Appendix B

Air Quality Analyses

2/14/2008 11:55:23 AM

Urbemis 2007 Version 9.2.2

Combined Summer Emissions Reports (Pounds/Day)

File Name: L:\ESP\VTA Co\VTA, City of\05-58810 Parklands Specific Plan MND\Report\Appendices\air quality 1.08\urb 9.2 parklands.urb9

Project Name: Parklands

Project Location: Ventura County APCD

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	6.34	49.28	26.95	0.00	333.81	2.88	336.68	69.71	2.65	72.36	4,143.18
2008 TOTALS (lbs/day mitigated)	6.34	49.28	26.95	0.00	182.84	2.88	185.72	38.19	2.65	40.83	4,143.18
2009 TOTALS (lbs/day unmitigated)	71.93	39.40	98.83	0.10	0.47	2.39	2.86	0.17	2.18	2.35	12,328.10
2009 TOTALS (lbs/day mitigated)	71.93	39.40	98.83	0.10	0.47	2.39	2.86	0.17	2.18	2.35	12,328.10
2010 TOTALS (lbs/day unmitigated)	71.36	36.44	92.16	0.10	0.47	2.19	2.66	0.17	2.00	2.16	12,328.87
2010 TOTALS (lbs/day mitigated)	71.36	36.44	92.16	0.10	0.47	2.19	2.66	0.17	2.00	2.16	12,328.87

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	33.30	5.64	21.74	0.00	0.06	0.06	6,947.88

2/14/2008 11:55:24 AM

TOTALS (lbs/day, mitigated)	33.21	4.55	21.26	0.00	0.06	0.06	5,564.46
Percent Reduction	0.27	19.33	2.21	NaN	0.00	0.00	19.91

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	48.36	47.20	552.53	0.40	71.11	13.47	40,590.92
TOTALS (lbs/day, mitigated)	45.63	44.17	517.04	0.38	66.55	12.61	37,985.55
Percent Reduction	5.65	6.42	6.42	5.00	6.41	6.38	6.42

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	81.66	52.84	574.27	0.40	71.17	13.53	47,538.80
TOTALS (lbs/day, mitigated)	66.42	9.10	42.52	0.00	0.12	0.12	11,128.92
Percent Reduction	18.66	82.78	92.60	100.00	99.83	99.11	76.59

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 4/21/2008-10/24/2008 Active Days: 135	6.34	**49.28**	26.95	0.00	**333.81**	**2.88**	**336.68**	**69.71**	**2.65**	**72.36**	4,143.18
Fine Grading 04/21/2008-10/24/2008	6.34	49.28	26.95	0.00	333.81	2.88	336.68	69.71	2.65	72.36	4,143.18
Fine Grading Dust	0.00	0.00	0.00	0.00	333.80	0.00	333.80	69.71	0.00	69.71	0.00
Fine Grading Off Road Diesel	6.28	49.18	25.15	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.10	1.80	0.00	0.01	0.00	0.01	0.00	0.00	0.01	179.29

2/12/2008 10:18:57 AM

Time Slice 10/27/2008-12/31/2008 Active Days: 48	4.24	21.92	11.93	0.00	0.02	1.75	1.77	0.01	1.61	1.62	1,762.65
Asphalt 10/27/2008-01/09/2009	4.24	21.92	11.93	0.00	0.02	1.75	1.77	0.01	1.61	1.62	1,762.65
Paving Off-Gas	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.21	18.89	9.61	0.00	0.00	1.63	1.63	0.00	1.50	1.50	1,272.41
Paving On Road Diesel	0.19	2.95	1.03	0.00	0.01	0.12	0.13	0.00	0.11	0.11	362.18
Paving Worker Trips	0.04	0.07	1.28	0.00	0.01	0.00	0.01	0.00	0.00	0.00	128.07
Time Slice 1/1/2009-1/9/2009 Active Days: 7	4.04	20.77	11.61	0.00	0.02	1.66	1.68	0.01	1.53	1.53	1,762.64
Asphalt 10/27/2008-01/09/2009	4.04	20.77	11.61	0.00	0.02	1.66	1.68	0.01	1.53	1.53	1,762.64
Paving Off-Gas	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.02	17.99	9.48	0.00	0.00	1.55	1.55	0.00	1.43	1.43	1,272.41
Paving On Road Diesel	0.18	2.71	0.93	0.00	0.01	0.11	0.12	0.00	0.10	0.10	362.18
Paving Worker Trips	0.04	0.07	1.19	0.00	0.01	0.00	0.01	0.00	0.00	0.00	128.06
Time Slice 1/12/2009-3/13/2009 Active Days: 45	7.60	39.36	98.11	0.10	0.46	2.39	2.85	0.17	2.18	2.35	12,251.21
Building 01/12/2009-06/22/2010	7.60	39.36	98.11	0.10	0.46	2.39	2.85	0.17	2.18	2.35	12,251.21
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	0.82	10.49	8.16	0.02	0.07	0.41	0.48	0.02	0.38	0.40	1,898.51
Building Worker Trips	2.42	4.16	75.32	0.08	0.39	0.17	0.56	0.14	0.14	0.28	8,093.42

2/12/2008 10:18:57 AM

Time Slice 3/16/2009-12/31/2009 Active Days: 209	**71.93**	39.40	**98.83**	**0.10**	0.47	2.39	2.86	0.17	2.18	2.35	12,328.10
Building 01/12/2009-06/22/2010	7.60	39.36	98.11	0.10	0.46	2.39	2.85	0.17	2.18	2.35	12,251.21
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	0.82	10.49	8.16	0.02	0.07	0.41	0.48	0.02	0.38	0.40	1,898.51
Building Worker Trips	2.42	4.16	75.32	0.08	0.39	0.17	0.56	0.14	0.14	0.28	8,093.42
Coating 03/16/2009-06/04/2010	64.33	0.04	0.72	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.89
Architectural Coating	64.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.72	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.89
Time Slice 1/1/2010-6/4/2010 Active Days: 111	71.36	36.44	92.16	**0.10**	0.47	2.19	2.66	0.17	2.00	2.16	**12,328.87**
Building 01/12/2009-06/22/2010	7.02	36.40	91.50	0.10	0.46	2.19	2.65	0.17	2.00	2.16	12,251.97
Building Off Road Diesel	4.08	23.31	14.31	0.00	0.00	1.67	1.67	0.00	1.54	1.54	2,259.28
Building Vendor Trips	0.75	9.31	7.56	0.02	0.07	0.36	0.43	0.02	0.33	0.35	1,898.62
Building Worker Trips	2.20	3.79	69.63	0.08	0.39	0.16	0.55	0.14	0.13	0.27	8,094.08
Coating 03/16/2009-06/04/2010	64.33	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.90
Architectural Coating	64.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.90
Time Slice 6/7/2010-6/22/2010 Active Days: 12	7.02	36.40	91.50	0.10	0.46	2.19	2.65	0.17	2.00	2.16	12,251.97
Building 01/12/2009-06/22/2010	7.02	36.40	91.50	0.10	0.46	2.19	2.65	0.17	2.00	2.16	12,251.97
Building Off Road Diesel	4.08	23.31	14.31	0.00	0.00	1.67	1.67	0.00	1.54	1.54	2,259.28
Building Vendor Trips	0.75	9.31	7.56	0.02	0.07	0.36	0.43	0.02	0.33	0.35	1,898.62
Building Worker Trips	2.20	3.79	69.63	0.08	0.39	0.16	0.55	0.14	0.13	0.27	8,094.08

2/12/2008 10:18:57 AM

Phase Assumptions

Phase: Fine Grading 4/21/2008 - 10/24/2008 - Default Fine Site Grading Description

Total Acres Disturbed: 66.76

Maximum Daily Acreage Disturbed: 16.69

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 10/27/2008 - 1/9/2009 - Default Paving Description

Acres to be Paved: 16.69

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 1/12/2009 - 6/22/2010 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

2/12/2008 10:18:57 AM

Phase: Architectural Coating 3/16/2009 - 6/4/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 4/21/2008-10/24/2008 Active Days: 135	6.34	**49.28**	26.95	0.00	182.84	**2.88**	185.72	38.19	**2.65**	40.83	4,143.18
Fine Grading 04/21/2008-10/24/2008	6.34	49.28	26.95	0.00	182.84	2.88	185.72	38.19	2.65	40.83	4,143.18
Fine Grading Dust	0.00	0.00	0.00	0.00	182.83	0.00	182.83	38.18	0.00	38.18	0.00
Fine Grading Off Road Diesel	6.28	49.18	25.15	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,963.89
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.06	0.10	1.80	0.00	0.01	0.00	0.01	0.00	0.00	0.01	179.29
Time Slice 10/27/2008-12/31/2008 Active Days: 48	4.24	21.92	11.93	0.00	0.02	1.75	1.77	0.01	1.61	1.62	1,762.65
Asphalt 10/27/2008-01/09/2009	4.24	21.92	11.93	0.00	0.02	1.75	1.77	0.01	1.61	1.62	1,762.65
Paving Off-Gas	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.21	18.89	9.61	0.00	0.00	1.63	1.63	0.00	1.50	1.50	1,272.41
Paving On Road Diesel	0.19	2.95	1.03	0.00	0.01	0.12	0.13	0.00	0.11	0.11	362.18
Paving Worker Trips	0.04	0.07	1.28	0.00	0.01	0.00	0.01	0.00	0.00	0.00	128.07

2/12/2008 10:18:57 AM

Time Slice 1/1/2009-1/9/2009 Active Days: 7	4.04	20.77	11.61	0.00	0.02	1.66	1.68	0.01	1.53	1.53	1,762.64
Asphalt 10/27/2008-01/09/2009	4.04	20.77	11.61	0.00	0.02	1.66	1.68	0.01	1.53	1.53	1,762.64
Paving Off-Gas	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.02	17.99	9.48	0.00	0.00	1.55	1.55	0.00	1.43	1.43	1,272.41
Paving On Road Diesel	0.18	2.71	0.93	0.00	0.01	0.11	0.12	0.00	0.10	0.10	362.18
Paving Worker Trips	0.04	0.07	1.19	0.00	0.01	0.00	0.01	0.00	0.00	0.00	128.06
Time Slice 1/12/2009-3/13/2009 Active Days: 45	7.60	39.36	98.11	0.10	0.46	2.39	2.85	0.17	2.18	2.35	12,251.21
Building 01/12/2009-06/22/2010	7.60	39.36	98.11	0.10	0.46	2.39	2.85	0.17	2.18	2.35	12,251.21
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	0.82	10.49	8.16	0.02	0.07	0.41	0.48	0.02	0.38	0.40	1,898.51
Building Worker Trips	2.42	4.16	75.32	0.08	0.39	0.17	0.56	0.14	0.14	0.28	8,093.42
Time Slice 3/16/2009-12/31/2009 Active Days: 209	**71.93**	39.40	**98.83**	**0.10**	0.47	2.39	2.86	0.17	2.18	2.35	12,328.10
Building 01/12/2009-06/22/2010	7.60	39.36	98.11	0.10	0.46	2.39	2.85	0.17	2.18	2.35	12,251.21
Building Off Road Diesel	4.37	24.71	14.63	0.00	0.00	1.81	1.81	0.00	1.67	1.67	2,259.28
Building Vendor Trips	0.82	10.49	8.16	0.02	0.07	0.41	0.48	0.02	0.38	0.40	1,898.51
Building Worker Trips	2.42	4.16	75.32	0.08	0.39	0.17	0.56	0.14	0.14	0.28	8,093.42
Coating 03/16/2009-06/04/2010	64.33	0.04	0.72	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.89
Architectural Coating	64.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.72	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.89

2/12/2008 10:18:57 AM

Time Slice 1/1/2010-6/4/2010 Active Days: 111	71.36	36.44	92.16	**0.10**	0.47	2.19	2.66	0.17	2.00	2.16	**12,328.87**
Building 01/12/2009-06/22/2010	7.02	36.40	91.50	0.10	0.46	2.19	2.65	0.17	2.00	2.16	12,251.97
Building Off Road Diesel	4.08	23.31	14.31	0.00	0.00	1.67	1.67	0.00	1.54	1.54	2,259.28
Building Vendor Trips	0.75	9.31	7.56	0.02	0.07	0.36	0.43	0.02	0.33	0.35	1,898.62
Building Worker Trips	2.20	3.79	69.63	0.08	0.39	0.16	0.55	0.14	0.13	0.27	8,094.08
Coating 03/16/2009-06/04/2010	64.33	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.90
Architectural Coating	64.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.66	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.90
Time Slice 6/7/2010-6/22/2010 Active Days: 12	7.02	36.40	91.50	0.10	0.46	2.19	2.65	0.17	2.00	2.16	12,251.97
Building 01/12/2009-06/22/2010	7.02	36.40	91.50	0.10	0.46	2.19	2.65	0.17	2.00	2.16	12,251.97
Building Off Road Diesel	4.08	23.31	14.31	0.00	0.00	1.67	1.67	0.00	1.54	1.54	2,259.28
Building Vendor Trips	0.75	9.31	7.56	0.02	0.07	0.36	0.43	0.02	0.33	0.35	1,898.62
Building Worker Trips	2.20	3.79	69.63	0.08	0.39	0.16	0.55	0.14	0.13	0.27	8,094.08

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 4/21/2008 - 10/24/2008 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

2/12/2008 10:18:57 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.42	5.44	2.43	0.00	0.01	0.01	6,917.07
Hearth - No Summer Emissions							
Landscape	2.85	0.20	19.31	0.00	0.05	0.05	30.81
Consumer Products	24.41						
Architectural Coatings	5.62						
TOTALS (lbs/day, unmitigated)	33.30	5.64	21.74	0.00	0.06	0.06	6,947.88

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.33	4.35	1.95	0.00	0.01	0.01	5,533.65
Hearth - No Summer Emissions							
Landscape	2.85	0.20	19.31	0.00	0.05	0.05	30.81
Consumer Products	24.41						
Architectural Coatings	5.62						
TOTALS (lbs/day, mitigated)	33.21	4.55	21.26	0.00	0.06	0.06	5,564.46

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Residential Increase Energy Efficiency Beyond Title 24	20.00
Commercial Increase Energy Efficiency Beyond Title 24	20.00

2/12/2008 10:18:57 AM

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	23.20	22.30	263.73	0.19	33.64	6.38	19,245.38
Condo/townhouse general	15.83	14.82	175.35	0.13	22.37	4.24	12,795.85
City park	0.27	0.16	1.76	0.00	0.23	0.04	132.50
Supermarket	8.91	9.84	110.74	0.08	14.74	2.79	8,345.61
Community Center	0.15	0.08	0.95	0.00	0.13	0.02	71.58
TOTALS (lbs/day, unmitigated)	48.36	47.20	552.53	0.40	71.11	13.47	40,590.92

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	21.95	20.91	247.34	0.18	31.55	5.98	18,049.12
Condo/townhouse general	14.83	13.72	162.32	0.12	20.71	3.93	11,844.87
City park	0.26	0.15	1.67	0.00	0.22	0.04	125.40
Supermarket	8.45	9.31	104.81	0.08	13.95	2.64	7,898.41
Community Center	0.14	0.08	0.90	0.00	0.12	0.02	67.75
TOTALS (lbs/day, mitigated)	45.63	44.17	517.04	0.38	66.55	12.61	37,985.55

Operational Mitigation Options Selected

Residential Mitigation Measures

2/12/2008 10:18:57 AM

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.31% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to a baseline of 9.57 and that product is

subtracted from the Unmitigated Trips

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 28

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.05% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to a baseline of 9.57 and that product is

2/12/2008 10:18:57 AM

Operational Mitigation Options Selected

Residential Mitigation Measures

subtracted from the Unmitigated Trips

Inputs Selected:

The Number of Intersections per Square Mile is 20

The Percent of Streets with Sidewalks on One Side is 20%

The Percent of Streets with Sidewalks on Both Sides is 70%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 20%

Nonresidential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.31%

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 28

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

2/12/2008 10:18:57 AM

Nonresidential Mitigation Measures

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.05%

Inputs Selected:

The Number of Intersections per Square Mile is 20

The Percent of Streets with Sidewalks on One Side is 20%

The Percent of Streets with Sidewalks on Both Sides is 70%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 20%

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 85 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	40.00	8.25	dwelling units	278.00	2,293.50	19,608.74
Condo/townhouse general	13.81	6.90	dwelling units	221.00	1,524.90	13,037.44
City park	11.5	1.59	acres	11.50	18.29	136.36
Supermarket	1.15	46.50	1000 sq ft	25.00	1,162.50	8,594.36

2/12/2008 10:18:57 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Community Center	0.3	1.52	1000 sq ft	6.56	9.97	73.72
	66.67 acres				5,009.16 ✓	41,450.62

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.1	1.9	97.7	0.4
Light Truck < 3750 lbs	8.7	3.4	90.9	5.7
Light Truck 3751-5750 lbs	23.5	0.9	99.1	0.0
Med Truck 5751-8500 lbs	11.5	0.9	99.1	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	0.7	0.0	28.6	71.4
Heavy-Heavy Truck 33,001-60,000 lbs	0.2	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	4.5	73.3	26.7	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)	10.8	7.3	7.5	9.5	7.4	7.4

2/12/2008 10:18:57 AM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Supermarket				2.0	1.0	97.0
Community Center				2.0	1.0	97.0

Operational Changes to Defaults

Ventura County APCD TDM Mitigation Fund Calculation

TC = EE * UC * D * 3 years
where:

TC = Total Cost for TDM Mitigation Fund Program
EE = Excess Emissions over threshold
UC = Unit Cost per pound
$5.18 ROC in 2000$ (January CPI at 167.9)
$7.54 NOx in 2000$ (January CPI at 167.9)
D = Days Of Operation

Project:	Parklands
Completion Date:	2010
Inflation Rate:	2.7%
Days of Operation:	365
Applicable Threshold:	25 pounds per day

Pollutant	Summer Daily Emissions	EE	Adjusted UC	Total Cost
ROC	66.42	41.4	$6.76	$102,220
NOx	9.1	-15.9	$9.84	$0

TDM Fund: ***$102,220***

Note: Based on URBEMIS 2001emission rates.

Greenhouse Gas Emission Worksheet
Mobile Emissions

From URBEMIS 2007 Vehicle Fleet Mix Output:

Daily Vehicle Miles Traveled (VMT):	41,451
Annual VMT:	15,129,615

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)
Light Auto	47.1%	0.4	0.1884	0.4	0.1884
Light Truck < 3750 lbs	8.7%	0.5	0.0435	0.6	0.0522
Light Truck 3751-5750 lbs	23.5%	0.5	0.1175	0.6	0.141
Med Truck 5751-8500 lbs	11.5%	0.5	0.0575	0.6	0.069
Lite-Heavy Truck 8501-10,000 lbs	1.7%	0.12	0.00204	0.2	0.0034
Lite-Heavy Truck 10,001-14,000 lbs	0.5%	0.12	0.0006	0.2	0.001
Med-Heavy Truck 14,001-33,000 lbs	0.7%	0.12	0.00084	0.2	0.0014
Heavy-Heavy Truck 33,001-60,000 lbs	0.2%	0.12	0.00024	0.2	0.0004
Other Bus	0.0%	0.5	0	0.6	0
Urban Bus	0.0%	0.5	0	0.6	0
Motorcycle	4.5%	0.09	0.00405	0.01	0.00045
School Bus	0.1%	0.5	0.0005	0.6	0.0006
Motor Home	1.5%	0.12	0.0018	0.2	0.003
Total			**0.41697**		**0.46085**

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
Assume Model year 2000-present, gasoline fueled.
Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0, April 2008.

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21 GWP
N2O	310 GWP

1 ton (short, US) = 0.90718474 metric ton.

Annual Mobile Emissions:

	Total Emissions		Total CO2e units	
CO2 Emissions* :	**6932.5**	tons CO2	**6,289**	metric tons CO2e
CH4 Emissions:	**6.3**	metric tons CH4	**132**	metric tons CO2e
N20 Emissions:	**7.0**	metric tons N2O	**2,161**	metric tons CO2e
		Project Total:	***8,583***	***metric tons CO2e***

* From URBEMIS 2007 results for mobile sources

Greenhouse Gas Emission Worksheet
Operational Emissions

Indirect Emission from Electricity Use

Total Project Annual KWh:	**782,417**	kWH/year
Project Annual MWh:	**782**	MWH/year

Emission Factors:

CO2 *	879	lbs/MWh/year
CH4 **	0.0067	lbs/MWh/year
N2O **	0.0037	lbs/MWh/year

Total Annual Operational Emissions (metric tons) = (Electricity Use (kWh) x EF)/ 2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	21	GWP
N2O	310	GWP

1 ton (short, US) = 0.90718474 metric ton.

Annual Operational Emissions:

	Total Emissions		**Total CO2e Units**	
CO2 emissions, electricity:	343.8648	tons	**311.9**	metric tons CO2e
CO2 emissions***:	1015.6000	tons	**921.3**	metric tons CO2e
CH4 emissions:	0.0024	metric tons	**0.0**	metric tons CO2e
N2O emissions:	0.0013	metric tons	**0.4**	metric tons CO2e
		Project Total	***1,234***	***metric tons CO2e***

References

* Table C.1: EPA eGRID CO2 Electricity Emission Factors by Subregion "Power Profiler"(Year 2004)
** Table C.3: Methane and Nitrous Oxide Electricity Emission Factors by State (Average years 2001-1003)
*** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.

Sources: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 2.2, March 2007.
Third Assessment Report, 2001, U.S. Environmental Protection Agency, U.S. Greeenhouse Gas Emissions and Sinks, 1990-2000 (April 2002).