2,547.99	18,693.53	14.80	2,395.22	488.30
Warehouse	239.21	393.66	2,863.22	2.28	370.52	75.51
General light industry	656.97	1,061.32	7,897.95	6.17	995.60	203.09
General heavy industry	594.33	950.05	7,158.16	5.53	889.89	181.63
CR	2,350.78	3,869.67	28,145.27	22.45	3,642.23	742.25
CT	217.45	357.52	2,604.10	2.07	336.43	68.57
Other Public Facilities	3,163.12	5,205.56	37,861.56	30.20	4,899.59	998.49
TOTALS (lbs/day, unmitigated)	16,458.46	26,648.91	196,876.26	154.85	25,022.76	5,102.88

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2007 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	45,398.14	4.07	dwelling units	69,320.00	282,132.41	4,570,545.20

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	2,487.64	4.07	dwelling units	7,356.00	29,938.92	485,010.54
Mobile home park	18,985.96	4.07	dwelling units	22,846.00	92,983.22	1,506,328.27
Junior high school		4.07	1000 sq ft	20,618.30	83,916.49	1,367,838.69
Warehouse		4.06	1000 sq ft	3,197.70	12,982.66	211,617.37
General light industry		4.07	1000 sq ft	8,568.70	34,874.61	568,456.14
General heavy industry		4.07	1000 sq ft	7,657.70	31,166.84	508,019.49
CR		4.07	unknown	31,356.00	127,618.93	2,080,188.39
CT		4.07	1000 sq ft	2,896.30	11,787.94	192,143.44
Other Public Facilities		4.06	1000 sq ft	42,284.60	171,675.48	2,798,310.19
					879,077.50	14,288,457.72

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	45.6	2.2	97.4	0.4
Light Truck < 3750 lbs	9.7	4.1	88.7	7.2
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	12.0	0.8	98.4	0.8
Lite-Heavy Truck 8501-10,000 lbs	1.9	0.0	73.7	26.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	1.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	4.5	82.2	17.8	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.5	6.7	80.0	13.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	16.2	16.2	16.2	16.3	16.3	16.3
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	28.9	10.0	61.1			
% of Trips - Commercial (by land use)						
Junior high school				20.0	10.0	70.0
Warehouse				2.0	1.0	97.0
General light industry				50.0	25.0	25.0
General heavy industry				90.0	5.0	5.0
CR				2.0	1.0	97.0
CT				5.0	2.5	92.5
Other Public Facilities				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Existing - SCAQMD - Mobile Source.urb924

Project Name: Riverside County GPA 960 County-Existing - SCAQMD - Mobile Source Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	18,317.50	31,667.50	190,273.45	131.27	25,022.76	5,102.88

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	18,317.50	31,667.50	190,273.45	131.27	25,022.76	5,102.88

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	5,895.80	10,151.26	61,675.80	42.15	8,005.40	1,633.39
Apartments mid rise	625.64	1,077.22	6,544.82	4.47	849.51	173.33
Mobile home park	1,943.10	3,345.58	20,326.68	13.89	2,638.37	538.32
Junior high school	1,747.92	3,027.69	18,064.26	12.54	2,395.22	488.30
Warehouse	268.80	467.72	2,770.26	1.93	370.52	75.51
General light industry	733.77	1,261.36	7,616.72	5.23	995.60	203.09
General heavy industry	661.67	1,129.30	6,891.90	4.70	889.89	181.63
CR	2,642.04	4,597.69	27,231.56	19.02	3,642.23	742.25
CT	244.29	424.78	2,519.03	1.76	336.43	68.57
Other Public Facilities	3,554.47	6,184.90	36,632.42	25.58	4,899.59	998.49
TOTALS (lbs/day, unmitigated)	18,317.50	31,667.50	190,273.45	131.27	25,022.76	5,102.88

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2007 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	45,398.14	4.07	dwelling units	69,320.00	282,132.41	4,570,545.20

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	2,487.64	4.07	dwelling units	7,356.00	29,938.92	485,010.54
Mobile home park	18,985.96	4.07	dwelling units	22,846.00	92,983.22	1,506,328.27
Junior high school		4.07	1000 sq ft	20,618.30	83,916.49	1,367,838.69
Warehouse		4.06	1000 sq ft	3,197.70	12,982.66	211,617.37
General light industry		4.07	1000 sq ft	8,568.70	34,874.61	568,456.14
General heavy industry		4.07	1000 sq ft	7,657.70	31,166.84	508,019.49
CR		4.07	unknown	31,356.00	127,618.93	2,080,188.39
CT		4.07	1000 sq ft	2,896.30	11,787.94	192,143.44
Other Public Facilities		4.06	1000 sq ft	42,284.60	171,675.48	2,798,310.19
					879,077.50	14,288,457.72

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	45.6	2.2	97.4	0.4
Light Truck < 3750 lbs	9.7	4.1	88.7	7.2
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	12.0	0.8	98.4	0.8
Lite-Heavy Truck 8501-10,000 lbs	1.9	0.0	73.7	26.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	1.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	4.5	82.2	17.8	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.5	6.7	80.0	13.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	16.2	16.2	16.2	16.3	16.3	16.3
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	28.9	10.0	61.1			
% of Trips - Commercial (by land use)						
Junior high school				20.0	10.0	70.0
Warehouse				2.0	1.0	97.0
General light industry				50.0	25.0	25.0
General heavy industry				90.0	5.0	5.0
CR				2.0	1.0	97.0
CT				5.0	2.5	92.5
Other Public Facilities				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Existing - SCAQMD - Residential.urb924

Project Name: Riverside County GPA 960 County-Existing - SCAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	6,821.93	1,614.34	5,273.53	0.23	15.36	15.21

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	6,821.93	1,614.34	5,273.53	0.23	15.36	15.21

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	121.52	1,573.43	669.55	0.02	3.01	2.98
Hearth - No Summer Emissions						
Landscape	830.27	40.91	4,603.98	0.21	12.35	12.23
Consumer Products	5,105.48					
Architectural Coatings	764.66					
TOTALS (lbs/day, unmitigated)	6,821.93	1,614.34	5,273.53	0.23	15.36	15.21

Area Source Changes to Defaults

5/6/2011 8:20:35 AM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Existing - SCAQMD - Residential.urb924

Project Name: Riverside County GPA 960 County-Existing - SCAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	21,592.30	2,973.06	43,946.28	121.81	6,715.08	6,464.70

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	21,592.30	2,973.06	43,946.28	121.81	6,715.08	6,464.70

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	121.52	1,573.43	669.55	0.02	3.01	2.98
Hearth	15,600.64	1,399.63	43,276.73	121.79	6,712.07	6,461.72
Landscaping - No Winter Emissions						
Consumer Products	5,105.48					
Architectural Coatings	764.66					
TOTALS (lbs/day, unmitigated)	21,592.30	2,973.06	43,946.28	121.81	6,715.08	6,464.70

Area Source Changes to Defaults

5/6/2011 8:18:32 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Existing - SCAQMD - Non-Res.urb924

Project Name: Riverside County GPA 960 County-Existing - SCAQMD - Area - Non-Res Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	536.33	503.06	434.50	0.01	0.94	0.93

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	536.33	503.06	434.50	0.01	0.94	0.93

5/6/2011 8:18:32 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	36.51	502.93	422.46	0.01	0.91	0.90
Hearth - No Summer Emissions						
Landscape	1.02	0.13	12.04	0.00	0.03	0.03
Consumer Products	0.00					
Architectural Coatings	498.80					
TOTALS (lbs/day, unmitigated)	536.33	503.06	434.50	0.01	0.94	0.93

Area Source Changes to Defaults

5/6/2011 8:18:50 AM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Existing - SCAQMD - Non-Res.urb924

Project Name: Riverside County GPA 960 County-Existing - SCAQMD - Area - Non-Res Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	535.31	502.93	422.46	0.01	0.91	0.90

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	535.31	502.93	422.46	0.01	0.91	0.90

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	36.51	502.93	422.46	0.01	0.91	0.90
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	0.00					
Architectural Coatings	498.80					
TOTALS (lbs/day, unmitigated)	535.31	502.93	422.46	0.01	0.91	0.90

Area Source Changes to Defaults

URBEMIS Model Output

SCAQMD Buildout

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - Mobile Sources.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Mobile Source Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	15,984.72	18,036.53	185,487.77	700.82	109,483.10	21,339.77

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	15,984.72	18,036.53	185,487.77	700.82	109,483.10	21,339.77

5/6/2011 7:19:24 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	2,413.10	2,715.61	28,050.30	105.57	16,477.17	3,212.45
Apartments mid rise	1,289.32	1,450.95	14,987.30	56.41	8,803.77	1,716.42
Mobile home park	2,413.10	2,715.61	28,050.30	105.57	16,477.17	3,212.45
Retirement community	2,413.10	2,715.61	28,050.30	105.57	16,477.17	3,212.45
Junior high school	468.24	531.79	5,405.87	20.64	3,231.67	629.48
General light industry	1,960.51	2,212.05	22,765.54	85.95	13,425.50	2,616.93
General heavy industry	330.61	370.76	3,856.88	14.43	2,248.29	438.51
Industrial park	777.13	878.47	9,009.46	34.12	5,333.56	1,039.42
Manufacturing	1,959.46	2,211.84	22,744.75	85.93	13,425.33	2,616.77
CR	438.53	500.13	5,046.03	19.39	3,041.56	592.19
CT	191.06	217.79	2,200.16	8.45	1,324.34	257.87
CO	165.31	187.21	1,914.85	7.27	1,136.92	221.53
CC & MUPA	209.61	239.05	2,411.88	9.27	1,453.79	283.05
Other Public Facilities	955.64	1,089.66	10,994.15	42.25	6,626.86	1,290.25
TOTALS (lbs/day, unmitigated)	15,984.72	18,036.53	185,487.77	700.82	109,483.10	21,339.77

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2040 Temperature (F): 80 Season: Summer

5/6/2011 7:19:24 AM

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	43,641.00	5.03	dwelling units	89,345.97	449,410.24	9,527,497.28
Apartments mid rise	13,714.00	5.03	dwelling units	47,737.63	240,120.28	5,090,550.09
Mobile home park	43,641.00	5.03	dwelling units	89,345.97	449,410.24	9,527,497.28
Retirement community	43,641.00	5.03	dwelling units	89,345.97	449,410.24	9,527,497.28
Junior high school		5.03	1000 sq ft	17,527.72	88,164.44	1,869,086.17
General light industry		5.03	1000 sq ft	72,802.65	366,197.34	7,763,383.82
General heavy industry		5.03	1000 sq ft	12,189.83	61,314.85	1,299,874.82
Industrial park		5.03	1000 sq ft	28,923.92	145,487.32	3,084,331.36
Manufacturing		5.03	1000 sq ft	72,802.65	366,197.34	7,763,383.82
CR		5.04	unknown	16,465.77	82,987.48	1,759,334.59
CT		5.05	1000 sq ft	7,155.12	36,133.36	766,027.22
CO		5.05	1000 sq ft	6,141.37	31,013.92	657,495.13
CC & MUPA		5.04	1000 sq ft	7,870.23	39,665.96	840,918.36
Other Public Facilities		5.03	1000 sq ft	35,946.46	180,810.71	3,833,187.11
					2,986,323.72	63,310,064.33

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.0	0.0	100.0	0.0
Light Truck < 3750 lbs	9.6	0.0	100.0	0.0
Light Truck 3751-5750 lbs	24.3	0.0	100.0	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	13.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.6	0.0	16.7	83.3
Heavy-Heavy Truck 33,001-60,000 lbs	2.1	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	2.7	33.3	66.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.6	0.0	92.3	7.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	21.2	21.2	21.2	21.2	21.2	21.2
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	28.9	10.0	61.1			
% of Trips - Commercial (by land use)						
Junior high school				20.0	10.0	70.0
General light industry				50.0	25.0	25.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General heavy industry				90.0	5.0	5.0
Industrial park				41.5	20.8	37.8
Manufacturing				48.0	24.0	28.0
CR				2.0	1.0	97.0
CT				5.0	2.5	92.5
CO				35.0	17.5	47.5
CC & MUPA				2.0	1.0	97.0
Other Public Facilities				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - Mobile Sources.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Mobile Source Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	18,745.34	21,481.70	171,107.93	595.01	109,483.10	21,339.77

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	18,745.34	21,481.70	171,107.93	595.01	109,483.10	21,339.77

5/6/2011 7:19:48 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	2,828.79	3,234.32	25,890.37	89.65	16,477.17	3,212.45
Apartments mid rise	1,511.43	1,728.10	13,833.25	47.90	8,803.77	1,716.42
Mobile home park	2,828.79	3,234.32	25,890.37	89.65	16,477.17	3,212.45
Retirement community	2,828.79	3,234.32	25,890.37	89.65	16,477.17	3,212.45
Junior high school	549.88	633.35	4,985.45	17.51	3,231.67	629.48
General light industry	2,298.01	2,634.64	20,979.96	72.97	13,425.50	2,616.93
General heavy industry	386.89	441.61	3,552.25	12.25	2,248.29	438.51
Industrial park	911.40	1,046.28	8,304.50	28.97	5,333.56	1,039.42
Manufacturing	2,297.07	2,634.37	20,961.79	72.96	13,425.33	2,616.77
CR	515.64	595.63	4,655.65	16.45	3,041.56	592.19
CT	224.63	259.38	2,029.79	7.17	1,324.34	257.87
CO	194.00	222.96	1,765.29	6.17	1,136.92	221.53
CC & MUPA	246.46	284.69	2,225.29	7.86	1,453.79	283.05
Other Public Facilities	1,123.56	1,297.73	10,143.60	35.85	6,626.86	1,290.25
TOTALS (lbs/day, unmitigated)	18,745.34	21,481.70	171,107.93	595.01	109,483.10	21,339.77

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2040 Temperature (F): 60 Season: Winter

5/6/2011 7:19:48 AM

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	43,641.00	5.03	dwelling units	89,345.97	449,410.24	9,527,497.28
Apartments mid rise	13,714.00	5.03	dwelling units	47,737.63	240,120.28	5,090,550.09
Mobile home park	43,641.00	5.03	dwelling units	89,345.97	449,410.24	9,527,497.28
Retirement community	43,641.00	5.03	dwelling units	89,345.97	449,410.24	9,527,497.28
Junior high school		5.03	1000 sq ft	17,527.72	88,164.44	1,869,086.17
General light industry		5.03	1000 sq ft	72,802.65	366,197.34	7,763,383.82
General heavy industry		5.03	1000 sq ft	12,189.83	61,314.85	1,299,874.82
Industrial park		5.03	1000 sq ft	28,923.92	145,487.32	3,084,331.36
Manufacturing		5.03	1000 sq ft	72,802.65	366,197.34	7,763,383.82
CR		5.04	unknown	16,465.77	82,987.48	1,759,334.59
CT		5.05	1000 sq ft	7,155.12	36,133.36	766,027.22
CO		5.05	1000 sq ft	6,141.37	31,013.92	657,495.13
CC & MUPA		5.04	1000 sq ft	7,870.23	39,665.96	840,918.36
Other Public Facilities		5.03	1000 sq ft	35,946.46	180,810.71	3,833,187.11
					2,986,323.72	63,310,064.33

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.0	0.0	100.0	0.0
Light Truck < 3750 lbs	9.6	0.0	100.0	0.0
Light Truck 3751-5750 lbs	24.3	0.0	100.0	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	13.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.6	0.0	16.7	83.3
Heavy-Heavy Truck 33,001-60,000 lbs	2.1	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	2.7	33.3	66.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.6	0.0	92.3	7.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	21.2	21.2	21.2	21.2	21.2	21.2
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	28.9	10.0	61.1			
% of Trips - Commercial (by land use)						
Junior high school				20.0	10.0	70.0
General light industry				50.0	25.0	25.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General heavy industry				90.0	5.0	5.0
Industrial park				41.5	20.8	37.8
Manufacturing				48.0	24.0	28.0
CR				2.0	1.0	97.0
CT				5.0	2.5	92.5
CO				35.0	17.5	47.5
CC & MUPA				2.0	1.0	97.0
Other Public Facilities				2.0	1.0	97.0

5/6/2011 7:27:51 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - Residential Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	14,045.85	3,468.70	9,417.68	0.40	27.57	27.32

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	14,045.85	3,468.70	9,417.68	0.40	27.57	27.32

5/6/2011 7:27:51 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	260.96	3,378.78	1,437.78	0.04	6.47	6.40
Hearth - No Summer Emissions						
Landscape	1,441.93	89.92	7,979.90	0.36	21.10	20.92
Consumer Products	11,615.84					
Architectural Coatings	727.12					
TOTALS (lbs/day, unmitigated)	14,045.85	3,468.70	9,417.68	0.40	27.57	27.32

Area Source Changes to Defaults

5/6/2011 7:28:06 AM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - Residential Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	48,093.79	6,490.32	99,868.74	276.66	15,271.68	14,702.10

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	48,093.79	6,490.32	99,868.74	276.66	15,271.68	14,702.10

5/6/2011 7:28:06 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	260.96	3,378.78	1,437.78	0.04	6.47	6.40
Hearth	35,489.87	3,111.54	98,430.96	276.62	15,265.21	14,695.70
Landscaping - No Winter Emissions						
Consumer Products	11,615.84					
Architectural Coatings	727.12					
TOTALS (lbs/day, unmitigated)	48,093.79	6,490.32	99,868.74	276.66	15,271.68	14,702.10

Area Source Changes to Defaults

5/6/2011 7:29:12 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - SFR Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - SFR part Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	5,739.52	1,500.32	4,607.71	0.20	13.33	13.21

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	5,739.52	1,500.32	4,607.71	0.20	13.33	13.21

5/6/2011 7:29:12 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	112.40	1,455.38	619.31	0.02	2.79	2.76
Hearth - No Summer Emissions						
Landscape	720.84	44.94	3,988.40	0.18	10.54	10.45
Consumer Products	4,583.45					
Architectural Coatings	322.83					
TOTALS (lbs/day, unmitigated)	5,739.52	1,500.32	4,607.71	0.20	13.33	13.21

Area Source Changes to Defaults

5/6/2011 7:30:13 AM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - SFR Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - SFR part Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	19,025.08	2,727.42	39,477.64	109.45	6,029.81	5,805.02

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	19,025.08	2,727.42	39,477.64	109.45	6,029.81	5,805.02

5/6/2011 7:30:13 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	112.40	1,455.38	619.31	0.02	2.79	2.76
Hearth	14,006.40	1,272.04	38,858.33	109.43	6,027.02	5,802.26
Landscaping - No Winter Emissions						
Consumer Products	4,583.45					
Architectural Coatings	322.83					
TOTALS (lbs/day, unmitigated)	19,025.08	2,727.42	39,477.64	109.45	6,029.81	5,805.02

Area Source Changes to Defaults

5/9/2011 9:25:58 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\SCAQMD Buildout - 5-2011\Buildout - SCAQMD - MFR only.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - MFR Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	2,566.66	468.04	200.71	0.00	0.91	0.90

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	2,566.66	468.04	200.71	0.00	0.91	0.90

5/9/2011 9:25:58 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	36.15	468.02	199.16	0.00	0.90	0.89
Hearth - No Summer Emissions						
Landscape	0.12	0.02	1.55	0.00	0.01	0.01
Consumer Products	2,448.94					
Architectural Coatings	81.45					
TOTALS (lbs/day, unmitigated)	2,566.66	468.04	200.71	0.00	0.91	0.90

Area Source Changes to Defaults

5/6/2011 7:25:50 AM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - Commercial Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - Non-Res Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	1,571.11	553.62	480.31	0.01	1.06	1.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	1,571.11	553.62	480.31	0.01	1.06	1.05

5/6/2011 7:25:50 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	40.18	553.41	464.86	0.01	1.00	0.99
Hearth - No Summer Emissions						
Landscape	1.23	0.21	15.45	0.00	0.06	0.06
Consumer Products	0.00					
Architectural Coatings	1,529.70					
TOTALS (lbs/day, unmitigated)	1,571.11	553.62	480.31	0.01	1.06	1.05

Area Source Changes to Defaults

5/6/2011 7:25:35 AM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\23849\Application Data\Urbemis\Version9a\Projects\Temp\Buildout - SCAQMD - Commercial Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - Non-Res Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	1,569.88	553.41	464.86	0.01	1.00	0.99

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	1,569.88	553.41	464.86	0.01	1.00	0.99

5/6/2011 7:25:35 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	40.18	553.41	464.86	0.01	1.00	0.99
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions						
Consumer Products	0.00					
Architectural Coatings	1,529.70					
TOTALS (lbs/day, unmitigated)	1,569.88	553.41	464.86	0.01	1.00	0.99

Area Source Changes to Defaults

URBEMIS Model Output

MDAQMD Existing

5/9/2011 3:42:35 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Existing - 5-2011\Existing - MDAQMD - Mobile Source.urb924

Project Name: Riverside County GPA 960 County-wide Existing - MDAQMD - Mobile Source Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	1,942.22	3,193.01	21,948.52	16.59	2,821.22	575.32

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	1,942.22	3,193.01	21,948.52	16.59	2,821.22	575.32

5/9/2011 3:42:35 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	566.70	920.43	6,415.15	4.79	811.43	165.58
Apartments mid rise	60.14	97.67	680.74	0.51	86.11	17.57
Mobile home park	186.76	303.34	2,114.16	1.58	267.41	54.57
Junior high school	200.21	331.31	2,261.46	1.72	293.05	59.74
Warehouse	30.82	51.31	347.39	0.27	45.45	9.26
General light industry	84.04	137.63	952.23	0.71	121.48	24.78
General heavy industry	75.93	123.21	862.59	0.64	108.58	22.16
CR	302.18	503.14	3,406.27	2.61	445.62	90.81
CT	27.94	46.48	315.11	0.24	41.16	8.39
Other Pub Fac	407.50	678.49	4,593.42	3.52	600.93	122.46
TOTALS (tons/year, unmitigated)	1,942.22	3,193.01	21,948.52	16.59	2,821.22	575.32

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2007 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	28,037.86	3.66	dwelling units	42,812.00	156,691.92	2,538,409.28

5/9/2011 3:42:35 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	1,536.36	3.66	dwelling units	4,543.00	16,627.38	269,363.58
Mobile home park	11,709.04	3.66	dwelling units	14,109.00	51,638.94	836,550.89
Junior high school		3.66	1000 sq ft	15,371.00	56,257.86	917,003.10
Warehouse		3.66	1000 sq ft	2,384.00	8,725.44	142,224.67
General light industry		3.65	1000 sq ft	6,388.00	23,316.20	380,054.05
General heavy industry		3.65	1000 sq ft	5,709.00	20,837.85	339,656.95
CR		3.66	unknown	23,376.00	85,556.16	1,394,565.38
CT		3.66	1000 sq ft	2,159.00	7,901.94	128,801.62
Other Pub Fac		3.66	1000 sq ft	31,523.00	115,374.18	1,880,599.09
					542,927.87	8,827,228.61

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	45.6	2.2	97.4	0.4
Light Truck < 3750 lbs	9.7	4.1	88.7	7.2
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	12.0	0.8	98.4	0.8
Lite-Heavy Truck 8501-10,000 lbs	1.9	0.0	73.7	26.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	1.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	4.5	82.2	17.8	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.5	6.7	80.0	13.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	16.2	16.2	16.2	16.3	16.3	16.3
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	35.9	8.5	55.6			
% of Trips - Commercial (by land use)						
Junior high school				20.0	10.0	70.0
Warehouse				2.0	1.0	97.0
General light industry				50.0	25.0	25.0
General heavy industry				90.0	5.0	5.0
CR				2.0	1.0	97.0
CT				5.0	2.5	92.5
Other Pub Fac				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Existing - 5-2011\Existing - MDAQMD - Residential.urb924

Project Name: Riverside County GPA 960 County-wide Existing - MDAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	893.23	187.68	926.55	0.93	53.14	51.20

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	893.23	187.68	926.55	0.93	53.14	51.20

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	13.70	177.34	75.46	0.00	0.34	0.34
Hearth	124.30	5.73	331.93	0.91	51.41	49.48
Landscape	93.60	4.61	519.16	0.02	1.39	1.38
Consumer Products	575.44					
Architectural Coatings	86.19					
TOTALS (tons/year, unmitigated)	893.23	187.68	926.55	0.93	53.14	51.20

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Existing - 5-2011\Existing - MDAQMD - Non-Res.urb924

Project Name: Riverside County GPA 960 County-wide Existing - MDAQMD - Area - Non-Res Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	73.03	68.56	59.77	0.00	0.13	0.13

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	73.03	68.56	59.77	0.00	0.13	0.13

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	4.98	68.54	57.57	0.00	0.12	0.12
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.19	0.02	2.20	0.00	0.01	0.01
Consumer Products	0.00					
Architectural Coatings	67.86					
TOTALS (tons/year, unmitigated)	73.03	68.56	59.77	0.00	0.13	0.13

Area Source Changes to Defaults

URBEMIS Model Output

MDAQMD Buildout

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Buildout - 5-2011\Buildout - MDAQMD - Mobile Sources.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - MDAQMD - Mobile Source Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	2,021.54	2,272.63	21,417.14	78.86	12,968.61	2,527.85

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	2,021.54	2,272.63	21,417.14	78.86	12,968.61	2,527.85

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25
Single family housing	407.90	457.04	4,333.77	15.87	2,606.65	508.27
Apartments mid rise	145.29	162.80	1,543.69	5.65	928.49	181.05
Retirement community	407.90	457.04	4,333.77	15.87	2,606.65	508.27
Junior high school	66.64	75.38	701.71	2.61	430.65	83.88
General light industry	278.79	313.55	2,954.42	10.88	1,789.08	348.73
General heavy industry	46.98	52.55	500.44	1.83	299.61	58.44
Industrial park	110.54	124.52	1,169.29	4.32	710.75	138.51
Manufacturing	278.79	313.55	2,954.42	10.88	1,789.08	348.73
CR	62.33	70.75	653.79	2.45	404.51	78.76
CT	27.10	30.75	284.49	1.06	175.78	34.23
CO	23.43	26.43	247.55	0.92	150.91	29.40
CC & MUPA	29.79	33.82	312.50	1.17	193.35	37.64
Other Pub Fac	136.06	154.45	1,427.30	5.35	883.10	171.94
TOTALS (tons/year, unmitigated)	2,021.54	2,272.63	21,417.14	78.86	12,968.61	2,527.85

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2040 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	42,489.00	4.48	dwelling units	86,988.55	389,708.69	8,258,512.02
Apartments mid rise	8,901.00	4.48	dwelling units	30,985.37	138,814.45	2,941,686.61
Retirement community	42,489.00	4.48	dwelling units	86,988.55	389,708.69	8,258,512.02
Junior high school		4.48	1000 sq ft	14,369.86	64,376.97	1,364,791.91
General light industry		4.48	1000 sq ft	59,686.25	267,394.40	5,668,761.51
General heavy industry		4.48	1000 sq ft	9,993.67	44,771.64	949,158.83
Industrial park		4.48	1000 sq ft	23,712.88	106,233.71	2,252,154.66
Manufacturing		4.48	1000 sq ft	59,686.25	267,394.40	5,668,761.51
CR		4.48	unknown	13,499.23	60,476.55	1,282,102.96
CT		4.48	1000 sq ft	5,866.02	26,279.77	557,131.14
CO		4.48	1000 sq ft	5,034.92	22,556.44	478,196.57
CC & MUPA		4.48	1000 sq ft	6,452.30	28,906.30	612,813.65
Other Pub Fac		4.48	1000 sq ft	29,470.21	132,026.55	2,798,962.87
					1,938,648.56	41,091,546.26

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.0	0.0	100.0	0.0
Light Truck < 3750 lbs	9.6	0.0	100.0	0.0
Light Truck 3751-5750 lbs	24.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	13.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.6	0.0	16.7	83.3
Heavy-Heavy Truck 33,001-60,000 lbs	2.1	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	2.7	33.3	66.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.6	0.0	92.3	7.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	21.2	21.1	21.2	21.2	21.2	21.2
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	35.9	8.5	55.6			
% of Trips - Commercial (by land use)						
Junior high school				20.0	10.0	70.0
General light industry				50.0	25.0	25.0
General heavy industry				90.0	5.0	5.0
Industrial park				41.5	20.8	37.8

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Manufacturing				50.0	25.0	25.0
CR				2.0	1.0	97.0
CT				5.0	2.5	92.5
CO				35.0	17.5	47.5
CC & MUPA				2.0	1.0	97.0
Other Pub Fac				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Buildout - 5-2011\Buildout - MDAQMD - Area - Residential.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - MDAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	2,788.25	607.72	2,768.48	3.10	176.27	169.79

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	2,788.25	607.72	2,768.48	3.10	176.27	169.79

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	44.23	572.64	243.68	0.01	1.10	1.08
Hearth	444.53	19.10	1,106.88	3.03	171.42	164.99
Landscape	256.21	15.98	1,417.92	0.06	3.75	3.72
Consumer Products	1,918.91					
Architectural Coatings	124.37					
TOTALS (tons/year, unmitigated)	2,788.25	607.72	2,768.48	3.10	176.27	169.79

Area Source Changes to Defaults

5/9/2011 3:35:03 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Buildout - 5-2011\Buildout - MDAQMD - Area - MFR.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - MDAQMD - Area - MFR Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	365.09	58.30	191.19	0.46	26.02	25.04

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	365.09	58.30	191.19	0.46	26.02	25.04

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	4.28	55.44	23.59	0.00	0.11	0.10
Hearth	61.05	2.86	167.32	0.46	25.91	24.94
Landscape	0.02	0.00	0.28	0.00	0.00	0.00
Consumer Products	290.09					
Architectural Coatings	9.65					
TOTALS (tons/year, unmitigated)	365.09	58.30	191.19	0.46	26.02	25.04

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Buildout - 5-2011\Buildout - MDAQMD - Area - Non-Res.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - MDAQMD - Area - Non-Res Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	235.11	82.95	72.46	0.00	0.16	0.16

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	235.11	82.95	72.46	0.00	0.16	0.16

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas	6.02	82.91	69.64	0.00	0.15	0.15
Hearth	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.22	0.04	2.82	0.00	0.01	0.01
Consumer Products	0.00					
Architectural Coatings	228.87					
TOTALS (tons/year, unmitigated)	235.11	82.95	72.46	0.00	0.16	0.16

Area Source Changes to Defaults

Air Quality Appendix

Reduction URBEMIS Output

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\SCAQMD Buildout - 5-2011\Buildout - SCAQMD - Residential Area Source.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - SCAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	86.84	1,484.15	631.55	9.47	119.99	118.73

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (lbs/day, unmitigated)	86.84	1,484.15	631.55	9.47	119.99	118.73

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas						
Hearth	86.84	1,484.15	631.55	9.47	119.99	118.73
Landscape						
Consumer Products						
Architectural Coatings						
TOTALS (lbs/day, unmitigated)	86.84	1,484.15	631.55	9.47	119.99	118.73

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: R:\General Air Quality Info\Projects\100015640 - County of Riverside\Modeling\Urbemis\MDAQMD Buildout - 5-2011\Buildout - MDAQMD - Area - Residential.urb924

Project Name: Riverside County GPA 960 County-wide Buildout - MDAQMD - Area - Residential Only

Project Location: Riverside County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	43.95	0.69	0.29	0.00	0.06	0.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5
TOTALS (tons/year, unmitigated)	43.95	0.69	0.29	0.00	0.06	0.05

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5
Natural Gas						
Hearth	43.95	0.69	0.29	0.00	0.06	0.05
Landscape						
Consumer Products						
Architectural Coatings						
TOTALS (tons/year, unmitigated)	43.95	0.69	0.29	0.00	0.06	0.05

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%