

## **APPENDIX C**

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Greenhouse Gas Emission Modeling Data

**Yuba County GHG Inventory  
2010 and 2030 Alt 2**

		GHG Emissions (tonnes CO <sub>2</sub> e/yr)			
<b>Emissions Sector</b>	<b>Subsector</b>	<b>2010</b>	<b>2030</b>	<b>Percent Contribution 2010</b>	<b>Percent Contribution 2030</b>
Energy - Electricity	Residential	47,231	67,482		
	Commercial	37,411	48,822		
	Industrial	540	612		
	<b>Total</b>	<b>85,182</b>	<b>116,916</b>	<b>12.8%</b>	<b>13.7%</b>
Energy - Natural Gas	Residential	62,985	26,174		
	Commercial	48,263	16,323		
	Industrial	612	0		
	<b>Total</b>	<b>111,860</b>	<b>42,497</b>	<b>16.8%</b>	<b>5.0%</b>
Transportation	<b>Total</b>	<b>343,868</b>	<b>568,964</b>	<b>51.7%</b>	<b>66.9%</b>
Waste	<b>Total</b>	<b>18,579</b>	<b>29,420</b>	<b>2.8%</b>	<b>3.5%</b>
Wastewater	<b>Total</b>	<b>2,687</b>	<b>4,255</b>	<b>0.4%</b>	<b>0.5%</b>
Agriculture	Residue Burn	7,722	3,522		
	Livestock	16,825	11,531		
	Rice Cultivation	40,862	38,142		
	Farm Equipment	27,436	25,626		
	Ag Pumps	9,450	8,821		
	Fertilizer	941	879		
	<b>Total</b>	<b>103,235</b>	<b>88,520</b>	<b>15.5%</b>	<b>10.4%</b>
<b>Total Yuba County GHG Emissions</b>		<b>665,411</b>	<b>850,571</b>	<b>100.0%</b>	<b>100.0%</b>

No Ag	<b>562,176</b>	<b>762,051</b>	<b>199,875</b>
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Existing, On-the-Ground																	Weighted Averages	
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park Acrea	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs	Comm	Industrial	
23,833	4,713	1,526,121	1,087,344	-	615,444	47,748	811	3,133	97	4,515	2,072	2,006	7,133	69,151	18,679	807,227	48,559	
k																		

New Land Use under Previous (1996) GP (the No Project)																		
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park Acrea	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs			
31,859	2,720	5,362,047	3,241,214	3,619,623	2,360,920	705,094	2,464,098	215,859	370	5,788	2,656	2,572	12,867	88,649	43,558			
k																		

New Land Use under the General Plan Update (the Project) in 2030																		
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park Acrea	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs			
12,064	2,428	1,696,255	2,291,381	699,190	448,542	582,184	568,283	306,897	83	2,302	1,056	1,023	4,554	35,256	15,994			
k																		

New Land Use under the General Plan Update (the Project) Alt2																		
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park Acrea	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs			
12,064	2,428	1,696,255	2,291,381	699,190	448,542	582,184	568,283	306,897	83	2,302	1,056	1,023	4,554	35,256	15,994	1,283,842	1,150,466	
k																		

Annual Percent increase Existing to 2030 Alt 2																		
SF Units	MF Units	Comm. Sqft	Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park Acrea	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs					
3%	3%	6%	11%	4%	61%	3505%	490%	4%	3%	3%	3%	3%	3%	4%	1.590434171	23.6921667		
0.026																		
0.015																		
10																		
100																		
100%																		

Existing Yr	2010
Building Yr	2030

Maximum Acreage affected by 2030 GPU at Full Buildout  
69,919 total  
19 per day  
3495.95 per year

Maximum Acreage affected by 2030 GPU Alt2 by 2030  
21,790 total  
6 per day  
1089.50

Maximum Acreage affected by 1996 GP at Buildout  
70,954 total  
19 per day  
3547.71

Construction Phase	1996 GP		Construction Durations Months		
	Ratio	Percent	2030 GPU	2030 Alt 2	240
FG	2	19%	22.9	45.7	45.7
P	0.5	5%	5.7	11.4	11.4
B	7	67%	80.0	160.0	160.0
AC	1	10%	11.4	22.9	22.9
10.5					

Unincorporated Yuba County Electricity Use

	GHG Emissions, MT CO <sub>2</sub>				
	2007	from electricity use 2010*	2030**	Net Increase	from NG use 2030 Revised
residential	44,770	47,231	67,482	20,250	62,985
commercial	36,465	37,411	48,822	11,411	48,263
industrial		540	612	72	612

TOTCITY	YEAR	CATEGORY	RES ELEC CO2(metric tonnes)	COM ELEC CO2(metric tonnes)	IND ELEC CO2(metric tonnes)
UNINC YUBA COUNTY	2007	(3) COUNTY		6	805
UNINC YUBA COUNTY	2007	Non-County		44764	35660
<b>Total</b>				<b>44770</b>	<b>36465</b>

TOTCITY	YEAR	CATEGORY	RES ELEC CO2(metric tonnes)	COM ELEC CO2(metric tonnes)	IND ELEC CO2(metric tonnes)
UNINC YUBA COUNTY	2030	(3) COUNTY		9	1.08E+03
UNINC YUBA COUNTY	2030	Non-County		67473	4.77E+04
<b>Total</b>				<b>67482</b>	<b>4.88E+04</b>

\* 2010 emissions based on projected growth

\*\* 2030 emissions based on projected growth of specific land use area

Source: Energy Information Administration. 2010. Pacific Region. Available: <http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html>

The 15/15 rule requires that any aggregated information provided by the Utilities must be made up of at least 15 customers and a single customer's load must be less than 15 percent of an assigned category. If the number of customers in the compiled data is below 15, or if a single customer's load is more than 15 percent of the total data, categories must be combined before

the information is released. The Rule further requires that if the 15/15 Rule is triggered for a second time after the data has been screened once already using the 15/15 Rule, the customer be dropped from the information provided. In addition to the 15/15 Rule, the CPUC further determined that no information about customers with demands above 500 kW should be included in the distributed information.

For 2010 estimation the following assumptions were used

<b>PG&amp;E</b>	<b>Average of PG&amp;E Factors</b>
Residential Natural Gas Consumption Annual Growth Rate 2010-2020	1.11%
Residential Electricity Consumption Annual Growth Rate 2010-2020	1.80%
Commercial Natural Gas Consumption Annual Growth Rate 2010-2020	0.52%
Commercial Electricity Consumption Annual Growth Rate 2010-2020	1.34%
Industrial Natural Gas Consumption Annual Growth Rate 2010-2020	-0.37%
Industrial Electricity Consumption Annual Growth Rate 2010-2020	0.63%

2007	2010*	2030**	Net Increase	2030 Revised
26174	27055	33739	6684	33,104
16323	16341	18127	1786	17,959
	238	221	-17	221

RES	COM	IND	
GAS	GAS	GAS	
CO2(metric tonnes)	CO2(metric tonnes)	CO2(metric tonnes)	
	186		*county-owned buildings ~ 1 % of total
26174	15343	794	
<b>26174</b>	<b>15529</b>	<b>794</b>	

RES	COM	IND	
GAS	GAS	GAS	
CO2(metric tonnes)	CO2(metric tonnes)	CO2(metric tonnes)	
	1.96E+02		*county-owned buildings ~ 1 % of total
26174	1.61E+04	0	
<b>26174</b>	<b>1.63E+04</b>	<b>0</b>	

**Yuba County GHG Emissions Inventory**  
**Transportation Emissions**  
 Alt 2

Calendar Year	2010	Emission Factors			Total Emissions (tonnes CO2e/yr)
Category		CO2 (ton/yr)	N2O (tons/yr)	CH4 (tons/yr)	
VMT/yr		369,690	24	37	343,868

Yuba County Daily VMT

2010	1,334,948
2030	4,408,074
Net New	3,073,126

Calendar Year	2030	Emission Factors			Total Emissions (tonnes CO2e/yr)
Category		CO2 (ton/yr)	N2O (tons/yr)	CH4 (tons/yr)	
VMT/yr		599,524	81	22	568,964

**Table 4: Methane and Nitrous Oxide Emission Factors from CCAR General Reporting Protocol v. 3.1 Table C.4**  
 model years 1984-present and 1985-present

Fuel - Vehicle Type	Emission Factor	Percent Contribution		EMFAC CO2		Emfac CH4	
	N2O (g/mi)	2010	2030	2010	2030	2010	2030
Gas - Passenger Car	0.0647						
Gas - Passenger Car	0.056						
Gas - Passenger Car	0.0473						
Gas - Passenger Car	0.0426						
Gas - Passenger Car	0.0422						
Gas - Passenger Car	0.0393						
Gas - Passenger Car	0.0337						
Gas - Passenger Car	0.0273						
Gas - Passenger Car	0.0158						
Gas - Passenger Car	0.0153						
Gas - Passenger Car	0.0135						
Gas - Passenger Car	0.0083						
Gas - Passenger Car	0.0079						
<b>Subtotal Passenger Car</b>	<b>0.0318</b>	<b>0.313131313</b>	<b>0.314553991</b>				
Gas - Light Trucks	0.1035						

  

from Emfac	1012.85	2329.366	0.101	0.061
tons/day	1012.85	2329.366	0.101	0.061
Pavley LCFS Reduction		687		
Adjusted Tn/day	1,013	1,643	0.101	0.061
tons/yr	369,690	599,524	36.751	22.295

Gas - Light Trucks	0.0982		
Gas - Light Trucks	0.0908		
Gas - Light Trucks	0.0871		
Gas - Light Trucks	0.0871		
Gas - Light Trucks	0.0728		
Gas - Light Trucks	0.0564		
Gas - Light Trucks	0.0621		
Gas - Light Trucks	0.0164		
Gas - Light Trucks	0.0228		
Gas - Light Trucks	0.0114		
Gas - Light Trucks	0.0132		
Gas - Light Trucks	0.0101		
<b>Subtotal Light Trucks</b>	<b>0.0563</b>	0.505050505	0.523474178
Gas - HD Vehicles	0.0515		
Gas - HD Vehicles	0.0849		
Gas - HD Vehicles	0.0933		
Gas - HD Vehicles	0.1142		
Gas - HD Vehicles	0.168		
Gas - HD Vehicles	0.1726		
Gas - HD Vehicles	0.1693		
Gas - HD Vehicles	0.1435		
Gas - HD Vehicles	0.1092		
Gas - HD Vehicles	0.1235		
Gas - HD Vehicles	0.1307		
Gas - HD Vehicles	0.124		
Gas - HD Vehicles	0.0285		
Gas - HD Vehicles	0.0177		
<b>Subtotal HD Vehicles</b>	<b>0.1094</b>	0.050505051	0.05399061
Diesel - Passenger Car	0.0012		
Diesel - Passenger Car	0.001		
<b>Subtotal DSL Pass Car</b>	<b>0.0011</b>	0	0
Diesel - Light Truck	0.0017		
Diesel - Light Truck	0.0014		
Diesel - Light Truck	0.0015		
<b>Subtotal DSL Light Truck</b>	<b>0.0015</b>	0.01010101	0
Diesel - HD Truck	0.0048	0.111111111	0.096244131

Emfac Default	Pop	Feer & Piers	Adjusted pop
VMT		VMT	
3249002	95360	4,408,074	129379

	% of Total	
	2010	2030
P Car Gas	0.313131313	0.314553991
LT Gas	0.505050505	0.523474178
HD Gas	0.050505051	0.05399061
P Car Dsl	0	0
LT Dsl	0.01010101	0
HD Dsl	0.111111111	0.096244131

Calculated from percent contribution by vehicle type per analysis year

Calendar year 2010 and 2030 daily VMT was provided by Fehr and Peers. Annual VMT was calculated by multiplying daily VMT by 365.

California Climate Action Registry (CCAR). 2009 (January). California Climate Action Registry General Reporting Protocol Version 3.1. Table C.4

\*Used weighted percent contribution to total vehicular emissions for estimating N2O emisison.

**Yuba County Greenhouse Gas Emissions Inventory  
Domestic Waste Water Treatment - 2007**

Facility	First Year of Operation	Year of Data	Type of Treatment	Facility-Specific Data									
				Capacity (MGD)	Capacity (G/yr)	Influent (MGD)	Influent (G/yr)	Influent BOD (mg/L)	BOD (Kg/Gal)	BOD (kg/yr)	Adjusted Emission Factor (kg CH4/kg BOD)	kg CH4/yr	tonnes CO2e/yr
LCWD WWTP		2007			-	1.80	657,000,000	200	0.0008	497,403	0.12	59,688	1,373
OPUD WWTP		2006			-	1.53	558,450,000	220	0.0008	465,072	0.12	55,809	1,284
River Highlands CSD WWTP		ND			-	0.03	9,490,000	310	0.0012	11,136	0.12	1,336	31

<b>Total (2007)</b>	<b>2,687</b>
<b>Per SP (Tns/yr/sp)</b>	<b>0.0306</b>

Source:  
Intergovernmental Panel on Climate Change 2006. IPCC Guidelines for National Greenhouse Gas Inventories; Chapter 6: Wastewater Treatment and Discharge  
MCF of 0.2 is the EF representing the lowest end of the "poorly managed centralized aerobic treatment plant" range.  
MGD from Utilities Section of this EIR

<b>Total (2030)</b>	<b>4,255</b>
<b>Per SP (Tns/yr/sp)</b>	<b>0.0306</b>

Conversion Factors:

Liter	Gallon	
1	0.264	
Year	Days	
1	365	
Kg	mg	
1	1000000	
MG	G	
1	1000000	

Default Emission Factor (kg CH4/kg BOD)	CH4 Correction Factor	Adjusted Emission Factor (kg CH4/kg BOD)	N2O per person/	N2O g/yr
0.6	0.2	0.12	3.2	163998.492

0.18

Landfilled Waste Unincorporated	2008		Yuba County Landfills		2030
	112,126 tons/yr		Ostrom Rd Landfill		
		CIWMB	EF by Waste		
Overall CA Waste Characterization*	tons	MTCO2e/ton	MTCO2e		
Paper	17.30%	34,812	0.29	9,979	
Glass	1.40%	3,818	0.04	153	
Metal	4.60%	6,341	0.04	254	
Plastic	9.60%	10,407	0.04	416	
Other Organic	32.40%	42,977	0.15	6,447	
Inerts and Other	29.10%	11,054	0.04	442	
Household Hazardous Waste	0.30%	297	0.04	12	
Special Waste	3.90%	58	0.04	2	
Mixed Residue	0.80%	2,362	0.37	874	
<b>Total</b>	<b>99.90%</b>	<b>112,126</b>		<b>18,579</b>	<b>29,420</b>
Per Capita				<b>0.2115</b>	<b>0.2115</b>

\*Commercial, residential and self-hauled waste characterization from CIWMB, 2008 Waste Characterization Study.

\*Used PC factor for electronics/HHW/Special Waste, mixed organic factor for other organic, and aggregate for inerts, according to categories and

\*Note: USEPA does not have emission factors for medical waste, HHW, C&D waste, and special wastes such as bulky items/white goods.

(WARM Version 9.01, 3/09)

[http://www.epa.gov/climatechange/wycd/waste/calculators/Warm\\_home.html#click](http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html#click)

The emission factors presented in this table reflect national average landfill gas recovery practices and transportation distances.

### Greenhouse Gas Emission Factors (MTCO2E per short ton)

Material	Source Reduction	Recycling	Landfilling, National Average	Landfilling, No Recovery	Landfilling, Flaring	Landfilling, Energy Recovery	Combustion	Composting
							0.06	N/A
Aluminum Cans	-8.29	-13.67	0.04	0.04	0.04	0.04	-1.54	N/A
Steel Cans	-3.19	-1.8	0.04	0.04	0.04	0.04	0.06	N/A
Copper Wire	-7.41	-4.97	0.04	0.04	0.04	0.04	0.05	N/A
Glass	-0.58	-0.28	0.04	0.04	0.04	0.04	0.91	N/A
HDPE	-1.8	-1.4	0.04	0.04	0.04	0.04	0.91	N/A
LDPE	-2.29	-1.71	0.04	0.04	0.04	0.04	1.07	N/A

PET	-2.11	-1.55	0.04	0.04	0.04	0.04	-0.66	N/A
Corrugated Box	-5.59	-3.11	0.33	1.49	-0.22	-0.46	-0.48	N/A
Magazines	-8.66	-3.07	-0.33	0.14	-0.55	-0.65	-0.75	N/A
Newspaper	-4.89	-2.8	-0.89	-0.48	-1.09	-1.18	-0.63	N/A
Office Paper	-8.01	-2.85	1.76	3.71	0.84	0.42	-0.75	N/A
Phonebook	-6.34	-2.66	-0.89	-0.48	-1.09	-1.18	-0.63	N/A
Textbook	-9.18	-3.11	1.76	3.71	0.84	0.42	-0.79	N/A
Dimensional Lumber	-2.02	-2.46	-0.52	0.07	-0.81	-0.93	-0.79	N/A
Fiberboard	-2.22	-2.47	-0.52	0.07	-0.81	-0.93	-0.18	-0.2
Food Waste	N/A	N/A	0.68	1.43	0.33	0.16	-0.22	-0.2
Yard Waste	N/A	N/A	-0.34	0.06	-0.54	-0.62	-0.22	-0.2
Grass	N/A	N/A	0.15	0.51	-0.02	-0.1	-0.22	-0.2
Leaves	N/A	N/A	-0.58	-0.3	-0.72	-0.78	-0.22	-0.2
Branches	N/A	N/A	-0.52	0.07	-0.81	-0.93	-0.66	N/A
Mixed Paper Board	N/A	-3.54	0.27	1.35	-0.24	-0.47	-0.66	N/A
Mixed Paper - Residential	N/A	-3.54	0.19	1.21	-0.3	-0.52	-0.6	N/A
Mixed Paper - Office	N/A	-3.42	0.38	1.43	-0.12	-0.34	-1.07	N/A
Mixed Metals	N/A	-5.26	0.04	0.04	0.04	0.04	0.97	N/A
Mixed Plastics	N/A	-1.52	0.04	0.04	0.04	0.04	-0.6	N/A
Mixed Recyclables	N/A	-2.88	0.08	0.93	-0.3	-0.47	-0.2	-0.2
Mixed Organics	N/A	N/A	0.15	0.59	-0.24	-0.37	-0.13	N/A
MixedMSW	N/A	N/A	0.37	1.34	-0.1	-0.31	0.37	N/A
Carpets	-4.03	-7.23	0.04	0.04	0.04	0.04	-0.2	N/A
PCs	-55.97	-2.27	0.04	0.04	0.04	0.04	N/A	N/A
ClayBricks	-0.29	N/A	0.04	0.04	0.04	0.04	N/A	N/A
Aggregate	N/A	-0.01	0.04	0.04	0.04	0.04	N/A	N/A
FlyAsh	N/A	-0.87	0.04	0.04	0.04	0.04	0.09	N/A
Tires	-4.01	-1.84	0.04	0.04	0.04	0.04		

All Paper Product Average

0.28666667

subcategories described in the CIWMB 2008 Waste Characterization Study.

Household Waste		Commercial Waste	
Paper	13739	Paper	21073
Glass	2020	Glass	1798
Metal	2316	Metal	4025
Plastic	4427	Plastic	5980
Other Organic	22521	Other Organic	20456

Construction	2,242	Construction	8812
Household Haz Mat	162	Household Haz Mat	135
Special Hazmat	12	Special Waste	46
Mixed Residue	2003	Mixed Residue	359



**CO2 Emission Reductions from the Pavley I Regulation & the Low Carbon Fuel Standard for Yuba - 2030 (Yuba GPU 2030 Alt 2)**

<b>Vehicle Category</b>	<b>Vehicle Population</b>	<b>Weekday VMT from EMFAC (VMT/day)</b>	<b>Weekday CO2 Emissions from EMFAC (tons/day)</b>	<b>Weekday CO2 Emission Reduction from Pavley I (tons/day)</b>	<b>Weekday CO2 Emissions after adopting Pavley I (tons/day)</b>	<b>% CO2 Emission Reduction from LCFS</b>	<b>Weekday CO2 Emission Reduction from LCFS (tons/day)</b>	<b>Weekday CO2 Emissions after adopting Pavley I &amp; LCFS (tons/day)</b>	<b>Annual CO2 Emissions after adopting Pavley I &amp; LCFS (MMTCO2/year)</b>
<b>LDA</b>	51,775	1,826,694	731.27	232.08	499.19	10.00%	49.92	449.27	0.14
<b>LDT1</b>	27,413	970,260	488.25	151.69	336.57	10.00%	33.66	302.91	0.10
<b>LDT2</b>	25,628	897,950	462.59	104.30	358.30	10.00%	35.83	322.47	0.10
<b>MDV</b>	11,387	384,769	269.91	58.19	211.72	10.00%	21.17	190.55	0.06
<b>Total</b>	<b>116,203</b>	<b>4,079,673</b>	<b>1,952.03</b>	<b>546.26</b>	<b>1,405.77</b>	<b>10.00%</b>	<b>140.58</b>	<b>1,265.19</b>	<b>0.40</b>

CO2 Reduction

686.84 tons/day

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: L:\~Practice Group Related\AQ\1 Projects\Yuba County GP\AQ\URBEMIS\Yuba 2030 Alt 2\Yuba Cnty 2030 GPU Construction2.urb924

Project Name: Yuba County 2030 GPU Alt2

Project Location: Yuba County

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

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2011 TOTALS (lbs/day unmitigated)	719.16	138.39	259.99	0.20	120.92	7.51	128.43	25.38	6.86	32.25	29,048.68
2011 TOTALS (lbs/day mitigated)	648.72	138.39	259.99	0.20	9.28	7.51	16.79	2.07	6.86	8.93	29,048.68
2012 TOTALS (lbs/day unmitigated)	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79
2012 TOTALS (lbs/day mitigated)	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/3/2011-2/14/2011 Active Days: 31	3.98	31.71	18.61	0.00	120.01	1.69	121.69	25.06	1.55	26.62	3,135.07
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	120.01	1.69	121.69	25.06	1.55	26.62	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	120.00	0.00	120.00	25.06	0.00	25.06	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Time Slice 2/15/2011-2/15/2011 Active Days: 1	29.79	<b>138.39</b>	<b>259.99</b>	<b>0.20</b>	<b>120.92</b>	<b>7.51</b>	<b>128.43</b>	<b>25.38</b>	<b>6.86</b>	<b>32.25</b>	<b>29,048.68</b>
Asphalt 02/15/2011-03/15/2011	11.53	38.74	18.61	0.03	0.12	2.36	2.48	0.04	2.17	2.21	4,810.37
Paving Off-Gas	7.17	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81

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Paving On Road Diesel	1.28	20.38	6.49	0.03	0.11	0.73	0.85	0.04	0.68	0.71	3,263.97
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
<b>Building 02/15/2011-10/28/2011</b>	<b>12.28</b>	<b>51.43</b>	<b>213.27</b>	<b>0.16</b>	<b>0.78</b>	<b>2.64</b>	<b>3.43</b>	<b>0.28</b>	<b>2.38</b>	<b>2.66</b>	<b>19,286.52</b>
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.54	18.77	17.01	0.04	0.15	0.68	0.83	0.05	0.62	0.67	3,970.56
Building Worker Trips	6.97	10.82	182.31	0.13	0.64	0.38	1.02	0.23	0.31	0.54	13,056.68
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	120.01	1.69	121.69	25.06	1.55	26.62	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	120.00	0.00	120.00	25.06	0.00	25.06	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
<b>Trenching 02/15/2011-01/13/2012</b>	<b>2.00</b>	<b>16.51</b>	<b>9.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>	<b>0.83</b>	<b>0.00</b>	<b>0.76</b>	<b>0.76</b>	<b>1,816.71</b>
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 2/16/2011-3/15/2011 Active Days: 20	25.82	106.68	241.38	0.20	0.91	5.83	6.74	0.32	5.31	5.63	25,913.60
Asphalt 02/15/2011-03/15/2011	11.53	38.74	18.61	0.03	0.12	2.36	2.48	0.04	2.17	2.21	4,810.37
Paving Off-Gas	7.17	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	1.28	20.38	6.49	0.03	0.11	0.73	0.85	0.04	0.68	0.71	3,263.97
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
<b>Building 02/15/2011-10/28/2011</b>	<b>12.28</b>	<b>51.43</b>	<b>213.27</b>	<b>0.16</b>	<b>0.78</b>	<b>2.64</b>	<b>3.43</b>	<b>0.28</b>	<b>2.38</b>	<b>2.66</b>	<b>19,286.52</b>
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.54	18.77	17.01	0.04	0.15	0.68	0.83	0.05	0.62	0.67	3,970.56
Building Worker Trips	6.97	10.82	182.31	0.13	0.64	0.38	1.02	0.23	0.31	0.54	13,056.68
<b>Trenching 02/15/2011-01/13/2012</b>	<b>2.00</b>	<b>16.51</b>	<b>9.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>	<b>0.83</b>	<b>0.00</b>	<b>0.76</b>	<b>0.76</b>	<b>1,816.71</b>
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07

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Time Slice 3/16/2011-10/7/2011 Active Days: 148	14.28	67.94	222.77	0.17	0.79	3.47	4.26	0.28	3.14	3.42	21,103.23
Building 02/15/2011-10/28/2011	12.28	51.43	213.27	0.16	0.78	2.64	3.43	0.28	2.38	2.66	19,286.52
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.54	18.77	17.01	0.04	0.15	0.68	0.83	0.05	0.62	0.67	3,970.56
Building Worker Trips	6.97	10.82	182.31	0.13	0.64	0.38	1.02	0.23	0.31	0.54	13,056.68
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 10/10/2011-10/28/2011 Active Days: 15	<b>719.16</b>	68.64	234.49	0.17	0.83	3.49	4.32	0.30	3.16	3.46	21,942.39
Building 02/15/2011-10/28/2011	12.28	51.43	213.27	0.16	0.78	2.64	3.43	0.28	2.38	2.66	19,286.52
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.54	18.77	17.01	0.04	0.15	0.68	0.83	0.05	0.62	0.67	3,970.56
Building Worker Trips	6.97	10.82	182.31	0.13	0.64	0.38	1.02	0.23	0.31	0.54	13,056.68
Coating 10/08/2011-12/29/2011	<b>704.88</b>	<b>0.70</b>	<b>11.72</b>	<b>0.01</b>	<b>0.04</b>	<b>0.02</b>	<b>0.07</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>839.16</b>
Architectural Coating	704.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.45	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 10/31/2011-12/29/2011 Active Days: 44	706.88	17.20	21.22	0.01	0.05	0.85	0.90	0.02	0.78	0.79	2,655.88
Coating 10/08/2011-12/29/2011	704.88	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Architectural Coating	704.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.45	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 12/30/2011-12/30/2011 Active Days: 1	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71

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Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 1/2/2012-1/13/2012 Active	<u>1.85</u>	<u>15.32</u>	<u>9.31</u>	<u>0.00</u>	<u>0.00</u>	<u>0.74</u>	<u>0.74</u>	<u>0.00</u>	<u>0.68</u>	<u>0.68</u>	<u>1,816.79</u>
Days: 10											
Trenching 02/15/2011-01/13/2012	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.05	0.08	1.30	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.15

Phase Assumptions

Phase: Mass Grading 1/3/2011 - 2/15/2011 - Default Fine Site Grading Description

Total Acres Disturbed: 163.42

Maximum Daily Acreage Disturbed: 6

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 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
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 2/15/2011 - 1/13/2012 - Type Your Description Here

Off-Road Equipment:

- 2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2011 - 3/15/2011 - Default Paving Description

Acres to be Paved: 57.43

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 8 hours per day

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

Phase: Building Construction 2/15/2011 - 10/28/2011 - 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

Phase: Architectural Coating 10/8/2011 - 12/29/2011 - 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 Winter Pounds Per Day, Mitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/3/2011-2/14/2011 Active Days: 31	3.98	31.71	18.61	0.00	8.37	1.69	10.05	1.75	1.55	3.30	3,135.07
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	8.37	1.69	10.05	1.75	1.55	3.30	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	8.36	0.00	8.36	1.75	0.00	1.75	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Time Slice 2/15/2011-2/15/2011 Active Days: 1	29.79	<b>138.39</b>	<b>259.99</b>	<b>0.20</b>	<b>9.28</b>	<b>7.51</b>	<b>16.79</b>	<b>2.07</b>	<b>6.86</b>	<b>8.93</b>	<b>29,048.68</b>
Asphalt 02/15/2011-03/15/2011	11.53	38.74	18.61	0.03	0.12	2.36	2.48	0.04	2.17	2.21	4,810.37
Paving Off-Gas	7.17	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	1.28	20.38	6.49	0.03	0.11	0.73	0.85	0.04	0.68	0.71	3,263.97

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Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Building 02/15/2011-10/28/2011	12.28	51.43	213.27	0.16	0.78	2.64	3.43	0.28	2.38	2.66	19,286.52
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.54	18.77	17.01	0.04	0.15	0.68	0.83	0.05	0.62	0.67	3,970.56
Building Worker Trips	6.97	10.82	182.31	0.13	0.64	0.38	1.02	0.23	0.31	0.54	13,056.68
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	8.37	1.69	10.05	1.75	1.55	3.30	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	8.36	0.00	8.36	1.75	0.00	1.75	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
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Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
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Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 10/10/2011-10/28/2011	<u>648.72</u>	68.64	234.49	0.17	0.83	3.49	4.32	0.30	3.16	3.46	21,942.39
Active Days: 15											
Building 02/15/2011-10/28/2011	12.28	51.43	213.27	0.16	0.78	2.64	3.43	0.28	2.38	2.66	19,286.52
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	1.54	18.77	17.01	0.04	0.15	0.68	0.83	0.05	0.62	0.67	3,970.56
Building Worker Trips	6.97	10.82	182.31	0.13	0.64	0.38	1.02	0.23	0.31	0.54	13,056.68
Coating 10/08/2011-12/29/2011	634.43	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Architectural Coating	633.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.45	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 10/31/2011-12/29/2011	636.44	17.20	21.22	0.01	0.05	0.85	0.90	0.02	0.78	0.79	2,655.88
Active Days: 44											
Coating 10/08/2011-12/29/2011	634.43	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Architectural Coating	633.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.45	0.70	11.72	0.01	0.04	0.02	0.07	0.01	0.02	0.03	839.16
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 12/30/2011-12/30/2011	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Active Days: 1											
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71

**12/2/2010 11:56:40 AM**

Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 1/2/2012-1/13/2012 Active	<u>1.85</u>	<u>15.32</u>	<u>9.31</u>	<u>0.00</u>	<u>0.00</u>	<u>0.74</u>	<u>0.74</u>	<u>0.00</u>	<u>0.68</u>	<u>0.68</u>	<u>1,816.79</u>
Days: 10											
Trenching 02/15/2011-01/13/2012	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.05	0.08	1.30	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.15

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/3/2011 - 2/15/2011 - Default Fine Site Grading Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

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

PM10: 5% PM25: 5%

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

PM10: 55% PM25: 55%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 10/8/2011 - 12/29/2011 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

**Land Use Data**

<b>2010 SFR</b>	<b>MFR</b>
83%	17%

<b>2030 SFR</b>	<b>MFR</b>
83%	17%

**Percent Reduction from 2005 Title 24 to 2008 Title 24**

**ELECTRICITY**

<b>SFR</b>	<b>MFR</b>	<b>Res (WtAvg)</b>	<b>NonRes</b>
22.7%	19.7%	22.2%	4.9%

**NATURAL GAS**

<b>SFR</b>	<b>MFR</b>	<b>Res (WtAvg)</b>	<b>NonRes</b>
10.0%	7.0%	9.5%	9.4%

**Yuba County GHG Inventory  
2010 and 2030 Alt4**

		GHG Emissions (tonnes CO <sub>2</sub> e/yr)			
<b>Emissions Sector</b>	<b>Subsector</b>	<b>2010</b>	<b>2030</b>	<b>Percent Contribution 2010</b>	<b>Percent Contribution 2030</b>
Energy - Electricity	Residential	47,231	67,482		
	Commercial	37,411	48,822		
	Industrial	540	612		
	<b>Total</b>	<b>85,182</b>	<b>116,916</b>	<b>12.8%</b>	<b>13.0%</b>
Energy - Natural Gas	Residential	62,985	26,174		
	Commercial	48,263	16,323		
	Industrial	612	0		
	<b>Total</b>	<b>111,860</b>	<b>42,497</b>	<b>16.8%</b>	<b>4.7%</b>
Transportation	<b>Total</b>	<b>343,868</b>	<b>612,673</b>	<b>51.7%</b>	<b>68.3%</b>
Waste	<b>Total</b>	<b>18,579</b>	<b>31,987</b>	<b>2.8%</b>	<b>3.6%</b>
Wastewater	<b>Total</b>	<b>2,688</b>	<b>4,627</b>	<b>0.4%</b>	<b>0.5%</b>
Agriculture	Residue Burn	7,722	3,522		
	Livestock	16,825	11,531		
	Rice Cultivation	40,862	38,142		
	Farm Equipment	27,436	25,626		
	Ag Pumps	9,450	8,821		
	Fertilizer	941	879		
	<b>Total</b>	<b>103,235</b>	<b>88,520</b>	<b>15.5%</b>	<b>9.9%</b>
<b>Total Yuba County GHG Emissions</b>		<b>665,411</b>	<b>897,220</b>	<b>100.0%</b>	<b>100.0%</b>

No Ag	<b>562,177</b>	<b>808,700</b>	<b>246,523</b>
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Existing, On-the-Ground																	Weighted Averages	
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park	Acree	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs	Comm	Industrial
23,833	4,713	1,526,121	1,087,344	-	615,444	47,748	811	3,133	97	4,515	2,072	2,006	7,133	69,151	18,679		807,227	48,559
k																		

New Land Use under Previous (1996) GP (the No Project)																
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park	Acree	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs
31,859	2,720	5,362,047	3,241,214	3,619,623	2,360,920	705,094	2,464,098	215,859	370	5,788	2,656	2,572	12,867	88,649	43,558	
k																

New Land Use under the General Plan Update (the Project) in 2030																
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park	Acree	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs
12,064	2,428	1,696,255	2,291,381	699,190	448,542	582,184	568,283	306,897	83	2,302	1,056	1,023	4,554	35,256	15,994	
k																

New Land Use under the General Plan Update (the Project Alt 4) in 2030																
SF Units	MF Units	Neigh Comm.	Community Comm.	S Reg. Comm.	Sqft Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park	Acree	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs
13,694	2,949	1,750,409	2,459,568	1,398,380	963,521	2,140,510	1,198,976	306,897	103	2,719	1,473	1,923	4,554	40,513	22,873	
k																

Annual Percent increase Existing to 2030 Alt 4																
SF Units	MF Units	Comm. Sqft	Office Sqft	Light Indust.	S Heavy Indust.	Sr Public/Quz	Park	Acree	Element.	S Middle Stu	HS Student	Other Schc	Population	Jobs		
3%	3%	6%	11%	8%	224%	7396%	490%	5%	3%	4%	5%	3%	3%	6%		
0.030																
0.015																
10																
100																
100%																

Existing Yr	2010
Building Yr	2030

Maximum Acreage affected by 2030 GPU at Full Buildout  
69,919 total  
19 per day  
3495.95 per year

Construction Phase	1996 GP		Construction Durations Months		
	Ratio	Percent	2030 GPU	2030 Alt 4	240
FG	2	19%	22.9	45.7	45.7
P	0.5	5%	5.7	11.4	11.4
B	7	67%	80.0	160.0	160.0
AC	1	10%	11.4	22.9	22.9
10.5					

Maximum Acreage affected by 2030 GPU Alt4 by 2030  
26,950 total  
7 per day  
1347.49

Maximum Acreage affected by 1996 GP at Buildout  
70,954 total  
19 per day  
3547.71

Unincorporated Yuba County Electricity Use

	GHG Emissions, MT CO <sub>2</sub>				
	2007	from electricity use 2010*	2030**	Net Increase	from NG use 2030 Revised
residential	44,770	47,231	67,482	20,250	62,985
commercial	36,465	37,411	48,822	11,411	48,263
industrial		540	612	72	612

TOTCITY	YEAR	CATEGORY	RES ELEC CO2(metric tonnes)	COM ELEC CO2(metric tonnes)	IND ELEC CO2(metric tonnes)
UNINC YUBA COUNTY	2007	(3) COUNTY		6	805
UNINC YUBA COUNTY	2007	Non-County		44764	35660
<b>Total</b>				<b>44770</b>	<b>36465</b>

TOTCITY	YEAR	CATEGORY	RES ELEC CO2(metric tonnes)	COM ELEC CO2(metric tonnes)	IND ELEC CO2(metric tonnes)
UNINC YUBA COUNTY	2030	(3) COUNTY		9	1.08E+03
UNINC YUBA COUNTY	2030	Non-County		67473	4.77E+04
<b>Total</b>				<b>67482</b>	<b>4.88E+04</b>

\* 2010 emissions based on projected growth

\*\* 2030 emissions based on projected growth of specific land use area

Source: Energy Information Administration. 2010. Pacific Region. Available: <http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html>

The 15/15 rule requires that any aggregated information provided by the Utilities must be made up of at least 15 customers and a single customer's load must be less than 15 percent of an assigned category. If the number of customers in the compiled data is below 15, or if a single customer's load is more than 15 percent of the total data, categories must be combined before

the information is released. The Rule further requires that if the 15/15 Rule is triggered for a second time after the data has been screened once already using the 15/15 Rule, the customer be dropped from the information provided. In addition to the 15/15 Rule, the CPUC further determined that no information about customers with demands above 500 kW should be included in the distributed information.

For 2010 estimation the following assumptions were used

<b>PG&amp;E</b>	<b>Average of PG&amp;E Factors</b>
Residential Natural Gas Consumption Annual Growth Rate 2010-2020	1.11%
Residential Electricity Consumption Annual Growth Rate 2010-2020	1.80%
Commercial Natural Gas Consumption Annual Growth Rate 2010-2020	0.52%
Commercial Electricity Consumption Annual Growth Rate 2010-2020	1.34%
Industrial Natural Gas Consumption Annual Growth Rate 2010-2020	-0.37%
Industrial Electricity Consumption Annual Growth Rate 2010-2020	0.63%

2007	2010*	2030**	Net Increase	2030 Revised
26174	27055	33739	6684	33,106
16323	16341	18127	1786	17,959
	238	221	-17	221

RES	COM	IND	
GAS	GAS	GAS	
CO2(metric tonnes)	CO2(metric tonnes)	CO2(metric tonnes)	
	186		*county-owned buildings ~ 1 % of total
26174	15343	794	
<b>26174</b>	<b>15529</b>	<b>794</b>	

RES	COM	IND	
GAS	GAS	GAS	
CO2(metric tonnes)	CO2(metric tonnes)	CO2(metric tonnes)	
	1.96E+02		*county-owned buildings ~ 1 % of total
26174	1.61E+04	0	
<b>26174</b>	<b>1.63E+04</b>	<b>0</b>	

**Yuba County GHG Emissions Inventory**  
**Transportation Emissions**  
 Alt4

Calendar Year	2010	Emission Factors			Total Emissions
Category		CO2 (ton/yr)	N2O (tons/yr)	CH4 (tons/yr)	(tonnes CO2e/yr)
VMT/yr		369,690	24	37	343,868

Yuba County Daily VMT

2010	1,334,948
2030	4,746,713
Net New	3,411,765

Calendar Year	2030	Emission Factors			Total Emissions
Category		CO2 (tons/yr)	N2O (tons/yr)	CH4 (tons/yr)	(tonnes CO2e/yr)
VMT/yr		645,581	88	24	612,673

**Table 4: Methane and Nitrous Oxide Emission Factors from CCAR General Reporting Protocol v. 3.1 Table C.4**  
 model years 1984-present and 1985-present

Fuel - Vehicle Type	Emission Factor	Percent Contribution		from Emfac tons/day	2010	2030	from Emfac Adjusted Tn/day tons/yr	2010	2030	Emfac CH4 2010	2030
	N2O (g/mi)	2010	2030								
Gas - Passenger Car	0.0647										
Gas - Passenger Car	0.056										
Gas - Passenger Car	0.0473										
Gas - Passenger Car	0.0426										
Gas - Passenger Car	0.0422										
Gas - Passenger Car	0.0393										
Gas - Passenger Car	0.0337										
Gas - Passenger Car	0.0273										
Gas - Passenger Car	0.0158										
Gas - Passenger Car	0.0153										
Gas - Passenger Car	0.0135										
Gas - Passenger Car	0.0083										
Gas - Passenger Car	0.0079										
<b>Subtotal Passenger Car</b>	<b>0.0318</b>	<b>0.313131313</b>	<b>0.314553991</b>								
Gas - Light Trucks	0.1035										
Gas - Light Trucks	0.0982										
Gas - Light Trucks	0.0908										

  

EMFAC CO2			Emfac CH4	
2010	2030	2010	2030	
1012.85	2508.314	0.101	6.58E-02	
1012.85	2508.314	0.101	0.066	
	740			
1,013	1,769	0.101	0.066	
369,690	645,581	36.751	24.008	

  

Emfac Default	Feer & Piers
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				VMT	Pop	VMT	Adjusted pop
Gas - Light Trucks	0.0871			3249002	95360	4,746,713	139319
Gas - Light Trucks	0.0871						
Gas - Light Trucks	0.0728						
Gas - Light Trucks	0.0564						
Gas - Light Trucks	0.0621						
Gas - Light Trucks	0.0164						
Gas - Light Trucks	0.0228						
Gas - Light Trucks	0.0114						
Gas - Light Trucks	0.0132						
Gas - Light Trucks	0.0101						
<b>Subtotal Light Trucks</b>	<b>0.0563</b>	0.505050505	0.523474178				
Gas - HD Vehicles	0.0515						
Gas - HD Vehicles	0.0849						
Gas - HD Vehicles	0.0933						
Gas - HD Vehicles	0.1142						
Gas - HD Vehicles	0.168						
Gas - HD Vehicles	0.1726						
Gas - HD Vehicles	0.1693						
Gas - HD Vehicles	0.1435						
Gas - HD Vehicles	0.1092						
Gas - HD Vehicles	0.1235						
Gas - HD Vehicles	0.1307						
Gas - HD Vehicles	0.124						
Gas - HD Vehicles	0.0285						
Gas - HD Vehicles	0.0177						
<b>Subtotal HD Vehicles</b>	<b>0.1094</b>	0.050505051	0.05399061				
Diesel - Passenger Car	0.0012						
Diesel - Passenger Car	0.001						
<b>Subtotal DSL Pass Car</b>	<b>0.0011</b>	0	0				
Diesel - Light Truck	0.0017						
Diesel - Light Truck	0.0014						
Diesel - Light Truck	0.0015						
<b>Subtotal DSL Light Truck</b>	<b>0.0015</b>	0.01010101	0				
Diesel - HD Truck	0.0048	0.111111111	0.096244131				

  

	% of Total	
	2010	2030
P Car Gas	0.313131313	0.314553991
LT Gas	0.505050505	0.523474178
HD Gas	0.050505051	0.05399061
P Car Dsl	0	0
LT Dsl	0.01010101	0
HD Dsl	0.111111111	0.096244131

Calculated from percent contribution by vehicle type per analysis year

Calendar year 2010 and 2030 daily VMT was provided by Fehr and Peers. Annual VMT was calculated by multiplying daily VMT by 365.  
California Climate Action Registry (CCAR). 2009 (January). California Climate Action Registry General Reporting Protocol Version 3.1. Table C.4  
\*Used weighted percent contribution to total vehicular emissions for estimating N2O emisisions.

**Yuba County Greenhouse Gas Emissions Inventory  
Domestic Waste Water Treatment - 2007**

Facility	First Year of Operation	Year of Data	Type of Treatment	Facility-Specific Data							Adjusted Emission Factor (kg CH4/kg BOD)	kg CH4/yr	tonnes CO2e/yr
				Capacity (MGD)	Capacity (G/yr)	Influent (MGD)	Influent (G/yr)	Influent BOD (mg/L)	BOD (Kg/Gal)	BOD (kg/yr)			
LCWD WWTP		2007			-	1.80	657,000,000	200	0.0008	497,403	0.12	59,688	1,373
OPUD WWTP		2006			-	1.53	558,450,000	220	0.0008	465,072	0.12	55,809	1,284
River Highlands CSD WWTP		ND			-	0.03	9,490,000	310	0.0012	11,136	0.12	1,336	31

<b>Total (2007)</b>	<b>2,688</b>
<b>Per SP (Tns/yr/sp)</b>	<b>0.0306</b>

Source:  
Intergovernmental Panel on Climate Change 2006. IPCC Guidelines for National Greenhouse Gas Inventories; Chapter 6: Wastewater Treatment and Discharge  
MCF of 0.2 is the EF representing the lowest end of the "poorly managed centralized aerobic treatment plant" range.  
MGD from Utilities Section of this EIR

<b>Total (2030)</b>	<b>4,627</b>
<b>Per SP (Tns/yr/sp)</b>	<b>0.0306</b>

Conversion Factors:

Liter	Gallon	
1		0.264
Year	Days	
1		365
Kg	mg	
1		1000000
MG	G	
1		1000000

\* From "Improvements to the U.S. Wastewater Methane and Nitrous Oxide Emissions Estimates" E. Scheehle et. al.

CH4			N2O		
Default Emission Factor (kg CH4/kg BOD)	CH4 Correction Factor	Adjusted Emission Factor (kg CH4/kg BOD)	N2O per person/yr*	N2O g/yr	N2O tons/yr
0.6	0.2	0.12	3.2	281055.26	0.31

Landfilled Waste Unincorporated	2008		Yuba County Landfills		2030
	112,126 tons/yr	CIWMB	Ostrom Rd Landfill		
		EF by Waste			
Overall CA Waste Characterization*	tons	MTCO2e/ton	MTCO2e		
Paper	17.30%	34,812	0.29	9,979	
Glass	1.40%	3,818	0.04	153	
Metal	4.60%	6,341	0.04	254	
Plastic	9.60%	10,407	0.04	416	
Other Organic	32.40%	42,977	0.15	6,447	
Inerts and Other	29.10%	11,054	0.04	442	
Household Hazardous Waste	0.30%	297	0.04	12	
Special Waste	3.90%	58	0.04	2	
Mixed Residue	0.80%	2,362	0.37	874	
<b>Total</b>	<b>99.90%</b>	<b>112,126</b>		<b>18,579</b>	<b>31,987</b>
Per Capita				<b>0.2115</b>	<b>0.2115</b>

\*Commercial, residential and self-hauled waste characterization from CIWMB, 2008 Waste Characterization Study.

\*Used PC factor for electronics/HHW/Special Waste, mixed organic factor for other organic, and aggregate for inerts, according to categories and subcategories des

\*Note: USEPA does not have emission factors for medical waste, HHW, C&D waste, and special wastes such as bulky items/white goods.

(WARM Version 9.01, 3/09)

[http://www.epa.gov/climatechange/wycd/waste/calculators/Warm\\_home.html#click](http://www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html#click)

The emission factors presented in this table reflect national average landfill gas recovery practices and transportation distances.

### Greenhouse Gas Emission Factors (MTCO2E per short ton)

Material	Source Reduction	Recycling	Landfilling, National Average	Landfilling, No Recovery	Landfilling, Flaring	Landfilling, Energy Recovery	Combustion	Composting
							0.06	N/A
Aluminum Cans	-8.29	-13.67	0.04	0.04	0.04	0.04	-1.54	N/A
Steel Cans	-3.19	-1.8	0.04	0.04	0.04	0.04	0.06	N/A
Copper Wire	-7.41	-4.97	0.04	0.04	0.04	0.04	0.05	N/A
Glass	-0.58	-0.28	0.04	0.04	0.04	0.04	0.91	N/A
HDPE	-1.8	-1.4	0.04	0.04	0.04	0.04	0.91	N/A
LDPE	-2.29	-1.71	0.04	0.04	0.04	0.04	1.07	N/A
PET	-2.11	-1.55	0.04	0.04	0.04	0.04	-0.66	N/A
Corrugated Box	-5.59	-3.11	0.33	1.49	-0.22	-0.46	-0.48	N/A
Magazines	-8.66	-3.07	-0.33	0.14	-0.55	-0.65	-0.75	N/A
Newspaper	-4.89	-2.8	-0.89	-0.48	-1.09	-1.18	-0.63	N/A
Office Paper	-8.01	-2.85	1.76	3.71	0.84	0.42	-0.75	N/A

Phonebook	-6.34	-2.66	-0.89	-0.48	-1.09	-1.18	-0.63	N/A
Textbook	-9.18	-3.11	1.76	3.71	0.84	0.42	-0.79	N/A
Dimensional Lumber	-2.02	-2.46	-0.52	0.07	-0.81	-0.93	-0.79	N/A
Fiberboard	-2.22	-2.47	-0.52	0.07	-0.81	-0.93	-0.18	-0.2
Food Waste	N/A	N/A	0.68	1.43	0.33	0.16	-0.22	-0.2
Yard Waste	N/A	N/A	-0.34	0.06	-0.54	-0.62	-0.22	-0.2
Grass	N/A	N/A	0.15	0.51	-0.02	-0.1	-0.22	-0.2
Leaves	N/A	N/A	-0.58	-0.3	-0.72	-0.78	-0.22	-0.2
Branches	N/A	N/A	-0.52	0.07	-0.81	-0.93	-0.66	N/A
Mixed Paper Board	N/A	-3.54	0.27	1.35	-0.24	-0.47	-0.66	N/A
Mixed Paper - Residential	N/A	-3.54	0.19	1.21	-0.3	-0.52	-0.6	N/A
Mixed Paper - Office	N/A	-3.42	0.38	1.43	-0.12	-0.34	-1.07	N/A
Mixed Metals	N/A	-5.26	0.04	0.04	0.04	0.04	0.97	N/A
Mixed Plastics	N/A	-1.52	0.04	0.04	0.04	0.04	-0.6	N/A
Mixed Recyclables	N/A	-2.88	0.08	0.93	-0.3	-0.47	-0.2	-0.2
Mixed Organics	N/A	N/A	0.15	0.59	-0.24	-0.37	-0.13	N/A
MixedMSW	N/A	N/A	0.37	1.34	-0.1	-0.31	0.37	N/A
Carpets	-4.03	-7.23	0.04	0.04	0.04	0.04	-0.2	N/A
PCs	-55.97	-2.27	0.04	0.04	0.04	0.04	N/A	N/A
ClayBricks	-0.29	N/A	0.04	0.04	0.04	0.04	N/A	N/A
Aggregate	N/A	-0.01	0.04	0.04	0.04	0.04	N/A	N/A
FlyAsh	N/A	-0.87	0.04	0.04	0.04	0.04	0.09	N/A
Tires	-4.01	-1.84	0.04	0.04	0.04	0.04		

All Paper Product Average

0.2866667

cribed in the CIWMB 2008 Waste Characterization Study.

Household Waste		Commercial Waste	
Paper	13739	Paper	21073
Glass	2020	Glass	1798
Metal	2316	Metal	4025
Plastic	4427	Plastic	5980
Other Organic	22521	Other Organic	20456
Construction	2,242	Construction	8812
Household Haz Mat	162	Household Haz Mat	135
Special Hazmat	12	Special Waste	46
Mixed Residue	2003	Mixed Residue	359



**CO2 Emission Reductions from the Pavley I Regulation & the Low Carbon Fuel Standard for Yuba - 2030 (Yuba GPU 2030 Alt 4)**

<b>Vehicle Category</b>	<b>Vehicle Population</b>	<b>Weekday VMT from EMFAC (VMT/day)</b>	<b>Weekday CO2 Emissions from EMFAC (tons/day)</b>	<b>Weekday CO2 Emission Reduction from Pavley I (tons/day)</b>	<b>Weekday CO2 Emissions after adopting Pavley I (tons/day)</b>	<b>% CO2 Emission Reduction from LCFS</b>	<b>Weekday CO2 Emission Reduction from LCFS (tons/day)</b>	<b>Weekday CO2 Emissions after adopting Pavley I &amp; LCFS (tons/day)</b>	<b>Annual CO2 Emissions after adopting Pavley I &amp; LCFS (MMTCO2/year)</b>
<b>LDA</b>	55,753	1,967,025	787.45	249.91	537.54	10.00%	53.75	483.78	0.15
<b>LDT1</b>	29,519	1,044,798	525.76	163.34	362.42	10.00%	36.24	326.18	0.10
<b>LDT2</b>	27,597	966,933	498.13	112.31	385.82	10.00%	38.58	347.24	0.11
<b>MDV</b>	12,261	414,328	290.65	62.66	227.98	10.00%	22.80	205.18	0.06
<b>Total</b>	<b>125,130</b>	<b>4,393,084</b>	<b>2,101.98</b>	<b>588.22</b>	<b>1,513.76</b>	<b>10.00%</b>	<b>151.38</b>	<b>1,362.39</b>	<b>0.43</b>

CO2 Reduction

739.60 tons/day

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: L:\~Practice Group Related\AQ1 Projects\Yuba County GP\AQ\URBEMIS\Yuba 2030 Alt 4\Yuba Cnty 2030 GPU Construction2.urb924

Project Name: Yuba County 2030 GPU Alt4

Project Location: Yuba County

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

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2011 TOTALS (lbs/day unmitigated)	870.39	154.09	311.63	0.25	161.16	8.08	169.24	33.82	7.37	41.20	34,647.76
2011 TOTALS (lbs/day mitigated)	785.07	154.09	311.63	0.25	12.30	8.08	20.39	2.74	7.37	10.11	34,647.76
2012 TOTALS (lbs/day unmitigated)	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79
2012 TOTALS (lbs/day mitigated)	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/3/2011-2/14/2011 Active Days: 31	3.98	31.71	18.61	0.00	160.01	1.69	161.69	33.42	1.55	34.97	3,135.07
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	160.01	1.69	161.69	33.42	1.55	34.97	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	160.00	0.00	160.00	33.41	0.00	33.41	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Time Slice 2/15/2011-2/15/2011 Active Days: 1	33.61	<b>154.09</b>	<b>311.63</b>	<b>0.25</b>	<b>161.16</b>	<b>8.08</b>	<b>169.24</b>	<b>33.82</b>	<b>7.37</b>	<b>41.20</b>	<b>34,647.76</b>
Asphalt 02/15/2011-03/15/2011	12.95	42.15	19.70	0.04	0.14	2.48	2.62	0.05	2.28	2.33	5,356.55
Paving Off-Gas	8.36	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81

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Paving On Road Diesel	1.49	23.79	7.57	0.04	0.13	0.86	0.99	0.04	0.79	0.83	3,810.14
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
<b>Building 02/15/2011-10/28/2011</b>	<b>14.68</b>	<b>63.73</b>	<b>263.83</b>	<b>0.21</b>	<b>1.01</b>	<b>3.09</b>	<b>4.09</b>	<b>0.36</b>	<b>2.78</b>	<b>3.14</b>	<b>24,339.43</b>
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	2.33	28.55	25.26	0.06	0.22	1.04	1.26	0.07	0.95	1.02	5,993.26
Building Worker Trips	8.59	13.33	224.62	0.16	0.79	0.47	1.26	0.28	0.38	0.67	16,086.90
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	160.01	1.69	161.69	33.42	1.55	34.97	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	160.00	0.00	160.00	33.41	0.00	33.41	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
<b>Trenching 02/15/2011-01/13/2012</b>	<b>2.00</b>	<b>16.51</b>	<b>9.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>	<b>0.83</b>	<b>0.00</b>	<b>0.76</b>	<b>0.76</b>	<b>1,816.71</b>
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 2/16/2011-3/15/2011 Active Days: 20	29.63	122.38	293.02	0.25	1.15	6.39	7.54	0.41	5.82	6.23	31,512.69
Asphalt 02/15/2011-03/15/2011	12.95	42.15	19.70	0.04	0.14	2.48	2.62	0.05	2.28	2.33	5,356.55
Paving Off-Gas	8.36	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	1.49	23.79	7.57	0.04	0.13	0.86	0.99	0.04	0.79	0.83	3,810.14
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
<b>Building 02/15/2011-10/28/2011</b>	<b>14.68</b>	<b>63.73</b>	<b>263.83</b>	<b>0.21</b>	<b>1.01</b>	<b>3.09</b>	<b>4.09</b>	<b>0.36</b>	<b>2.78</b>	<b>3.14</b>	<b>24,339.43</b>
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	2.33	28.55	25.26	0.06	0.22	1.04	1.26	0.07	0.95	1.02	5,993.26
Building Worker Trips	8.59	13.33	224.62	0.16	0.79	0.47	1.26	0.28	0.38	0.67	16,086.90
<b>Trenching 02/15/2011-01/13/2012</b>	<b>2.00</b>	<b>16.51</b>	<b>9.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>	<b>0.83</b>	<b>0.00</b>	<b>0.76</b>	<b>0.76</b>	<b>1,816.71</b>
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07



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Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 1/2/2012-1/13/2012 Active	<u>1.85</u>	<u>15.32</u>	<u>9.31</u>	<u>0.00</u>	<u>0.00</u>	<u>0.74</u>	<u>0.74</u>	<u>0.00</u>	<u>0.68</u>	<u>0.68</u>	<u>1,816.79</u>
Days: 10											
Trenching 02/15/2011-01/13/2012	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.05	0.08	1.30	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.15

Phase Assumptions

Phase: Mass Grading 1/3/2011 - 2/15/2011 - Default Fine Site Grading Description

Total Acres Disturbed: 199.65

Maximum Daily Acreage Disturbed: 8

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 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
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 2/15/2011 - 1/13/2012 - Type Your Description Here

Off-Road Equipment:

- 2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2011 - 3/15/2011 - Default Paving Description

Acres to be Paved: 67.04

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 8 hours per day

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

Phase: Building Construction 2/15/2011 - 10/28/2011 - 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

Phase: Architectural Coating 10/8/2011 - 12/29/2011 - 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 Winter Pounds Per Day, Mitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/3/2011-2/14/2011 Active Days: 31	3.98	31.71	18.61	0.00	11.15	1.69	12.84	2.33	1.55	3.88	3,135.07
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	11.15	1.69	12.84	2.33	1.55	3.88	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	11.15	0.00	11.15	2.33	0.00	2.33	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Time Slice 2/15/2011-2/15/2011 Active Days: 1	33.61	<b>154.09</b>	<b>311.63</b>	<b>0.25</b>	<b>12.30</b>	<b>8.08</b>	<b>20.39</b>	<b>2.74</b>	<b>7.37</b>	<b>10.11</b>	<b>34,647.76</b>
Asphalt 02/15/2011-03/15/2011	12.95	42.15	19.70	0.04	0.14	2.48	2.62	0.05	2.28	2.33	5,356.55
Paving Off-Gas	8.36	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	1.49	23.79	7.57	0.04	0.13	0.86	0.99	0.04	0.79	0.83	3,810.14

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Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Building 02/15/2011-10/28/2011	14.68	63.73	263.83	0.21	1.01	3.09	4.09	0.36	2.78	3.14	24,339.43
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	2.33	28.55	25.26	0.06	0.22	1.04	1.26	0.07	0.95	1.02	5,993.26
Building Worker Trips	8.59	13.33	224.62	0.16	0.79	0.47	1.26	0.28	0.38	0.67	16,086.90
Mass Grading 01/03/2011-02/15/2011	3.98	31.71	18.61	0.00	11.15	1.69	12.84	2.33	1.55	3.88	3,135.07
Mass Grading Dust	0.00	0.00	0.00	0.00	11.15	0.00	11.15	2.33	0.00	2.33	0.00
Mass Grading Off Road Diesel	3.91	31.61	16.82	0.00	0.00	1.68	1.68	0.00	1.55	1.55	3,007.48
Mass 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
Mass Grading Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 2/16/2011-3/15/2011 Active Days: 20	29.63	122.38	293.02	0.25	1.15	6.39	7.54	0.41	5.82	6.23	31,512.69
Asphalt 02/15/2011-03/15/2011	12.95	42.15	19.70	0.04	0.14	2.48	2.62	0.05	2.28	2.33	5,356.55
Paving Off-Gas	8.36	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	1.49	23.79	7.57	0.04	0.13	0.86	0.99	0.04	0.79	0.83	3,810.14
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Building 02/15/2011-10/28/2011	14.68	63.73	263.83	0.21	1.01	3.09	4.09	0.36	2.78	3.14	24,339.43
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	2.33	28.55	25.26	0.06	0.22	1.04	1.26	0.07	0.95	1.02	5,993.26
Building Worker Trips	8.59	13.33	224.62	0.16	0.79	0.47	1.26	0.28	0.38	0.67	16,086.90
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 3/16/2011-10/7/2011 Active Days: 148	16.68	80.23	273.33	0.21	1.01	3.91	4.92	0.36	3.54	3.90	26,156.15

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Building 02/15/2011-10/28/2011	14.68	63.73	263.83	0.21	1.01	3.09	4.09	0.36	2.78	3.14	24,339.43
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	2.33	28.55	25.26	0.06	0.22	1.04	1.26	0.07	0.95	1.02	5,993.26
Building Worker Trips	8.59	13.33	224.62	0.16	0.79	0.47	1.26	0.28	0.38	0.67	16,086.90
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 10/10/2011-10/28/2011	<u>785.07</u>	81.07	287.52	0.22	1.06	3.94	5.00	0.38	3.56	3.94	27,172.49
Active Days: 15											
Building 02/15/2011-10/28/2011	14.68	63.73	263.83	0.21	1.01	3.09	4.09	0.36	2.78	3.14	24,339.43
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	2.33	28.55	25.26	0.06	0.22	1.04	1.26	0.07	0.95	1.02	5,993.26
Building Worker Trips	8.59	13.33	224.62	0.16	0.79	0.47	1.26	0.28	0.38	0.67	16,086.90
Coating 10/08/2011-12/29/2011	768.39	0.84	14.19	0.01	0.05	0.03	0.08	0.02	0.02	0.04	1,016.35
Architectural Coating	767.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.54	0.84	14.19	0.01	0.05	0.03	0.08	0.02	0.02	0.04	1,016.35
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 10/31/2011-12/29/2011	770.39	17.35	23.69	0.01	0.05	0.85	0.91	0.02	0.78	0.80	2,833.06
Active Days: 44											
Coating 10/08/2011-12/29/2011	768.39	0.84	14.19	0.01	0.05	0.03	0.08	0.02	0.02	0.04	1,016.35
Architectural Coating	767.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.54	0.84	14.19	0.01	0.05	0.03	0.08	0.02	0.02	0.04	1,016.35
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 12/30/2011-12/30/2011	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71
Active Days: 1											
Trenching 02/15/2011-01/13/2012	2.00	16.51	9.50	0.00	0.00	0.82	0.83	0.00	0.76	0.76	1,816.71

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Trenching Off Road Diesel	1.95	16.42	8.07	0.00	0.00	0.82	0.82	0.00	0.76	0.76	1,714.64
Trenching Worker Trips	0.05	0.08	1.43	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.07
Time Slice 1/2/2012-1/13/2012 Active	<u>1.85</u>	<u>15.32</u>	<u>9.31</u>	<u>0.00</u>	<u>0.00</u>	<u>0.74</u>	<u>0.74</u>	<u>0.00</u>	<u>0.68</u>	<u>0.68</u>	<u>1,816.79</u>
Days: 10											
Trenching 02/15/2011-01/13/2012	1.85	15.32	9.31	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.79
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.05	0.08	1.30	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.15

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/3/2011 - 2/15/2011 - Default Fine Site Grading Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

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

PM10: 5% PM25: 5%

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

PM10: 55% PM25: 55%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 10/8/2011 - 12/29/2011 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

**Land Use Data**

<b>2010 SFR</b>	<b>MFR</b>
83%	17%

<b>2030 SFR</b>	<b>MFR</b>
82%	18%

**Percent Reduction from 2005 Title 24 to 2008 Title 24**

**ELECTRICITY**

<b>SFR</b>	<b>MFR</b>	<b>Res (WtAvg)</b>	<b>NonRes</b>
22.7%	19.7%	22.2%	4.9%

**NATURAL GAS**

<b>SFR</b>	<b>MFR</b>	<b>Res (WtAvg)</b>	<b>NonRes</b>
10.0%	7.0%	9.5%	9.4%

**Yuba County GHG Inventory  
2010 and 2030 Full Build**

		GHG Emissions (tonnes CO <sub>2</sub> e/yr)			
<b>Emissions Sector</b>	<b>Subsector</b>	<b>2010</b>	<b>2030</b>	<b>Percent Contribution 2010</b>	<b>Percent Contribution 2030</b>
Energy - Electricity	Residential	47,231	67,482		
	Commercial	37,411	48,822		
	Industrial	540	612		
	<b>Total</b>	<b>85,182</b>	<b>116,916</b>	<b>14.3%</b>	<b>7.7%</b>
Energy - Natural Gas	Residential	27,055	33,739		
	Commercial	16,341	18,127		
	Industrial	238	221		
	<b>Total</b>	<b>43,634</b>	<b>52,087</b>	<b>7.3%</b>	<b>3.4%</b>
Transportation	<b>Total</b>	<b>343,868</b>	<b>1,199,820</b>	<b>57.6%</b>	<b>79.0%</b>
Waste	<b>Total</b>	<b>18,579</b>	<b>53,365</b>	<b>3.1%</b>	<b>3.5%</b>
Wastewater	<b>Total</b>	<b>2,687</b>	<b>7,719</b>	<b>0.4%</b>	<b>0.5%</b>
Agriculture	Residue Burn	7,722	3,522		
	Livestock	16,825	11,531		
	Rice Cultivation	40,862	38,142		
	Farm Equipment	27,436	25,626		
	Ag Pumps	9,450	8,821		
	Fertilizer	941	879		
	<b>Total</b>	<b>103,235</b>	<b>88,520</b>	<b>17.3%</b>	<b>5.8%</b>
<b>Total Yuba County GHG Emissions</b>		<b>597,185</b>	<b>1,518,426</b>	<b>100.0%</b>	<b>100.0%</b>

No Ag	493,950	1,429,906	935,956
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Existing, On-the-Ground															Weighted Averages						
SF Units	MF Units	Neigh Comm.	Community Comm.	Reg. Comm.	Sqft Office	Sqft	Light Indust.	Heavy Indust.	Public/Quar	Park	Acres	Element.	Middle Stu	HS Student	Other Schc	Population	Jobs	Comm	Industrial		
23,833	4,713	1,526,121	1,087,344	-	615,444	47,748	811	3,133	97	4,515	2,072	2,006	7,133	69,151	18,679			807,227	48,559		
		1,526.12	1,087.34	-	615.44	47.75	0.81	3.13													

New Land Use under the General Plan Update (the Project) at Full Buildout																					
SF Units	MF Units	Neigh Comm.	Community Comm.	Reg. Comm.	Sqft Office	Sqft	Light Indust.	Heavy Indust.	Public/Quar	Park	Acres	Element.	Middle Stu	HS Student	Other Schc	Population	Jobs				
33,815	6,252	2,560,273	6,740,185	3,830,583	5,305,722	4,944,086	2,652,353	638,502	474	6,503	2,984	2,889	12,867	99,604	64,845			4,609,191	7,596,439		
		2,560.27	6,740.19	3,830.58	5,305.72	4,944.09	2,652.35	638.50													

Annual Percent increase Existing to 2030 Full Buildout																					
SF Units	MF Units	Comm. Sqft			Office Sqft	Light Indust.	Heavy Indust.	Public/Quar	Park	Acres	Element.	Middle Stu	HS Student	Other Schc	Population	Jobs					
7%	7%	8%	31%		43%	518%	16360%	1019%	24%	7%	7%	7%	9%	7%	17%			5.709905137	156.437508		
		0.069					0.015														

Existing Yr	2010
Building Yr	2030

10  
100  
100%

Construction Durations  
Months  
2030 GPU 240  
2030 Full 240

Maximum Acreage affected by 2030 GPU at Full Buildout  
69,919 total  
19 per day  
3495.95 per year

	Construction Phase Ratio	Percent	1996 GP	2030 GPU	2030 Full
FG	2	19%	22.9	45.7	45.7
P	0.5	5%	5.7	11.4	11.4
B	7	67%	80.0	160.0	160.0
AC	1	10%	11.4	22.9	22.9
	10.5				

Maximum Acreage affected by 2030 GPU by 2030  
21,790 total  
6 per day  
1089.49

Maximum Acreage affected by 1996 GP at Buildout  
70,954 total  
19 per day  
3547.71

Unincorporated Yuba County Electricity Use

GHG Emissions, MT CO<sub>2</sub>

	ELECTRICITY						
	2007	2010*	2030**	Net Increase	2030 Revised	2007	2010*
residential	44,770	47,231	67,482	20,250	62,985	26174	27055
commercial	36,465	37,411	48,822	11,411	48,263	16323	16341
industrial		540	612	72	612		238

TOTCITY	YEAR	CATEGORY	RES ELEC CO2(metric tonnes)	COM ELEC CO2(metric tonnes)	IND ELEC CO2(metric tonnes)	RES GAS CO2(metric tonnes)	COM GAS CO2(metric tonnes)
UNINC YUBA COUNTY	2007 (3)	COUNTY		6	805		186
UNINC YUBA COUNTY	2007	Non-County		44764	35660	26174	15343
<b>Total</b>				<b>44770</b>	<b>36465</b>	<b>0</b>	<b>15529</b>

TOTCITY	YEAR	CATEGORY	RES ELEC CO2(metric tonnes)	COM ELEC CO2(metric tonnes)	IND ELEC CO2(metric tonnes)	RES GAS CO2(metric tonnes)	COM GAS CO2(metric tonnes)
UNINC YUBA COUNTY	2030 (3)	COUNTY		9	1.08E+03		2.17E+02
UNINC YUBA COUNTY	2030	Non-County		67473	4.77E+04	0	33739
<b>Total</b>				<b>67482</b>	<b>4.88E+04</b>	<b>0</b>	<b>33739</b>

\* For 2010 estimation the following assumptions were used

\*\* 2030 emissions based on projected growth of specific land use area

Source: PG&E growth rates from CEC,. Available: <http://www.energy.ca.gov/2009publications/CEC-200-2009-012/index.htm>

The 15/15 rule requires that any aggregated information provided by the Utilities must be made up of at least 15 customers and a single customer's load must be less than 15 percent of an assigned category. If the number of customers in the compiled data is below 15, or if a single customer's load is more than 15 percent of the total data, categories must be combined before the information is released. The Rule further requires that if the 15/15 Rule is triggered for a second time after the data has been screened once already using the 15/15 Rule, the customer be dropped from the information provided. In addition to the 15/15 Rule, the CPUC further determined that no information about customers with demands above 500 kW should be included in the distributed information.

**PG&E****Average of PG&E Factors**

Residential Natural Gas Consumption Annual Residential Natural Gas Consumption Annual Growth Rate 2010-2020

1.11%

1.11%

Residential Electricity Consumption Annual Residential Electricity Consumption Annual Growth Rate 2010-2020

1.80%

1.80%

Commercial Natural Gas Consumption Annual Commercial Natural Gas Consumption Annual Growth Rate 2010-2020

0.52%

0.52%

Commercial Electricity Consumption Annual Commercial Electricity Consumption Annual Growth Rate 2010-2020

1.34%

1.34%

Industrial Natural Gas Consumption Annual Industrial Natural Gas Consumption Annual Growth Rate 2010-2020

-0.37%

-0.37%

Industrial Electricity Consumption Annual Industrial Electricity Consumption Annual Growth Rate 2010-2020

0.63%

0.63%

<b>NATURAL GAS</b>		
<b>2030**</b>	<b>Net Increase</b>	<b>2030 Revised</b>
33739	6684	33,102
18127	1786	17,959
221	-17	221

IND

GAS

CO2(metric tonnes)

\*county-owned buildings ~ 1 % of total

794

**794**

IND

GAS

CO2(metric tonnes)

\*county-owned buildings ~ 1 % of total

221

**221**

**Yuba County GHG Emissions Inventory**  
**Transportation Emissions**  
 Full Bld

Calendar Year	2010	Emission Factors			Total Emissions (tonnes CO2e/yr)
Category		CO2 (ton/yr)	N2O (tons/yr)	CH4 (tons/yr)	
VMT/yr		369,690	24	37	343,868

Yuba County Daily VMT

2010	1,334,948
2030	8,061,810
Net New	6,726,862

Calendar Year	2030	Emission Factors			Total Emissions (tonnes CO2e/yr)
Category		CO2 (tons/yr)	N2O (tons/yr)	CH4 (tons/yr)	
VMT/yr		1,271,365	149	45	1,199,820

**Table 4: Methane and Nitrous Oxide Emission Factors from CCAR General Reporting Protocol v. 3.1 Table C.4**  
 model years 1984-present and 1985-present

Fuel - Vehicle Type	Emission Factor	Percent Contribution		EMFAC CO2 2010	EMFAC CO2 2030	Emfac CH4 2010	Emfac CH4 2030
	N2O (g/mi)	2010	2030				
Gas - Passenger Car	0.0647						
Gas - Passenger Car	0.056						
Gas - Passenger Car	0.0473						
Gas - Passenger Car	0.0426						
Gas - Passenger Car	0.0422						
Gas - Passenger Car	0.0393						
Gas - Passenger Car	0.0337						
Gas - Passenger Car	0.0273						
Gas - Passenger Car	0.0158						
Gas - Passenger Car	0.0153						
Gas - Passenger Car	0.0135						
Gas - Passenger Car	0.0083						
Gas - Passenger Car	0.0079						
<b>Subtotal Passenger Car</b>	<b>0.0318</b>	<b>0.313131313</b>	<b>0.314553991</b>				
Gas - Light Trucks	0.1035						

  

from Emfac	1012.85	4739.33	0.10	0.12
tons/day	1012.85	4739.33	0.10	0.12
Pavley LCFS Reduction		1256.14		
Adjusted Tn/day	1012.85	3483.19	0.10	0.12
tons/yr	369690.25	1271364.69	36.75	45.36

Gas - Light Trucks	0.0982		
Gas - Light Trucks	0.0908		
Gas - Light Trucks	0.0871		
Gas - Light Trucks	0.0871		
Gas - Light Trucks	0.0728		
Gas - Light Trucks	0.0564		
Gas - Light Trucks	0.0621		
Gas - Light Trucks	0.0164		
Gas - Light Trucks	0.0228		
Gas - Light Trucks	0.0114		
Gas - Light Trucks	0.0132		
Gas - Light Trucks	0.0101		
<b>Subtotal Light Trucks</b>	<b>0.0563</b>	0.505050505	0.523474178
Gas - HD Vehicles	0.0515		
Gas - HD Vehicles	0.0849		
Gas - HD Vehicles	0.0933		
Gas - HD Vehicles	0.1142		
Gas - HD Vehicles	0.168		
Gas - HD Vehicles	0.1726		
Gas - HD Vehicles	0.1693		
Gas - HD Vehicles	0.1435		
Gas - HD Vehicles	0.1092		
Gas - HD Vehicles	0.1235		
Gas - HD Vehicles	0.1307		
Gas - HD Vehicles	0.124		
Gas - HD Vehicles	0.0285		
Gas - HD Vehicles	0.0177		
<b>Subtotal HD Vehicles</b>	<b>0.1094</b>	0.050505051	0.05399061
Diesel - Passenger Car	0.0012		
Diesel - Passenger Car	0.001		
<b>Subtotal DSL Pass Car</b>	<b>0.0011</b>	0	0
Diesel - Light Truck	0.0017		
Diesel - Light Truck	0.0014		
Diesel - Light Truck	0.0015		
<b>Subtotal DSL Light Truck</b>	<b>0.0015</b>	0.01010101	0
Diesel - HD Truck	0.0048	0.111111111	0.096244131

Emfac Default	Pop	Feer & Piers	Adjusted pop
VMT		VMT	
3249002	95360	8061810	236619

	% of Total	
	2010	2030
P Car Gas	0.313131313	0.314553991
LT Gas	0.505050505	0.523474178
HD Gas	0.050505051	0.05399061
P Car Dsl	0	0
LT Dsl	0.01010101	0
HD Dsl	0.111111111	0.096244131

Calculated from percent contribution by vehicle type per analysis year

Calendar year 2010 and 2030 daily VMT was provided by Fehr and Peers. Annual VMT was calculated by multiplying daily VMT by 365.

California Climate Action Registry (CCAR). 2009 (January). California Climate Action Registry General Reporting Protocol Version 3.1. Table C.4

\*Used weighted percent contribution to total vehicular emissions for estimating N2O emisison.



**Yuba County Greenhouse Gas Emissions Inventory  
Domestic Waste Water Treatment - 2007**

Facility	First Year of Operation	Year of Data	Type of Treatment	Facility-Specific Data									
				Capacity (MGD)	Capacity (G/yr)	Influent (MGD)	Influent (G/yr)	Influent BOD (mg/L)	BOD (Kg/Gal)	BOD (kg/yr)	Adjusted Emission Factor (kg CH4/kg BOD)	kg CH4/yr	tonnes CO2e/yr
LCWD WWTP		2007			-	1.80	657,000,000	200	0.0008	497,403	0.12	59,688	1,373
OPUD WWTP		2006			-	1.53	558,450,000	220	0.0008	465,072	0.12	55,809	1,284
River Highlands CSD WWTP		ND			-	0.03	9,490,000	310	0.0012	11,136	0.12	1,336	31

<b>Total (2007)</b>	<b>2,687</b>
<b>Per SP (Tns/yr/sp)</b>	<b>0.0306</b>

Source:

Intergovernmental Panel on Climate Change 2006. IPCC Guidelines for National Greenhouse Gas Inventories; Chapter 6: Wastewater Treatment and Discharge  
MCF of 0.2 is the EF representing the lowest end of the "poorly managed centralized aerobic treatment plant" range.

MGD from Utilities Section of this EIR

<b>Total (2030)</b>	<b>7,719</b>
<b>Per SP (Tns/yr/sp)</b>	<b>0.0306</b>

Conversion Factors:

Liter	Gallon	
1	0.264	
Year	Days	
1	365	
Kg	mg	
1	1000000	
MG	G	
1	1000000	

CH4			N2O		
Default Emission Factor (kg CH4/kg BOD)	CH4 Correction Factor	Adjusted Emission Factor (kg CH4/kg BOD)	N2O per person/yr*	N2O g/yr	N2O tons/yr
0.6	0.2	0.12	3.2	281055.263	0.31

Landfilled Waste Unincorporated	2008		Yuba County Landfills		2030
	112,126 tons/yr	CIWMB	Ostrom Rd Landfill		
Overall CA Waste Characterization*	tons	EF by Waste			
		MTCO2e/ton	MTCO2e		
Paper	17.30%	34,812	0.29	9,979	
Glass	1.40%	3,818	0.04	153	
Metal	4.60%	6,341	0.04	254	
Plastic	9.60%	10,407	0.04	416	
Other Organic	32.40%	42,977	0.15	6,447	
Inerts and Other	29.10%	11,054	0.04	442	
Household Hazardous Waste	0.30%	297	0.04	12	
Special Waste	3.90%	58	0.04	2	
Mixed Residue	0.80%	2,362	0.37	874	
<b>Total</b>	<b>99.90%</b>	<b>112,126</b>		<b>18,579</b>	<b>53,365</b>
Per Capita				<b>0.2115</b>	<b>0.2115</b>

\*Commercial, residential and self-hauled waste characterization from CIWMB, 2008 Waste Characterization Study.

\*Used PC factor for electronics/HHW/Special Waste, mixed organic factor for other organic, and aggregate for inerts, according to categories and subcategories descri

\*Note: USEPA does not have emission factors for medical waste, HHW, C&D waste, and special wastes such as bulky items/white goods.

(WARM Version 9.01, 3/09)

[http://www.epa.gov/climatechange/wywd/waste/calculators/Warm\\_home.html#click](http://www.epa.gov/climatechange/wywd/waste/calculators/Warm_home.html#click)

The emission factors presented in this table reflect national average landfill gas recovery practices and transportation distances.

### Greenhouse Gas Emission Factors (MTCO2E per short ton)

Material	Source Reduction	Recycling	Landfilling, National Average	Landfilling, No Recovery	Landfilling, Flaring	Landfilling, Energy Recovery	Combustion	Composting
							0.06	N/A
Aluminum Cans	-8.29	-13.67	0.04	0.04	0.04	0.04	-1.54	N/A
Steel Cans	-3.19	-1.8	0.04	0.04	0.04	0.04	0.06	N/A
Copper Wire	-7.41	-4.97	0.04	0.04	0.04	0.04	0.05	N/A
Glass	-0.58	-0.28	0.04	0.04	0.04	0.04	0.91	N/A
HDPE	-1.8	-1.4	0.04	0.04	0.04	0.04	0.91	N/A
LDPE	-2.29	-1.71	0.04	0.04	0.04	0.04	1.07	N/A
PET	-2.11	-1.55	0.04	0.04	0.04	0.04	-0.66	N/A
Corrugated Box	-5.59	-3.11	0.33	1.49	-0.22	-0.46	-0.48	N/A
Magazines	-8.66	-3.07	-0.33	0.14	-0.55	-0.65	-0.75	N/A
Newspaper	-4.89	-2.8	-0.89	-0.48	-1.09	-1.18	-0.63	N/A
Office Paper	-8.01	-2.85	1.76	3.71	0.84	0.42	-0.75	N/A
Phonebook	-6.34	-2.66	-0.89	-0.48	-1.09	-1.18	-0.63	N/A
Textbook	-9.18	-3.11	1.76	3.71	0.84	0.42	-0.79	N/A

Dimensional Lumber	-2.02	-2.46	-0.52	0.07	-0.81	-0.93	-0.79	N/A
Fiberboard	-2.22	-2.47	-0.52	0.07	-0.81	-0.93	-0.18	-0.2
Food Waste	N/A	N/A	0.68	1.43	0.33	0.16	-0.22	-0.2
Yard Waste	N/A	N/A	-0.34	0.06	-0.54	-0.62	-0.22	-0.2
Grass	N/A	N/A	0.15	0.51	-0.02	-0.1	-0.22	-0.2
Leaves	N/A	N/A	-0.58	-0.3	-0.72	-0.78	-0.22	-0.2
Branches	N/A	N/A	-0.52	0.07	-0.81	-0.93	-0.66	N/A
Mixed Paper Board	N/A	-3.54	0.27	1.35	-0.24	-0.47	-0.66	N/A
Mixed Paper - Residential	N/A	-3.54	0.19	1.21	-0.3	-0.52	-0.6	N/A
Mixed Paper - Office	N/A	-3.42	0.38	1.43	-0.12	-0.34	-1.07	N/A
Mixed Metals	N/A	-5.26	0.04	0.04	0.04	0.04	0.97	N/A
Mixed Plastics	N/A	-1.52	0.04	0.04	0.04	0.04	-0.6	N/A
Mixed Recyclables	N/A	-2.88	0.08	0.93	-0.3	-0.47	-0.2	-0.2
Mixed Organics	N/A	N/A	0.15	0.59	-0.24	-0.37	-0.13	N/A
MixedMSW	N/A	N/A	0.37	1.34	-0.1	-0.31	0.37	N/A
Carpets	-4.03	-7.23	0.04	0.04	0.04	0.04	-0.2	N/A
PCs	-55.97	-2.27	0.04	0.04	0.04	0.04	N/A	N/A
ClayBricks	-0.29	N/A	0.04	0.04	0.04	0.04	N/A	N/A
Aggregate	N/A	-0.01	0.04	0.04	0.04	0.04	N/A	N/A
FlyAsh	N/A	-0.87	0.04	0.04	0.04	0.04	0.09	N/A
Tires	-4.01	-1.84	0.04	0.04	0.04	0.04		

All Paper Product Average

0.2866667

ibed in the CIWMB 2008 Waste Characterization Study.

Household Waste		Commercial Waste	
Paper	13739	Paper	21073
Glass	2020	Glass	1798
Metal	2316	Metal	4025
Plastic	4427	Plastic	5980
Other Organic	22521	Other Organic	20456
Construction	2,242	Construction	8812
Household Haz Mat	162	Household Haz Mat	135
Special Hazmat	12	Special Waste	46
Mixed Residue	2003	Mixed Residue	359

**Yuba County GHG Emissions Inventory Data Needs**

Base year (?):	2007	Data Source:	Requested?
<b>Transportation</b>			
annual VMT	VMT/yr	F&P	
<b>Electricity</b>			
Residential	KWH/yr	Co special districts, PG&E ?	
Commercial	KWH/yr	Co special districts, PG&E ?	
Industrial	KWH/yr	Co special districts, PG&E ?	
County utility-specific emission factor or electricity portfolio composition (% fuel type)	MT CO2, CH4, N2O/KWH	PG&E?	
<b>Natural Gas</b>			
Residential	MMBTU/yr	Co special districts, PG&E ?	
Commercial	MMBTU/yr	Co special districts, PG&E ?	
Industrial	MMBTU/yr	Co special districts, PG&E ?	
<b>Solid Waste</b>			
Landfilled waste	tons/yr	County	
Incinerated waste	tons/yr	County	
Waste characterization	paper, food, wood/textiles, plant debris, other	County	
% methane captured (if any)		County	
<b>Waste Water</b>			
Facility name(s)		Co public works ?	
Treatment type(s)	anaerobic activated sludge, secondary, tertiary	Co public works ?	
Facility influent	MGD	Co public works ?	
Facility influent BOD	mg/L	Co public works ?	
<b>Agriculture</b>			
Livestock	# cattle	Co Ag Commissioner ?	
Livestock	# milk cows	Co Ag Commissioner ?	
Other livestock	# swine, goats, sheep	Co Ag Commissioner ?	
Residue burn	total acres harvested/crop type	Co Ag Commissioner ?	
Rice cultivation	# acres rice	Co Ag Commissioner ?	
Fertilizer	tons applied	Co Ag Commissioner ?	
Ag irrigation pumps	# pumps	ARB, FRAQMD	
Off Road Equipment		OFFROAD 2007	

**Transportation**

Received?

529 pumps in FRAQMD's jurisdiction. Need to know portion in Yuba Co.



**CO2 Emission Reductions from the Pavley I Regulation & the Low Carbon Fuel Standard for Yuba - 2030 (Yuba GPU 2030 Bidout)**

Vehicle Category	Vehicle Population	Weekday VMT from EMFAC (VMT/day)	Weekday CO2 Emissions from EMFAC (tons/day)	Weekday CO2 Emission Reduction from Pavley I (tons/day)	Weekday CO2 Emissions after adopting Pavley I (tons/day)	% CO2 Emission Reduction from LCFS	Weekday CO2 Emission Reduction from LCFS (tons/day)	Weekday CO2 Emissions after adopting Pavley I & LCFS (tons/day)	Annual CO2 Emissions after adopting Pavley I & LCFS (MMTCO2/year)
<b>LDA</b>	94,691	3,340,793	1,337.40	424.45	912.95	10.00%	91.30	821.66	0.26
<b>LDT1</b>	50,134	1,774,484	892.96	277.42	615.54	10.00%	61.55	553.98	0.17
<b>LDT2</b>	46,871	1,642,237	846.02	190.75	655.28	10.00%	65.53	589.75	0.19
<b>MDV</b>	20,825	703,694	493.63	106.43	387.20	10.00%	38.72	348.48	0.11
<b>Total</b>	<b>212,521</b>	<b>7,461,208</b>	<b>3,570.01</b>	<b>999.04</b>	<b>2,570.97</b>	<b>10.00%</b>	<b>257.10</b>	<b>2,313.87</b>	<b>0.73</b>

CO2 Reduction

1,256.14 tons/day

Urbemis 2007 Version 9.2.4

Detail Report for Winter Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\wolfmj\My Documents\Projects\Yuba GPU\URBEMIS\Yuba 2030 GPU Full Build\Yuba Cnty 2030 GPU Full Build

Project Name: Yuba County 2030 GPU Full Build

Project Location: Yuba County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
Time Slice 1/3/2011-2/14/2011 Active	5.33	40.99	25.41	0.00	380.01	2.37	382.38	79.36	2.18	81.54	4,142.52
Mass Grading 01/03/2011-	5.33	40.99	25.41	0.00	380.01	2.37	382.38	79.36	2.18	81.54	4,142.52
Mass Grading Dust	0.00	0.00	0.00	0.00	380.00	0.00	380.00	79.36	0.00	79.36	0.00
Mass Grading Off Road Diesel	5.24	40.84	22.92	0.00	0.00	2.37	2.37	0.00	2.18	2.18	3,963.89
Mass 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
Mass Grading Worker Trips	0.10	0.15	2.49	0.00	0.01	0.01	0.01	0.00	0.00	0.01	178.63
Time Slice 2/15/2011-2/15/2011 Active	292.75	<b>1,183.34</b>	4,781.44	4.39	<b>400.31</b>	<b>45.81</b>	<b>446.11</b>	<b>86.54</b>	<b>41.05</b>	<b>127.59</b>	468,544.98
Asphalt 02/15/2011-03/15/2011	69.61	178.92	63.23	0.24	0.91	7.41	8.31	0.30	6.81	7.11	27,259.17
Paving Off-Gas	56.44	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	10.07	160.57	51.11	0.24	0.90	5.78	6.68	0.30	5.32	5.61	25,712.76
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Building 02/15/2011-10/28/2011	213.81	930.42	4,673.80	4.14	19.38	34.38	53.76	6.88	30.53	37.41	433,509.86
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	53.63	665.77	569.31	1.28	5.05	24.19	29.23	1.71	22.12	23.82	138,297.66
Building Worker Trips	156.41	242.80	4,090.55	2.86	14.34	8.62	22.95	5.17	6.97	12.14	292,952.93
Mass Grading 01/03/2011-	5.33	40.99	25.41	0.00	380.01	2.37	382.38	79.36	2.18	81.54	4,142.52
Mass Grading Dust	0.00	0.00	0.00	0.00	380.00	0.00	380.00	79.36	0.00	79.36	0.00
Mass Grading Off Road Diesel	5.24	40.84	22.92	0.00	0.00	2.37	2.37	0.00	2.18	2.18	3,963.89
Mass 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
Mass Grading Worker Trips	0.10	0.15	2.49	0.00	0.01	0.01	0.01	0.00	0.00	0.01	178.63
Trenching 02/15/2011-01/13/2012	4.01	33.01	19.00	0.00	0.01	1.65	1.66	0.00	1.52	1.52	3,633.43
Trenching Off Road Diesel	3.90	32.84	16.15	0.00	0.00	1.64	1.64	0.00	1.51	1.51	3,429.28
Trenching Worker Trips	0.11	0.17	2.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.15
Time Slice 2/16/2011-3/15/2011 Active	287.42	1,142.35	4,756.03	4.38	20.30	43.43	63.73	7.18	38.86	46.05	464,402.46
Asphalt 02/15/2011-03/15/2011	69.61	178.92	63.23	0.24	0.91	7.41	8.31	0.30	6.81	7.11	27,259.17
Paving Off-Gas	56.44	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	18.25	10.34	0.00	0.00	1.62	1.62	0.00	1.49	1.49	1,418.81
Paving On Road Diesel	10.07	160.57	51.11	0.24	0.90	5.78	6.68	0.30	5.32	5.61	25,712.76
Paving Worker Trips	0.07	0.11	1.78	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.59
Building 02/15/2011-10/28/2011	213.81	930.42	4,673.80	4.14	19.38	34.38	53.76	6.88	30.53	37.41	433,509.86
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	53.63	665.77	569.31	1.28	5.05	24.19	29.23	1.71	22.12	23.82	138,297.66
Building Worker Trips	156.41	242.80	4,090.55	2.86	14.34	8.62	22.95	5.17	6.97	12.14	292,952.93
Trenching 02/15/2011-01/13/2012	4.01	33.01	19.00	0.00	0.01	1.65	1.66	0.00	1.52	1.52	3,633.43
Trenching Off Road Diesel	3.90	32.84	16.15	0.00	0.00	1.64	1.64	0.00	1.51	1.51	3,429.28
Trenching Worker Trips	0.11	0.17	2.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.15
Time Slice 3/16/2011-10/7/2011 Active	217.81	963.43	4,692.80	4.14	19.39	36.03	55.42	6.88	32.05	38.93	437,143.29
Building 02/15/2011-10/28/2011	213.81	930.42	4,673.80	4.14	19.38	34.38	53.76	6.88	30.53	37.41	433,509.86
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	53.63	665.77	569.31	1.28	5.05	24.19	29.23	1.71	22.12	23.82	138,297.66
Building Worker Trips	156.41	242.80	4,090.55	2.86	14.34	8.62	22.95	5.17	6.97	12.14	292,952.93

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Trenching 02/15/2011-01/13/2012	4.01	33.01	19.00	0.00	0.01	1.65	1.66	0.00	1.52	1.52	3,633.43
Trenching Off Road Diesel	3.90	32.84	16.15	0.00	0.00	1.64	1.64	0.00	1.51	1.51	3,429.28
Trenching Worker Trips	0.11	0.17	2.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.15
<b>Time Slice 10/10/2011-10/28/2011</b>	<b>29,743.06</b>	<b>992.56</b>	<b>5,183.61</b>	<b>4.49</b>	<b>21.11</b>	<b>37.06</b>	<b>58.17</b>	<b>7.50</b>	<b>32.89</b>	<b>40.39</b>	<b>472,293.40</b>
Building 02/15/2011-10/28/2011	213.81	930.42	4,673.80	4.14	19.38	34.38	53.76	6.88	30.53	37.41	433,509.86
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	53.63	665.77	569.31	1.28	5.05	24.19	29.23	1.71	22.12	23.82	138,297.66
Building Worker Trips	156.41	242.80	4,090.55	2.86	14.34	8.62	22.95	5.17	6.97	12.14	292,952.93
Coating 10/08/2011-11/04/2011	29,525.25	29.13	490.81	0.34	1.72	1.03	2.75	0.62	0.84	1.46	35,150.11
Architectural Coating	29,506.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	18.77	29.13	490.81	0.34	1.72	1.03	2.75	0.62	0.84	1.46	35,150.11
Trenching 02/15/2011-01/13/2012	4.01	33.01	19.00	0.00	0.01	1.65	1.66	0.00	1.52	1.52	3,633.43
Trenching Off Road Diesel	3.90	32.84	16.15	0.00	0.00	1.64	1.64	0.00	1.51	1.51	3,429.28
Trenching Worker Trips	0.11	0.17	2.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.15
<b>Time Slice 10/31/2011-11/4/2011</b>	<b>29,529.25</b>	<b>62.15</b>	<b>509.81</b>	<b>0.34</b>	<b>1.73</b>	<b>2.68</b>	<b>4.41</b>	<b>0.62</b>	<b>2.35</b>	<b>2.98</b>	<b>38,783.54</b>
Coating 10/08/2011-11/04/2011	29,525.25	29.13	490.81	0.34	1.72	1.03	2.75	0.62	0.84	1.46	35,150.11
Architectural Coating	29,506.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	18.77	29.13	490.81	0.34	1.72	1.03	2.75	0.62	0.84	1.46	35,150.11
Trenching 02/15/2011-01/13/2012	4.01	33.01	19.00	0.00	0.01	1.65	1.66	0.00	1.52	1.52	3,633.43
Trenching Off Road Diesel	3.90	32.84	16.15	0.00	0.00	1.64	1.64	0.00	1.51	1.51	3,429.28
Trenching Worker Trips	0.11	0.17	2.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.15
<b>Time Slice 11/7/2011-12/30/2011</b>	<b>4.01</b>	<b>33.01</b>	<b>19.00</b>	<b>0.00</b>	<b>0.01</b>	<b>1.65</b>	<b>1.66</b>	<b>0.00</b>	<b>1.52</b>	<b>1.52</b>	<b>3,633.43</b>
Trenching 02/15/2011-01/13/2012	4.01	33.01	19.00	0.00	0.01	1.65	1.66	0.00	1.52	1.52	3,633.43
Trenching Off Road Diesel	3.90	32.84	16.15	0.00	0.00	1.64	1.64	0.00	1.51	1.51	3,429.28
Trenching Worker Trips	0.11	0.17	2.85	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.15
<b>Time Slice 1/2/2012-1/13/2012 Active</b>	<b>3.71</b>	<b>30.64</b>	<b>18.62</b>	<b>0.00</b>	<b>0.01</b>	<b>1.47</b>	<b>1.48</b>	<b>0.00</b>	<b>1.35</b>	<b>1.36</b>	<b>3,633.57</b>
Trenching 02/15/2011-01/13/2012	3.71	30.64	18.62	0.00	0.01	1.47	1.48	0.00	1.35	1.36	3,633.57
Trenching Off Road Diesel	3.61	30.48	16.02	0.00	0.00	1.46	1.46	0.00	1.35	1.35	3,429.28
Trenching Worker Trips	0.10	0.15	2.60	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.29

Phase Assumptions	lbs/day	tons/day	tons/yr	tons
	1,892,577.19	946.288593	172,698	3,453,953

Phase: Mass Grading 1/3/2011 - 2/15/2011 - Default Fine Site Grading Description

Total Acres Disturbed: 69919

Maximum Daily Acreage Disturbed: 19

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: Trenching 2/15/2011 - 1/13/2012 - Type Your Description Here

Off-Road Equipment:

- 4 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 2 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
- 2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2011 - 3/15/2011 - Default Paving Description

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Acres to be Paved: 452.42

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

Phase: Building Construction 2/15/2011 - 10/28/2011 - 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

Phase: Architectural Coating 10/8/2011 - 11/4/2011 - 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

**Land Use Data**

<b>2010 SFR</b>	<b>MFR</b>
83%	17%

<b>2030 SFR</b>	<b>MFR</b>
84%	16%

**Percent Reduction from 2005 Title 24 to 2008 Title 24**

**ELECTRICITY**

<b>SFR</b>	<b>MFR</b>	<b>Res (WtAvg)</b>	<b>NonRes</b>
22.7%	19.7%	22.2%	4.9%

**NATURAL GAS**

<b>SFR</b>	<b>MFR</b>	<b>Res (WtAvg)</b>	<b>NonRes</b>
10.0%	7.0%	9.5%	9.4%

**Form 1.1 - PG&E Natural Gas Planning Area  
Natural Gas Consumption by Sector (10<sup>6</sup> Therms)**

Year	Residential	Commercial	Industrial	Mining	Agricultural	Other	Total Consumption
1990	2,118	778	1,962	238	65	114	5,275
1991	2,169	758	1,733	418	60	122	5,260
1992	1,963	651	1,530	162	50	90	4,445
1993	2,126	696	1,732	96	40	95	4,786
1994	2,211	755	1,840	71	52	98	5,027
1995	1,966	707	1,950	77	47	76	4,822
1996	1,982	706	2,081	44	55	81	4,950
1997	1,978	723	2,014	163	64	67	5,010
1998	2,283	789	1,914	319	70	67	5,442
1999	2,422	831	1,837	236	71	64	5,461
2000	2,164	797	1,909	288	79	55	5,291
2001	2,029	642	1,770	296	50	67	4,853
2002	2,086	819	1,547	272	59	35	4,818
2003	2,051	887	1,471	268	85	49	4,810
2004	2,024	812	1,538	304	65	68	4,811
2005	1,935	779	1,560	329	41	79	4,724
2006	2,021	950	1,747	29	41	98	4,886
2007	2,039	873	1,516	39	46	50	4,563
2008	1,951	841	1,375	46	41	55	4,309
2009	1,910	819	1,321	45	41	55	4,192
2010	1,928	822	1,296	43	41	56	4,186
2011	1,947	834	1,304	44	41	56	4,227
2012	1,968	845	1,312	45	41	57	4,268
2013	1,990	849	1,310	46	41	57	4,293
2014	2,011	848	1,299	45	41	58	4,302
2015	2,032	849	1,289	45	41	58	4,315
2016	2,054	852	1,280	44	41	59	4,330
2017	2,076	856	1,270	43	41	59	4,346
2018	2,099	857	1,258	42	41	60	4,358
2019	2,122	858	1,246	42	41	61	4,369
2020	2,153	859	1,232	41	41	61	4,388

**Growth Rates (%)**

1990-2000	0.22%	0.24%	-0.28%	1.93%	-	-6.96%	0.03%
2000-2008	-1.28%	0.67%	-4.02%	-20.41%	-7.71%	-0.14%	-2.53%
2008-2010	-0.60%	-1.10%	-2.92%	-3.13%	0.00%	1.08%	-1.43%
2010-2020	1.11%	0.52%	-0.37%	-0.33%	0.00%	0.88%	0.50%

**Form 1.1 - PG&E Planning Area  
California Energy Demand 2010-2020 Staff Revised Forecast  
Electricity Consumption by Sector (GWh)**

Year	Residential	Residential Electric Vehicles*	Commercial	Commercial Electric Vehicles*	Industrial	Mining	Agricultural	TCU	Street lighting	Total Consumption
1990	25,844	0	26,022	0	20,071	3,188	6,512	4,685	481	86,803
1991	26,308	0	26,325	0	19,545	3,255	5,887	4,799	508	86,627
1992	26,412	0	27,333	0	19,500	3,190	6,078	4,871	499	87,883
1993	26,781	0	27,714	0	19,706	3,115	5,850	4,955	507	88,627
1994	27,013	0	27,850	0	19,784	2,838	5,772	4,854	509	88,621
1995	27,080	0	28,516	0	20,770	2,574	5,380	4,934	527	89,781
1996	28,120	0	29,466	0	20,486	2,629	5,723	5,104	542	92,069
1997	28,599	0	31,203	0	21,750	2,716	5,975	4,897	559	95,699
1998	29,596	0	31,156	0	21,117	2,563	5,000	4,841	572	94,845
1999	30,521	0	33,176	0	20,572	2,585	6,005	5,165	509	98,535
2000	31,647	0	34,504	0	20,748	2,599	6,004	5,279	552	101,333
2001	29,660	0	33,330	0	18,893	2,397	6,350	4,645	509	95,785
2002	30,544	0	34,228	0	18,144	2,283	6,439	4,945	503	97,086
2003	31,989	0	35,270	0	17,966	2,477	6,325	4,685	516	99,228
2004	32,731	0	35,807	0	18,384	2,655	6,780	4,992	532	101,880
2005	33,137	0	35,923	0	18,671	2,878	5,407	5,122	537	101,675
2006	34,387	0	37,107	0	18,638	2,928	6,017	5,291	542	104,911
2007	34,324	1	39,179	4	19,003	3,420	7,352	5,579	556	109,413
2008	35,321	2	39,437	3	18,873	3,492	7,793	5,661	552	111,128
2009	34,937	2	38,383	3	18,289	3,444	6,592	5,642	559	107,847
2010	35,074	4	38,789	3	18,306	3,351	6,599	5,663	561	108,344
2011	35,358	35	39,462	5	18,570	3,435	6,595	5,720	563	109,703
2012	35,594	101	40,170	8	19,106	3,532	6,591	5,787	565	111,346
2013	36,336	249	40,864	16	19,362	3,588	6,604	5,838	568	113,161
2014	37,075	454	41,373	23	19,405	3,578	6,617	5,879	570	114,499
2015	37,808	665	41,904	29	19,446	3,547	6,631	5,920	572	115,828
2016	38,566	860	42,453	34	19,503	3,510	6,635	5,960	574	117,201
2017	39,342	1,035	42,992	38	19,530	3,469	6,638	5,998	576	118,545
2018	40,171	1,238	43,420	40	19,542	3,426	6,642	6,035	579	119,814
2019	41,022	1,437	43,844	42	19,532	3,384	6,646	6,073	581	121,082
2020	41,932	1,633	44,296	43	19,502	3,340	6,650	6,112	583	122,414

\* Residential and commercial electric vehicle consumption included in residential and commercial totals.

Last historic year is 2008. Consumption includes self-generation.

**Annual Growth Rates (%)**

1990-2000	2.05%	0.00%	2.86%	0.00%	0.33%	-2.02%	-0.81%	1.20%	1.40%	1.56%
2000-2008	1.38%	0.00%	1.68%	0.00%	-1.18%	3.76%	3.31%	0.88%	-0.01%	1.16%
2008-2010	-0.35%	46.77%	-0.82%	-9.59%	-1.51%	-2.04%	-7.98%	0.02%	0.85%	-1.26%
2010-2020	1.80%	84.79%	1.34%	32.24%	0.63%	-0.03%	0.08%	0.77%	0.38%	1.23%