Appendix D
Air Quality and Greenhouse Gas Modeling Data

Appendices

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CITY OF ANHEIM - GHG EMISSIONS INVENTORY

Forecasting SCAQMD's GHG Target	6.6	1.3	4.0
	2020	2050	2035
	AB 32	S-03-05	Interpolated *
		80% Below 1990	40% Below 1990
	1990 Levels	Levels	Levels

	$MTCO_2e$ Business as Usual Forecasts								$MTCO_2e$ Adjusted BAU					
SECTORS	**2012**	**Percent of Total**	**2020**	**Percent of Total**	**Project**	**Percent of Total**	**Current GP**	**Percent of Total**	**2020**	**Percent of Total**	**Project**	**Percent of Total**	**Current GP**	**Percent of Total**
Transportation	2,432,336	50%	2,557,437	49%	3,131,382	50%	2,552,719	50%	1,950,072	46%	2,178,821	45%	1,776,187	45%
Residential (Natural Gas and Electricity)	606,037	12%	684,246	13%	830,889	13%	690,500	14%	591,624	14%	718,416	15%	597,031	15%
Nonresidential* (Natural Gas and Electricity)	1,513,031	31%	1,656,656	32%	1,925,953	31%	1,523,508	30%	1,383,172	33%	1,608,027	33%	1,272,027	32%
Waste	80,149	2%	89,361	2%	106,633	2%	86,928	2%	89,361	2%	106,633	2%	86,928	2%
Water/Wastewater	184,813	4%	178,745	3%	213,539	3%	174,303	3%	143,250	3%	171,136	4%	139,692	4%
Other - Offroad Equipment	62,267	1%	65,388	1%	71,239	1%	63,842	1%	58,849	1%	64,115	1%	57,458	1%
Total Community Emissions	4,878,634	100%	5,231,834	100%	6,279,635	100%	5,091,800	100%	4,216,328	100%	4,847,148	100%	3,929,322	100%
Service Population	604,081		673,509		803,687		655,170		673,509		803,687		655,170	
$MTCO_2e$/SP	8.1		7.8		7.8		7.8		6.3		6.0		6.0	
Industrial	35,980													
SCAQMD GHG GP Threshold (PROGRAM LEVEL)	NA		6.6		4.0		4.0		6.6		4.0		4.0	

Notes:

Emissions forecast based on changes in population (residential energy), employment (nonresidential energy), or service population (City energy, waste, water/wastewater, transportation).

Transportation. EMFAC2011 and data provided by ITERIS using the ATAM model. Transportation sector does not proportion 50 percent of the trip length for trips that occur outside of the City boundaries. Per the Regional Targets Advisory Committee (RTAC) under Senate Bill 375 (SB 375), 50 percent of the trip length for intrajurisdictional trips are the responsibility of the adjacent/corresponding jurisdiction while the other 50 percent. External-Internal and Internal-External trips do not include 50 percent of the trip length.

Energy. Energy use based on a three year (2009-2011) average provided by Anaheim Utilities and a three year (2009-2011) average provided by SoCal Gas. Nonresidential* includes direct access customers, county facilities, and other district facilities within the City boundaries. Anaheim energy based on the utility's 2011 carbon intensity provided by Anaheim Utilities.

Water/Wastewater. Includes fugitive emissions from wastewater processing and energy associated with water/wastewater treatment and conveyance. Water use is estimated based on generation rates identified in Anaheim's 2010 Urban Water Management Plan.

Waste. WARM2012 and CalRecycle. GHG emissions from landfilled waste is based on a three year average (2010-2011) of waste generated in the City. GHG emissions are based on the waste commitment method and modeling using WARM, version 2. Waste generation for the City obtained from CalRecycle. Assumes 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1.

Other Sources. OFFROAD2007. Estimated based on population (Landscaping) and employment (Light Commercial Equipment) for the City of Anaheim as a percentage of Orange County. Excludes SCAQMD permitted sources (see note below). Construction is estimated based on housing permit data for the City of Anaheim from the U.S. Census. Daily construction emissions multiplied by 347 days/year to account for reduced/limited construction activity on weekends and holidays.

Industrial Sector are "point" sources that are permitted by SCAQMD. Because the reductions associated with the Industrial sector are regulated separately by SCAQMD and CARB (e.g., through the CAP and trade program and industry-specific sector reductions) and are not under the jurisdiction of the City of Anaheim, these emissions are shown for informational purposes only. In addition, given that these sources are for energy generation, it is likely that associated emissions would be double-counted because indirect GHG emissions from electricity use is included in the residential and non-residential sectors.

Adjusted BAU includes reductions identified in the Scoping Plan associated with Transportation (Pavely+LCFS), Energy & Water/Wastewater (improvements in the carbon intensity of electricity identified by SCE), and Other (LCFS). The current inventory does not account for reductions in building energy use from Title 24 cycle updates.

CITY OF ANAHEIM - GHG EMISSIONS INVENTORY COMPARISON

	Change of ABAU from 2012 $MTCO_2e$					Change from BAU to ABAU			Change from 2004 EIR	
SECTORS	**Delta 2020**	**Percent of Total**	**Delta Project**	**Percent of Total**	**Delta Current GP**	**Delta 2020**	**Delta Project**	**Percent of Total**	**Delta Current GP**	
Transportation	(482,264)		(253,515)		(656,150)	(607,365)	(952,561)		402,634	23%
Residential (Natural Gas and Electricity)	(14,413)		112,379		(9,006)	(92,622)	(112,472)		121,385	20%
Nonresidential* (Natural Gas and Electricity)	(129,859)		94,996		(241,004)	(273,484)	(317,927)		335,999	26%
Waste	9,212		26,484		6,778	0	0		19,705	23%
Water/Wastewater	(41,563)		(13,677)		(45,121)	(35,495)	(42,404)		31,444	23%
Other - Offroad Equipment	(3,418)		1,848		(4,809)	(6,539)	(7,124)		6,657	12%
Total Community Emissions	(662,305)		(31,486)		(949,311)	(1,015,505)	(1,432,488)		917,825	23%
	-14%		-1%		-19%	-19%	-23%		18%	

CITY OF ANAHEIM - CRITERIA AIR POLLUTANT INVENTORY

EXISTING BASELINE	2012 - lbs/day					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	9,983	19,609	94,134	153	1,920	945
Energy - Residential (Natural Gas)	111	950	404	6	77	77
Energy - Nonresidential* (Natural Gas)	154	1,398	1,174	8	106	106
Area Sources (Landscaping, Light Commercial Equipment)	1,775	1,297	28,075	3	149	147
Other (Construction Equipment)	283	1,947	1,698	2	121	119
Total	12,306	25,201	125,485	173	2,372	1,395
	2012 - tons/year					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	1,732	3,402	16,332	27	333	164
Energy - Residential (Natural Gas)	20	173	74	1	14	14
Energy - Nonresidential* (Natural Gas)	28	255	214	2	19	19
Area Sources (Landscaping, Light Commercial Equipment)	324	237	5,124	0	27	27
Other (Construction Equipment)**	49	338	295	0	21	21
Total	2,153	4,405	22,038	30	414	245

EXISTING w/2035 EMISSION RATES	2035 Existing Land Uses - lbs/day					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	4,003	6,469	31,185	159	1,782	803
Energy - Residential (Natural Gas)	111	950	404	6	77	77
Energy - Nonresidential* (Natural Gas)	154	1,398	1,174	8	106	106
Area Sources (Landscaping, Light Commercial Equipment)	1,775	1,297	28,075	3	149	147
Other (Construction Equipment)	283	1,947	1,698	2	121	119
Total	6,326	12,060	62,536	178	2,234	1,253
Net Change from Baseline	-5,980	-13,141	-62,949	5	-137	-142
	2035 Existing Land Uses - tons/year					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	694	1,122	5,411	28	309	139
Energy - Residential (Natural Gas)	20	173	74	1	14	14
Energy - Nonresidential* (Natural Gas)	28	255	214	2	19	19
Area Sources (Landscaping, Light Commercial Equipment)	324	237	5,124	0	27	27
Other (Construction Equipment)**	49	338	295	0	21	21
Total	1,116	2,125	11,117	31	391	220
Net Change from Baseline	-1,038	-2,280	-10,922	1	-24	-25

CITY OF ANAHEIM - CRITERIA AIR POLLUTANT INVENTORY

	Project Land Uses - lbs/day					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	4,978	8,045	38,785	197	2,216	999
Energy - Residential (Natural Gas)	152	1,302	554	8	105	105
Energy - Nonresidential* (Natural Gas)	196	1,780	1,495	11	135	135
Area Sources (Landscaping, Light Commercial Equipment)	2,433	1,778	38,491	4	204	202
Other (Construction Equipment)	377	2,590	2,260	3	161	159
Total without Construction	7,760	12,906	79,325	220	2,661	1,441
Total with Construction	8,137	15,496	81,585	223	2,821	1,600
Net Change from Baseline in 2035	1,811	3,435	19,048	45	587	347
Net Change from Current GP	1,565	2,929	16,032	41	528	302
Net Change from 2004 Certified EIR	5,857	14,013	72,341	199	-581	-1,768
	Project Land Uses - tons/year					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	864	1,396	6,729	34	385	173
Energy - Residential (Natural Gas)	28	238	101	2	19	19
Energy - Nonresidential* (Natural Gas)	36	325	273	2	25	25
Area Sources (Landscaping, Light Commercial Equipment)	444	325	7,025	1	37	37
Other (Construction Equipment)**	65	449	392	1	28	28
Total without Construction	1,437	2,732	14,520	39	493	282
Total with Construction	1,371	2,283	14,128	38	466	254
Net Change from Baseline in 2035	255	158	3,011	7	75	34
Net Change from Current GP	211	67	2,466	7	65	26
Net Change from 2004 Certified EIR	-909	800	4,884	14	-2,937	-3,114

CITY OF ANAHEIM - CRITERIA AIR POLLUTANT INVENTORY

	Current GP Land Uses - lbs/day					
2004 Certified EIR	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	899	1,109	8,967	20	3,401	3,367
Energy (Natural Gas)	28	374	156	0	1	1
Area Sources	1,353	0	121	4	0	0
Total	2,280	1,483	9,244	24	3,402	3,368
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	4,058	6,558	31,618	161	1,807	814
Energy - Residential (Natural Gas)	127	1,082	461	7	87	87
Energy - Nonresidential* (Natural Gas)	155	1,408	1,183	8	107	107
Area Sources (Landscaping, Light Commercial Equipment)	1,925	1,407	30,449	3	161	160
Other (Construction Equipment)	307	2,111	1,842	3	131	130
Total	6,572	12,567	65,552	182	2,293	1,298
Net Change from Baseline in 2035	246	507	3,016	4	59	45
	Current GP Land Uses - tons/year					
SECTORS	**ROG**	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Transportation	704	1,138	5,486	28	313	141
Energy - Residential (Natural Gas)	23	198	84	1	16	16
Energy - Nonresidential* (Natural Gas)	28	257	216	2	20	20
Area Sources (Landscaping, Light Commercial Equipment)	351	257	5,557	1	29	29
Other (Construction Equipment)**	53	366	320	0	23	22
Total	1,160	2,215	11,662	32	401	228
Net Change from Baseline in 2035	44	90	545	1	10	8

CITY OF ANAHEIM - CRITERIA AIR POLLUTANT INVENTORY

Notes: Emissions forecasts estimated based on changes in population (residential energy), employment (nonresidential energy), or service population (transportation)

EMFAC2011 based on daily VMT provided by ITERIS using the ATAM model. Transportation sector includes the full trip length for external-internal trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

Energy. Based on a two-year average (2010-2011) of energy use provided by Anaheim Utilities and a three year average (2010-2012) provided by SoCal Gas. Nonresidential* includes direct access customers, county facilities, and other district facilities within the City boundaries.

Area Sources. OFFROAD2007. Estimated based on population (Landscaping) and employment (Light Commercial Equipment) for the City of Anaheim as a percentage of Orange County. Excludes SCAQMD permitted sources. Does not include emissions from wood-burning fireplaces or consumer products (Note: no new homes would permit wood-burning fireplaces). Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the Project would require permitting and would be subject to further study pursuant to SCAQMD Rule 1401, New Source Review. Because the nature of those emissions cannot be determined at this time and they are subject to further regulation and permitting, they will not be included in the table because they would be speculative.

Other Sources. OFFROAD2007. Estimated based on housing permit data for Orange County and Anaheim from the U.S. Census. ** Daily offroad construction emissions multiplied by 347 days/year to account for reduced/limited construction activity on weekends and holidays. Excludes fugitive emissions from construction sites.

Model Inputs

	From ITERIS	Interpolated	From ITERIS	From 2004 EIR
	2012	2020 estimate	Proposed GP	Current GP
Population	354,383	400,116	485,866	403,773
Employment	249,698	273,393	317,821	251,397
Service Population	**604,081**	**673,509**	**803,687**	**655,170**

Notes:

Source: 2012 and 2035 Population and Employment is provided by ITERIS. The Current General Plan Population and Employment is based on the 2004 General Plan EIR.

Model Inputs

Note: highlighted areas are the model inputs. The remaining areas are automatically updated based on the change in Population and Employment

	Sector Inputs			
	2012	2020 estimate	Proposed GP	Current GP
Residential Electricity (Kwh)	624,930,745	705,578,219	856,792,231	712,026,710
Commercial + Industrial Electricity (Kwh)	1,902,781,978	2,083,345,444	2,421,901,942	1,915,728,924
Total Electricity (Kwh)	2,527,712,723	2,788,923,662	3,278,694,173	2,627,755,635
Residential Natural Gas (Therms)	37,619,540	42,474,351	51,577,122	42,862,537
Commercial+Industrial Natural Gas (Therms)	51,604,334	56,501,299	65,683,109	51,955,461
City (Therms)	439,475	489,984	584,690	476,642
Total Natural Gas (Therms)	89,663,348	99,465,634	117,844,920	95,294,640
VMT/day	14,628,528	15,246,764	18,193,703	14,831,605
Water (AF/year)	70,098	67,834	81,028	66,130
Water (gallons/year)	22,841,599,435	22,103,667,911	26,403,029,546	21,548,668,225
Wastewater (gallons/year)	13,491,373,791	12,989,607,124	15,534,357,680	12,694,850,440
Indoor Water as a Percent of Total Water Use	59%	59%	59%	59%
Waste Generation (tons/year)	369,373	411,826	491,425	400,612
Waste Generation ADC (tons/year)	235,432	262,490	313,225	255,343
Total Waste Disposal (tons/year)	604,805	674,316	804,650	655,955
Sources				

Natural gas and electricity use for residential land uses in the City were modeled using data provided by SoCalGas and Anaheim Utilities, respectively. Natural gas and electricity use is based on a three-year average (2011, 2010, and 2009) to account for fluctuation in annual natural use as a result of natural variations in climate. Forecasts in energy are based on the change in population and employment.
EMFAC2011 based on daily VMT provided by ITERIS using the ATAM model. Transportation sector includes the full trip length for external-internal trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

Total water generation for the City of Anaheim is based on Anaheim's 2010 Urban Water Management Plan SBX7-7 gallons per capita per day (gpcd). Forecasts (2020 and 2035) are adjusted for increases in population and employment and are based on the Target per capita SBx7-7 for Anaheim Utilities.

Waste generation based on waste commitment for the City of Anaheim is obtained from CalRecycle. Forecasts are based on an average 2011-2009 disposal rate and adjusted for increases in population and employment.

Water and Wastewater

Water Demand Calculations Derived from the Urban Water Management Plan

Source: Anaheim. 2011, June. 2010 Urban Water Management Plan. Prepared by Malcolm Pirnie, Inc. http://www.anaheim.net/articlenew2222.asp?id=4400

The City's service area excludes several small areas inside City limits serviced by other water purveyors and includes areas outside of City limits (between Brookhurst and Gilbert Streets) serviced by the City.

	Total Demand		
	% Total Demand	Indoor	Outdoor
Residential (single + multi-family) - Demand	58%	61%	39%
Commercial + Industrial	37%	62%	38%
Other non-residential: Irrigation + Other + System Loss - Outdoor	5%	0%	100%
Total			

	Per Capita Water Use (gpdc)				
	Total	Residential Indoor	Residential Outdoor	Non-Residential Indoor	Non-Residential Outdoor
Base	201.6	71.7	45.2	46.2	38.4
2020 Target	161.2	57.3	36.2	46.2	38.4

The SBX7-7 rate is allocated to residential, non-residential, and outdoor water use based on the Customer type % identified in Table above (since rate only includes population not employment)

	Water Use gallons/year				
	Total	Residential Indoor	Residential Outdoor	Non-Residential Indoor	Non-Residential Outdoor
2012	22,841,599,435	9,276,429,202	5,848,183,628	4,214,944,589	3,502,042,017
2020	22,103,667,911	8,374,687,651	5,279,694,389	4,614,919,474	3,834,366,398
Proposed Project	26,403,029,546	10,169,485,298	6,411,197,253	5,364,872,382	4,457,474,612
Current General Plan	21,548,668,225	8,451,226,443	5,327,947,106	4,243,623,997	3,525,870,679

California	Total (AFY)	Percent
Residential Indoor Water Use	2,300,000	61%
Residential Outdoor Water Use	1,450,000	39%

The Pacific Institute. 2003, November. Waste Not Want Not (WNWN): The Potential for Urban Water Conservation in California. Table ES-1

Office Outdoor Water Use percentage	38%
Misc. Retail Outdoor Water Use percentage	38%

The Pacific Institute. 2003, November. Waste Not Want Not (WNWN): The Potential for Urban Water Conservation in California. Appendix E, Details of Commercial Water Use and Potential Savings, by Sector; and Appendix F, Details of Industrial Water Use and Potential Saves, by Sector.

Water and Wastewater

Fugitive Emissions - Process Emissions from WWTP with Nitrification/Denitrification

CH_4 - Microorganisms can biodegrade soluble organic material in wastewater under aerobic (presence of oxygen) or anaerobic (absence of oxygen) conditions. Anaerobic conditions result in the production of CH_4.

N_2O - Treatment of domestic wastewater during both nitrification and denitrification of the nitrogen present leads to the formation of N_2O, usually in the form of urea, ammonia, and proteins. These compounds are converted to nitrate through the aerobic process of nitrification. Denitrification occurs under anoxic conditions (without free oxygen), and involves the biological conversion of nitrate into dinitrogen. N_2O can be an intermediate product of both processes, but more often is associated with denitrification.

Notes: Waste discharge facilities in compliance with the United States Environmental Protection Agency's Clean Water Standards do not typically result in CH_4 emissions. However, poorly-operated aerobic wastewater treatment systems can result in the generation of CH_4. Because wastewater treatment systems are assumed to operate in compliance with state and federal laws pertaining to water quality, CH_4 emissions from centralized aerobic treatments are not included in the inventory.

Buildout Fugitive Emissions - Process Emissions from WWTP with Nitrification/Denitrification

LGOP Version 1.1. Equation 10.9.

N_2O = Wastewater x 10^-6 x Nload x EF effluent x 10^3

	2012	2020	Proposed Project	Current GP
wastewater (Liters)=	51,064,849,799	49,165,662,966	58,797,543,819	48,050,008,916

10^-6 =	1.00E-06	conversion factor; kg/mg	
N Load	40.00	mg/L of wastewater	USEPA 2008
EF effluent	0.01	kg/N_2O/kg N	
10^-3 =	1.00E-03	conversion factor: MTons/kg	

	2012	2020	Proposed Project	Current GP
	MTons			
N_2O	10.21	9.83	11.76	9.61
CO_2e =	3,166	3,048	3,645	2,979

Source: California Air Resources Board (CARB). 2010, May. Local Government Operations Protocol (LGOP), Version 1.1. The LGOP protocol provides default values for all the terms except the Nitrogen Load, which is assumed to be 40 mg of N per Liter of wastewater effluent based on USEPA methodology outlined in the CalEEMod program manual. South Coast Air Quality Management District (SCAQMD). 2011. California Emissions Estimator Model (CalEEMod), Version 2011.1.1. User's Manual. USEPA. 2008. Page 8-12. USEPA cites Metcalf & Eddy, Inc., 1991, "Wastewater Engineering: Treatment Disposal, and Reuse," 3rd Ed. McGraw Hill Publishing.

Water and Wastewater

Energy for Water Conveyance, Treatment, Distribution, and Wastewater Treatment (Southern California)

Water Supply and Conveyance	Water Treatment	Water Distribution	Total Water	Wastewater Treatment (Tertiary)
	kWhr/million gallons			
9,727	111	1,272	11,110	1,911

Source: California Energy Commission (CEC). 2006, December. Refining Estimates of Water-Related Energy Use in California. CEC-500-2006-118. Prepared by Navigant Consulting, Inc. Based on the electricity use for Southern California.

Anaheim Carbon Intensity

Intensity factor				CO_2e
CO2 MTons/MWH[1]	CH_4 MTons/MWH[2]	N_2O MTons/MWH[2]		MTons/MWh
0.649	0.000013	0.000003		0.650

Source 1: Anaheim, Public Utilities Department. 2013, February 12. Mandip Kaur Samra, Integrated Resources Planner.

Source 2: CH_4 intensity factor=28.94 lb/GWh; N_20 intensity factor=6.17 lb/GWh. United States Environmental Protection Agency. eGRID2012 Version 1.0 Year 2009 GHG Annual Emission Rates. http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2012V1_0_year09_GHGOutputrates.pdf

ABAU Carbon Intensity

	2011	2020	CO_2e
Assumed Percent Renewable	16%	33%	MTons/MWh
CO_2e MTons/Mwh	0.649	0.517	0.519

Source: Anaheim, Public Utilities Department. 2013, February 12. Mandip Kaur Samra, Integrated Resources Planner.

Source: California Public Utilities Commission (CPUC). California RPS Procurement Summary 2003-20010. http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm

GHG Emissions from Energy Associated with Water/Wastewater

Energy Associated with Water Use	2012	2020	Proposed Project	Current GP
	MwH/Year			
Water	253,770	245,572	293,338	239,406
Wastewater	25,782	24,823	29,686	24,260
Total Water/Wastewater	279,552	270,395	323,024	263,666

Wastewater Modeling assumes 100% septic treatment for 2012, 50% septic treatment for 2020; 25% septic treatment in 2035, and 0% septic treatment at P-2035.

GHG Emissions from Energy Associated with Water Use/Wastewater Generation	2012	2020	Proposed Project	Current GP
	$MTCO_2e$/Year			
Water	164,894	159,567	190,605	155,561
Wastewater	16,753	16,130	19,289	15,764
Total Water/Wastewater	181,647	175,697	209,894	171,324

Total GHGs

GHG Emissions from Water/Wastewater Use	2012	2020	Proposed Project	Current GP
	$MTCO_2e$/Year			
Water	164,894	159,567	190,605	155,561
Wastewater	19,919	19,178	22,935	18,743
Total Water/Wastewater	184,813	178,745	213,539	174,303

GHG Emissions from Energy Use - Adjusted for Lower Carbon Intensity in 2020

GHG Emissions from Water/Wastewater Use		2020	Proposed Project	Current GP
		$MTCO_2e$/Year		
Water		127,331	152,098	124,134
Wastewater		15,919	19,038	15,558
Total Water/Wastewater		143,250	171,136	139,692

Water and Wastewater

General Conversion Factors

	Global Warming Potentials (GWP)
CO_2	1
CH_4	21
N_2O	310

Source: Intergovernmental Panel on Climate Change (IPCC). 2001. Third Assessment Report: Climate Change 2011.

gallons to Liters	3.785
kilowatt hrs to megawatt hrs	0.001
gallons to AF	325851.4290

Table 2-5: Additional Water Uses and Losses (AFY)

Water Use	Fiscal Year Ending						
	2005	2010	2015	2020	2025	2030	2035-opt
Saline Barriers	-	-	-	-	-	-	-
Groundwater Recharge	-	-	-	-	-	-	-
Conjunctive Use	-	-	-	-	-	-	-
Raw Water	-	-	-	-	-	-	-
Golf Course Irrigation	232	355	300	300	300	300	300
Unaccounted-for Water	1,831	3,698	3,258	3,312	3,416	3,488	3,497
Total	**2,063**	**4,053**	**3,558**	**3,612**	**3,716**	**3,788**	**3,797**

2.4. SBx7-7 Requirements

2.4.1. Overview

SBx7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package. It seeks to implement Governor Schwarzenegger's 2008 water use reduction goals to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. As discussed above, the bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four target-setting methods (compliance options). The retail agency may choose to comply to SBx7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier still has to report the water use target for its individual service area. The bill also includes reporting requirements in the 2010, 2015, and 2020 UWMPs. An agency that does not comply with SBx7-7 requirement will not be eligible for water related grant, or loan, from the state on and after July 16, 2016. However, if an agency that is not in compliance documents a plan and obtains funding approval to come into compliance then could become eligible for grants or loans.

2.4.2. SBx7-7 Compliance Options

DWR has established four compliance options for urban retail water suppliers to choose from. Each supplier is required to adopt one of the four options to comply with SBx7-7 requirements. The four options include:

- *Option 1* requires a simple 20 percent reduction from the baseline by 2020 and 10 percent by 2015.

- *Option 2* employs a budget-based approach by requiring an agency to achieve a performance standard based on three metrics:
    - Residential indoor water use of 55 GPCD
    - Landscape water use commiserate with Model Landscape Ordinance
    - 10 percent reduction in baseline CII water use
- *Option 3* is to achieve 95% of the applicable state hydrologic region target as set forth in the State's 20x2020 Water Conservation Plan.
- *Option 4* requires calculation of Total Savings and subtraction from Base GPCD:
    - Total Savings includes indoor residential savings, metering savings, CII savings, landscape and water loss savings.

Anaheim's Compliance Option Selection

With MWDOC's assistance in the calculation of the City's base daily per capita use and water use targets, the City has selected to comply with **Option 1**.

While each retail agency is required to choose a compliance option in 2010, DWR allows for the agency to change its compliance option in 2015. This will allow the City to determine its water use targets for Compliance Option 2 and 4 as it anticipates more data to be available for targets calculation in the future.

2.4.3. Regional Alliance

As discussed above, retail agencies can choose to meet the SBx7-7 targets on its own or several retail agencies may form a regional alliance and meet the water use targets as a region. The benefit for an agency that joins a regional alliance is that it has multiple means of meeting compliance.

The City is a member of the Orange County 20x2020 Regional Alliance formed by MWDOC. This regional alliance consists of 29 retail agencies in Orange County as described in MWDOC's 2010 RUWMP. The Regional Alliance Weighted 2015 target is 174 GPCD and 2020 target is 157 GPCD.

2.4.4. Baseline Water Use

The first step to calculating an agency's water use targets is to determine its base daily per capita water use (baseline water use). This baseline water use is essentially the agency's gross water use divided by its service area population, reported in gallons per capita per day (GPCD). The baseline water use is calculated as a continuous 10-year average during a period, which ends no earlier than December 31, 2004 and no later than December 31, 2010. Agencies that recycled water consists of 10 percent or more of 2008 retail water delivery can use up to a 15-year average for the calculation.

The City's retail delivery in 2008 did not include recycled water; therefore, a 10-year instead of a 15-year rolling average was calculated. The City's baseline water use is **201.6 GPCD** which was obtained from the 10-year period July 1, 1995 to June 30, 2005.

Tables 2-6 and 2-7 provide the base period ranges used to calculate the baseline water use for the City as well as the service area population and annual water use data which the base daily per capita water use was derived. Data provided in Table 2-6 was used to calculate the continuous 10-year average baseline GPCD. Moreover, regardless of the compliance option adopted by the City, it will need to meet a minimum water use target of 5% reduction from a five-year baseline as calculated in Table 2-7. Because the City is an OCWD agency, the City's gross water use includes deductions for indirect potable recycled water use from the Groundwater Replenishment System (GWRS) and Water Factory 21 managed by OCWD. The calculations for the gross water use are included in Appendix C.

Table 2-6: Base Daily per Capita Water Use – 10-year range

Highest Available Baseline [1]	Beginning	Ending
10 Year Avg	July 1, 1995	June 30, 2005

Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use
1996	303,051	63,978,366	211
1997	309,953	66,920,067	216
1998	317,468	61,984,726	195
1999	324,968	66,564,814	205
2000	333,052	71,142,641	214
2001	339,261	67,467,866	199
2002	342,641	70,750,321	206
2003	345,157	66,261,928	192
2004	348,117	68,300,052	196
2005	348,018	63,114,928	181
		Base Daily Per Capita Water Use:	201.6

[1] The most recent year in base period must end no earlier than December 31, 2004, and no later than December 31, 2010. The base period cannot exceed 10 years unless at least 10 percent of 2008 retail deliveries were met with recycled water.

Table 2-7: Base Daily per Capita Water Use – 5-year range

Highest Available Baseline [2]	Beginning	Ending
5 Year Avg	July 1, 2003	June 30, 2008

Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use
2004	348,117	68,300,052	196
2005	348,018	63,114,928	181
2006	347,959	64,643,550	186
2007	349,645	68,159,525	195
2008	351,933	66,023,837	188
		Base Daily Per Capita Water Use:	189.2

[2] The base period must end no earlier than December 31, 2007, and no later than December 31, 2010.

2.4.5. SBx7-7 Water Use Targets

Under Compliance Option 1, the simple 20 percent reduction from the baseline, the City's 2015 interim water use target is 181.4 GPCD and the 2020 final water use target is **161.2 GPCD** as summarized in Table 2-8.

Table 2-8: Preferred Compliance Option and Water Use Targets

	Baseline	2015 Target	2020 Target
Option 1 - Simple 20% Reduction	201.6	181.4	161.2

2.4.6. Water Use Reduction Implementation Plan

The City will continue to implement Demand Management Measures described in Section 4 as part of its Water Use Reduction Implementation Plan. As part of this implementation, the City recently submitted a grant application to the United States Department of the Interior Bureau of Reclamation (BOR) to develop a Water Use Efficiency Master Plan. The purpose of this master plan is to develop specific approaches for implementing cost effective water conservation measures to achieve the 20 x 2020 targets set by the 2009 Water Conservation Bill.

In addition, the City will participate in the Orange County 20x2020 Regional Alliance along with 28 other retail urban water suppliers in Orange County. The Orange County 20x2020 Regional Alliance was created to allow local water suppliers to meet their 20% by 2020 reduction targets set by the 2009 Water Conservation Bill on a regional basis through the successful implementation of region-wide programs.

Community Wide GHG Inventory Report for Anaheim

Anaheim, Public Utilities Department. 2013, May 9. Brian Beelner, Financial Planning Manager.

Southern California Gas Company (SoCal Gas), 2013, May 16. 2012, 2011, and 2010 Annual Natural Gas Use (City). Provided by Paulo Morais, Energy Programs Supervisor, Customer Programs.

Southern California Gas Company (SoCal Gas), 2013, April 12. 2011, 2010, and 2009 Annual Natural Gas Use. Provided by Paulo Morais, Energy Programs Supervisor, Customer Programs.

California Energy Commission Sector Group: Bundled and Direct Access Customers

	2010 Annual KWH	2011 Annual KWH	2012 Annual KWH	Average 2009-2011 Annual KWH
Residential	623,834,747	630,893,341	620,064,147	624,930,745
Commercial + Industrial + City	1,973,078,213	1,902,931,293	1,832,336,428	1,902,781,978
	0	0	0	0
	2,596,912,960	2,533,824,634	2,452,400,575	2,527,712,723

* City facilities not disaggregated from commercial + industrial accounts.

SoCal Gas Natural Gas Use

	2010 Annual Therms	2011 Annual Therms	2012 Annual Therms	Average 2010-2012 Annual Therms
Residential	37,533,733	37,705,346		37,619,540
Commercial + Industrial	41,155,908	62,052,759		51,604,334
City	452,395	426,554		439,475
	79,142,036	100,184,659	0	89,663,348

Energy

Natural Gas Emission Factors

Natural Gas	Intensity factor				CO_2e
	lbs CO_2/Therm	MTons CO_2/Therm	CH_4 MTons/Therm	N_2O MTons/Therm	MTons/Therm
All Years	11.7	0.00530	5.E-07	1.E-08	**0.00532**

Source: CO2, CH4 and N2O intensity based on Table G.3 of the LGOP for residential and non-residential (CO_2, 53.02 kg/Mmbtu; CH_4: 0.005 kg/MMBtu; N_2O: 0.0001 kg/MMBtu)

Anaheim Utility Electricity Carbon Intensity

Intensity factor 2011					CO_2e
	CO2 MTons/MWH[1]	CH_4 MTons/MWH[2]	N_2O MTons/MWH[2]		MTons/MWh
	0.649	0.000013	0.000003		0.650

Source 1: Anaheim, Public Utilities Department. 2013, February 12. Mandip Kaur Samra, Integrated Resources Planner.

Source 2: CH_4 intensity factor=28.94 lb/GWh; N_20 intensity factor=6.17 lb/GWh. United States Environmental Protection Agency. eGRID2012 Version 1.0 Year 2009 GHG Annual Emission Rates. http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2012V1_0_year09_GHGOutputrates.pdf

ABAU Carbon Intensity

	2011	2020	CO_2e
Assumed Percent Renewable	16%	33%	MTons/MWh
CO_2e MTons/Mwh	0.649	0.517	0.519

Source: Anaheim, Public Utilities Department. 2013, February 12. Mandip Kaur Samra, Integrated Resources Planner.

Source: California Public Utilities Commission (CPUC). California RPS Procurement Summary 2003-2010. http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm

GHG Emissions from Energy Use

	2012	2020	Project	Current GP
Electricity				
Residential Electricity	406,067	458,470	556,725	462,660
Commercial + Industrial	1,236,387	1,353,713	1,573,700	1,244,800
Total	1,642,454	1,812,183	2,130,425	1,707,459

	2012	2020	Project	Current GP
Natural Gas				
Residential Electricity	199,970	225,777	274,163	227,840
Commercial + Industrial	274,308	300,338	349,145	276,174
City	2,336	2,605	3,108	2,534
Total	476,614	528,720	626,416	506,548

	2012	2020	Project	Current GP
Summary				
Residential Total	606,037	684,246	830,889	690,500
Commercial + Industrial Total	1,510,695	1,654,052	1,922,845	1,520,974
City Total (natural gas only)	2,336	2,605	3,108	2,534
Total	2,119,068	2,340,902	2,756,842	2,214,007

GHG Emissions from Energy Use - Adjusted for Lower Carbon Intensity in 2020

		2020	Project	Current GP
Electricity		**$MTCO_2e$/Year**		
Residential Electricity		365,847	444,253	369,191
Commercial + Industrial		1,080,229	1,255,773	993,319
Total		1,446,077	1,700,026	1,362,510
		2020	Project	Current GP
Natural Gas		**$MTCO_2e$/Year**		
Residential Electricity		225,777	274,163	227,840
Commercial + Industrial		300,338	349,145	276,174
City		2,605	3,108	2,534
Total		528,720	626,416	506,548
		2020	P-2035	2035
Summary		**$MTCO_2e$/Year**		
Residential Total		591,624	718,416	597,031
Commercial + Industrial Total		1,380,568	1,604,919	1,269,494
City Total (natural gas only)		2,605	3,108	2,534
Total		1,974,796	2,326,443	1,869,058

General Conversion Factors

lbs to kg	0.4536
kg to MTons	0.001
Mmbtu to Therm	0.1
kilowatt hrs to megawatt hrs	0.001
lbs to Tons	2000
Tons to MTon	0.9071847

Source: California Air Resources Board (CARB). 2010. Local Government Operations Protocol. Version 1.1. Appendix F, Standard Conversion Factors

	Global Warming Potentials (GWP)
CO_2	1
CH_4	21
N_2O	310

Source: Intergovernmental Panel on Climate Change (IPCC). 2001. Third Assessment Report: Climate Change 2011.

Therms to kwh	29.30711111

Criteria Air Pollutants from Natural Gas

Rate	lbs/MBTU					
Natural Gas	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Residential	0.01078431	0.09215686	0.03921569	0.00058824	0.00745098	0.00745098
Non-Residential	0.01078431	0.09803922	0.08235294	0.00058824	0.00745098	0.00745098

Source: CalEEMod Version 2011.1.1.

Natural Gas	2012 lbs/day					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Residential	111	950	404	6	77	77
Commercial + Industrial	152	1386	1164	8	105	105
City	1	12	10	0	1	1
Total	265	2348	1578	14	183	183

Natural Gas	2020 lbs/day					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Residential	125	1072	456	7	87	87
Commercial + Industrial	167	1518	1275	9	115	115
City	1	13	11	0	1	1
Total	294	2603	1742	16	203	203
Increase from Baseline	29	255	164	2	20	20

Natural Gas	Project lbs/day					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Residential	152	1302	554	8	105	105
Commercial + Industrial	194	1764	1482	11	134	134
City	2	16	13	0	1	1
Total	348	3082	2049	19	241	241
Increase from Baseline	83	734	471	5	58	58

Natural Gas	Current GP lbs/day					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Residential	127	1082	461	7	87	87
Commercial + Industrial	154	1396	1172	8	106	106
City	1	13	11	0	1	1
Total	282	2491	1644	15	195	195
Increase from Baseline	17	143	65	1	11	11

General Conversion Factors	
Mmbtu to Therm	0.1
lbs to Tons	2000
Tons to MTon	0.9071847

Source: California Air Resources Board (CARB). 2010. Local Government Operations Protocol. Version 1.1. Appendix F, Standard Conversion Factors

1. **Anaheim's Renewable Resources and Resource Mix:**
    - ***a.*** Based on Published Data: http://www.anaheim.net/utilities/PowerContentLabel.pdf
    - ***b.*** We are 16% Renewable for Calendar Year 2012 (this data has not been audited). Our aim is to be at 33% RPS by 2020. Anaheim intends to comply with the State RPS Statute, SBX1 2, passed in April 2011.
        - ***i.*** Here is Anaheim's RPS Policy, based on data from 2011 and 2012 (please click on the link that says "Anaheim's Renewable Procurement Plan": http://www.anaheim.net/article.asp?id=4606

2. **Anaheim's Carbon Content (2012 data is not available- it will be available in September of 2013). As you can see, overall, our carbon content has gone down over time. This is primarily due to the purchase of Renewable Resources.**

Calendar Year	MT CO2/MWh	lbs CO2/MWh
2008	0.732675195	1615.272308
2009	0.75860895	1672.446451
2010	0.692666204	1527.067582
2011	0.648635319	1429.996097

City of Anaheim 2010	Category	Annual Therms	# of meters	Anaheim Facilities Aggregated Therms**	# of meters
	Industrual/Commercial*	41608303	4,240	452,395	44
	Single Family Residential	27327288	75438		
	Multi-Family Resdential	10206445	3051		
Total Therms		79,142,036	82,729		
City of Anaheim 2011	Category	Annual Therms	# of meters		
	Industrual/Commercial*	62479313	4,199	426,554	44
	Single Family Residential	27593056	75962		
	Multi-Family Resdential	10112290	3,053		
Total Therms		100,184,659	83,214		
City of Anaheim 2012	Category	Annual Therms	# of meters		
	Industrual/Commercial				
	Single Family Residential				
	Multi-Family Resdential				
Total Therms		0	0		

* Industrual/Commercial load includes City of Anaheim Facilities

**Anaheim Facilities Aggregated Therms. Load does not include Power Generation

Public Notification of Amendment and Adoption of Renewable Portfolio Standard

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20% of retail sales by 2017. In 2006, Senate Bill 107 codified California's 20% by 2010 RPS goal. Publicly owned utilities, like Anaheim Public Utilities, set their own RPS goals recognizing the intent of the legislature is to achieve the 20% by 2010 target. In response to SB 107, Anaheim Public Utilities established a goal of 20% RPS by 2015, which was approved by the Anaheim City Council per Resolution 2006-187.

In April 2011 new legislation, Senate Bill X1 2 (SBX1 2), was signed by Governor Brown requiring all utilities to meet a 33% Renewable Portfolio Standard (RPS) goal by 2020. By legislative mandate, Anaheim Public Utilities must adopt the new RPS goals of an average of 20% of retail sales from renewable resources for the period 2011-2013, 25% by the end of 2016, and 33% by the end of 2020. In December of 2011, Anaheim posted the Resolution and Anaheim RPS Policy, which included the Enforcement Program and Procurement Plan. Anaheim is proposing an amendment to the 2011 RPS policy, to include an updated Resources Procurement Plan and a cost limitation provision. The draft 2013 RPS Policy is posted below. There is no change to the Resolution.

Please note that the draft RPS Policy remain in draft form until they are approved by the Anaheim City Council.

Reference Documents:
- Resolution
- Anaheim's RPS Policy and Resources Procurement Plan

CITY OF ANAHEIM — TRANSPORTATION SECTOR

VMT	City of Anaheim						
	Population	Employment	Service Population (SP)	Daily VMT*	Rate (VMT/ SP)	Adjusted Daily VMT	Annual VMT
2012	354,383	249,698	604,081	14,628,528	24.22	14,628,528	5,076,099,216
2020	400,116	273,393	673,509	15,246,764	22.64	15,246,764	5,290,627,047
Proposed Project	485,866	317,821	803,687	18,193,703	22.64	18,193,703	6,313,214,941
Current GP	403,773	251,397	655,170	14,831,605	22.64	14,831,605	5,146,567,050
Baseline in 2035	354,383	249,698	604,081	14,628,528	24.22	14,628,528	5,076,099,216
ITERIS 2012 Baseline	354,383	249,698	604,081	14,628,528	24.22		
ITERIS 2035	485,866	317,821	803,687	18,193,703	22.64		
Source: 2012 and 2035 VMT is based on data provided by Iteris using the ATAM model.							
VMT for the Current General Plan is based on per capita VMT in the Traffic Study provided by Iteris (i.e., VMT/population and employment (service population)).							
Adjusted Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.							

CRITERIA AIR POLLUTANTS

	lbs/day					
	ROG	NOx	CO	SOx	PM10	PM2.5
2012	9,983	19,609	94,134	153	1,920	945
2020	6,187	11,034	51,624	161	1,821	814
Proposed Project	4,978	8,045	38,785	197	2,216	999
Current GP	4,058	6,558	31,618	161	1,807	814
Baseline in 2035	4,003	6,469	31,185	159	1,782	803
	Tons/year					
	ROG	NOx	CO	SOx	PM10	PM2.5
2012	1,732	3,402	16,332	27	333	164
2020	1,074	1,914	8,957	28	316	141
Proposed Project	864	1,396	6,729	34	385	173
Current GP	704	1,138	5,486	28	313	141
Baseline in 2035	694	1,122	5,411	28	309	139
Daily emissions multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.						
Source: EMFAC2011-SG						

GHG EMISSIONS

	MTons/year - Business as Usual (BAU)			MTons/year - Adjusted			Percent Reduction from BAU	Percent Reduction from 2012
	N_2O	CO_2	CO_2e	N_2O	CO_2	CO_2e		
2012	98	2,401,910	2,432,336	98	2,315,823	2,346,249	-4%	NA
2020	55	2,540,316	2,557,437	55	1,932,951	1,950,072	-24%	-17%
Proposed Project	33	3,118,899	3,131,382	33	2,166,338	2,178,821	-30%	-7%
Current GP	40	2,542,543	2,552,719	40	1,766,011	1,776,187	-30%	-24%
Baseline in 2035	32	2,507,730	2,517,767	32	1,741,830	1,751,867	-30%	-25%
Source: EMFAC2011-SG								
Note: MTons = metric tons; CO_2e = carbon dioxide-equivalent. Adjusted BAU Includes Pavley and the Low Carbon Fuel Standard (LCFS).								

State and Federal Fuel Efficiency Improvements + Low Carbon Fuel Standard (LCFS)

1493 (AB 1493) Pavley I Fuel Efficiency Standards. In addition, the State of California has adopted the Low Carbon Fuel Standard (LCFS). In January 2012, the California Air Resources Board (CARB) adopted the Advanced Clean Car Program which implements the Pavley II Fuel Efficiency Standards and projects that by 2025, one in every seven new cars sold will be electric vehicles (PHEV or PEV). However, the Pavley II Advanced Clean Car Program is not included in the transportation emissions reductions and therefore reductions are conservative.

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the court's rulings preliminarily enjoins the CARB from enforcing the regulation during the pendency of the litigation. In January 2012, CARB appealed the decision and on April 23, 2012, the Night Circuit Court granted CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

Baseline in 2035

Based on EMFAC2011

	Emission year	Daily						
	Baseline in 2035	**14,628,528**				**lbs/day**		
	Percent of VMT	**Adjust % VMT**	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.06%	0.06%	2	22	8	0	3	2
LDA	47.75%	47.75%	1,030	970	11,194	56	738	319
LDT1	5.96%	5.96%	247	147	1,755	8	92	40
LDT2	20.40%	20.40%	750	514	5,654	32	315	135
LHD1	4.37%	4.37%	311	1,041	1,698	8	84	37
LHD2	0.63%	0.63%	28	160	191	1	16	7
MCY	0.30%	0.30%	366	119	2,089	0	4	2
MDV	15.90%	15.90%	932	580	6,267	32	244	105
MH	0.38%	0.38%	4	92	29	1	9	4
Motor Coach	0.06%	0.06%	5	40	25	0	4	2
OBUS	0.04%	0.04%	13	17	103	0	1	0
PTO	0.04%	0.04%	3	24	10	0	1	0
SBUS	0.05%	0.05%	5	57	32	0	8	4
T6 Ag	0.00%	0.00%	0	1	0	0	0	0
T6 CAIRP heavy	0.00%	0.00%	0	0	0	0	0	0
T6 CAIRP small	0.00%	0.00%	0	1	0	0	0	0
T6 instate construction heavy	0.05%	0.05%	2	20	7	0	3	2
T6 instate construction small	0.16%	0.16%	4	50	20	1	9	5
T6 instate heavy	0.29%	0.29%	9	106	40	1	17	9
T6 instate small	0.87%	0.87%	24	271	108	3	50	26
T6 OOS heavy	0.00%	0.00%	0	0	0	0	0	0
T6 OOS small	0.00%	0.00%	0	1	0	0	0	0
T6 public	0.04%	0.04%	1	15	6	0	2	1
T6 utility	0.01%	0.01%	0	2	1	0	0	0
T6TS	0.31%	0.31%	43	57	386	1	4	2
T7 Ag	0.00%	0.00%	0	1	1	0	0	0
T7 CAIRP	0.28%	0.28%	30	245	158	2	16	10
T7 CAIRP construction	0.02%	0.02%	2	18	11	0	1	1
T7 NNOOS	0.32%	0.32%	32	241	172	2	17	10
T7 NOOS	0.10%	0.10%	12	95	64	1	6	4
T7 other port	0.00%	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0.00%	0	0	0	0	0	0
T7 POLA	0.63%	0.63%	63	609	329	3	40	26
T7 public	0.02%	0.02%	3	29	15	0	1	1
T7 Single	0.15%	0.15%	11	88	59	1	8	4
T7 single construction	0.05%	0.05%	4	31	21	0	3	2
T7 SWCV	0.05%	0.05%	5	63	26	0	3	1
T7 tractor	0.40%	0.40%	29	281	152	2	23	14
T7 tractor construction	0.04%	0.04%	3	30	18	0	2	1
T7 utility	0.00%	0.00%	0	2	2	0	0	0
T7IS	0.04%	0.04%	6	54	380	0	1	0
UBUS	0.24%	0.24%	23	377	153	1	56	27
TOTAL	100%	100%	**4,003**	**6,469**	**31,185**	**159**	**1,782**	**803**

Based on the emission factors for Orange County - South Coast Air Basin

Current GP

Based on EMFAC2011

	Emission year	Daily						
	Current GP	**14,831,605**				**lbs/day**		
	Percent of VMT	**Adjust % VMT**	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.06%	0.06%	2	23	8	0	3	2
LDA	47.75%	47.75%	1,044	984	11,349	57	748	323
LDT1	5.96%	5.96%	250	149	1,780	8	93	40
LDT2	20.40%	20.40%	760	521	5,733	33	319	137
LHD1	4.37%	4.37%	315	1,056	1,721	8	85	37
LHD2	0.63%	0.63%	29	162	194	1	16	7
MCY	0.30%	0.30%	371	121	2,118	0	4	2
MDV	15.90%	15.90%	945	588	6,354	33	248	106
MH	0.38%	0.38%	4	93	30	1	9	4
Motor Coach	0.06%	0.06%	5	40	25	0	4	2
OBUS	0.04%	0.04%	13	17	105	0	1	0
PTO	0.04%	0.04%	3	25	10	0	1	0
SBUS	0.05%	0.05%	5	58	32	0	9	4
T6 Ag	0.00%	0.00%	0	1	0	0	0	0
T6 CAIRP heavy	0.00%	0.00%	0	0	0	0	0	0
T6 CAIRP small	0.00%	0.00%	0	1	0	0	0	0
T6 instate construction heavy	0.05%	0.05%	2	20	8	0	3	2
T6 instate construction small	0.16%	0.16%	4	51	20	1	9	5
T6 instate heavy	0.29%	0.29%	9	107	41	1	18	9
T6 instate small	0.87%	0.87%	24	275	109	3	51	26
T6 OOS heavy	0.00%	0.00%	0	0	0	0	0	0
T6 OOS small	0.00%	0.00%	0	1	0	0	0	0
T6 public	0.04%	0.04%	1	15	6	0	2	1
T6 utility	0.01%	0.01%	0	2	1	0	0	0
T6TS	0.31%	0.31%	43	58	391	1	5	2
T7 Ag	0.00%	0.00%	0	1	1	0	0	0
T7 CAIRP	0.28%	0.28%	30	248	160	2	16	10
T7 CAIRP construction	0.02%	0.02%	2	18	12	0	1	1
T7 NNOOS	0.32%	0.32%	33	244	174	2	17	10
T7 NOOS	0.10%	0.10%	12	96	65	1	6	4
T7 other port	0.00%	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0.00%	0	0	0	0	0	0
T7 POLA	0.63%	0.63%	64	618	334	3	41	26
T7 public	0.02%	0.02%	3	29	15	0	1	1
T7 Single	0.15%	0.15%	11	90	60	1	8	4
T7 single construction	0.05%	0.05%	4	31	21	0	3	2
T7 SWCV	0.05%	0.05%	5	64	27	0	3	1
T7 tractor	0.40%	0.40%	30	284	154	2	23	14
T7 tractor construction	0.04%	0.04%	3	31	18	0	2	1
T7 utility	0.00%	0.00%	0	2	2	0	0	0
T7IS	0.04%	0.04%	6	54	385	0	1	0
UBUS	0.24%	0.24%	24	382	155	1	57	28
TOTAL	100%	100%	**4,058**	**6,558**	**31,618**	**161**	**1,807**	**814**

Based on the emission factors for Orange County - South Coast Air Basin

Proposed Project

Based on EMFAC2011

	Emission year	Daily						
	Proposed Proje	**18,193,703**				**lbs/day**		
	Percent of VMT	**Adjust % VMT**	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.06%	0.06%	2	28	10	0	4	2
LDA	47.75%	47.75%	1,281	1,207	13,922	70	918	397
LDT1	5.96%	5.96%	307	183	2,183	10	114	49
LDT2	20.40%	20.40%	932	639	7,032	40	391	169
LHD1	4.37%	4.37%	387	1,295	2,111	10	104	46
LHD2	0.63%	0.63%	35	199	238	1	20	9
MCY	0.30%	0.30%	455	148	2,598	0	5	2
MDV	15.90%	15.90%	1,160	722	7,794	40	304	130
MH	0.38%	0.38%	5	114	37	1	11	5
Motor Coach	0.06%	0.06%	6	50	31	0	5	3
OBUS	0.04%	0.04%	16	21	128	0	1	0
PTO	0.04%	0.04%	4	30	12	0	1	1
SBUS	0.05%	0.05%	6	71	39	0	11	5
T6 Ag	0.00%	0.00%	0	1	0	0	0	0
T6 CAIRP heavy	0.00%	0.00%	0	0	0	0	0	0
T6 CAIRP small	0.00%	0.00%	0	1	1	0	0	0
T6 instate construction heavy	0.05%	0.05%	2	24	9	0	4	2
T6 instate construction small	0.16%	0.16%	5	62	25	1	12	6
T6 instate heavy	0.29%	0.29%	11	132	50	1	22	11
T6 instate small	0.87%	0.87%	29	337	134	4	62	32
T6 OOS heavy	0.00%	0.00%	0	0	0	0	0	0
T6 OOS small	0.00%	0.00%	0	1	0	0	0	0
T6 public	0.04%	0.04%	1	18	7	0	3	1
T6 utility	0.01%	0.01%	0	2	1	0	0	0
T6TS	0.31%	0.31%	53	71	480	1	6	2
T7 Ag	0.00%	0.00%	0	2	1	0	0	0
T7 CAIRP	0.28%	0.28%	37	304	197	2	20	12
T7 CAIRP construction	0.02%	0.02%	3	22	14	0	1	1
T7 NNOOS	0.32%	0.32%	40	300	213	2	21	12
T7 NOOS	0.10%	0.10%	15	118	79	1	7	5
T7 other port	0.00%	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0.00%	0	0	0	0	0	0
T7 POLA	0.63%	0.63%	78	758	410	4	50	32
T7 public	0.02%	0.02%	3	36	18	0	1	1
T7 Single	0.15%	0.15%	14	110	74	1	10	6
T7 single construction	0.05%	0.05%	5	38	26	0	3	2
T7 SWCV	0.05%	0.05%	6	79	33	0	3	2
T7 tractor	0.40%	0.40%	37	349	189	3	28	17
T7 tractor construction	0.04%	0.04%	4	38	22	0	3	2
T7 utility	0.00%	0.00%	0	2	2	0	0	0
T7IS	0.04%	0.04%	8	67	473	0	1	0
UBUS	0.24%	0.24%	29	468	190	2	70	34
TOTAL	100%	100.0%	**4,978**	**8,045**	**38,785**	**197**	**2,216**	**999**

Based on the emission factors for Orange County - South Coast Air Basin

Year 2020

Based on EMFAC2011

	Emission year	Daily						
	2020	**15,246,764**				**lbs/day**		
	Percent of VMT	**Adjust % VMT**	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.05%	0.05%	2	46	7	0	3	2
LDA	50.89%	50.89%	1,752	1,425	16,805	62	807	342
LDT1	5.64%	5.64%	610	391	4,444	8	92	40
LDT2	19.32%	19.32%	971	870	8,561	32	306	129
LHD1	4.19%	4.19%	526	1,915	3,056	8	88	40
LHD2	0.59%	0.59%	52	351	284	1	17	8
MCY	0.47%	0.47%	589	197	3,586	0	7	3
MDV	15.08%	15.08%	1,304	1,335	11,865	32	240	102
MH	0.23%	0.23%	7	110	112	1	7	4
Motor Coach	0.05%	0.05%	4	63	21	0	3	2
OBUS	0.05%	0.05%	21	38	216	0	1	0
PTO	0.03%	0.03%	2	59	8	0	1	0
SBUS	0.05%	0.05%	8	132	79	0	10	5
T6 Ag	0.00%	0.00%	0	2	0	0	0	0
T6 CAIRP heavy	0.00%	0.00%	0	1	0	0	0	0
T6 CAIRP small	0.00%	0.00%	0	1	0	0	0	0
T6 instate construction heavy	0.06%	0.06%	2	69	8	0	4	2
T6 instate construction small	0.16%	0.16%	6	82	26	1	11	6
T6 instate heavy	0.27%	0.27%	8	277	36	1	17	9
T6 instate small	0.76%	0.76%	26	357	115	3	50	27
T6 OOS heavy	0.00%	0.00%	0	0	0	0	0	0
T6 OOS small	0.00%	0.00%	0	1	0	0	0	0
T6 public	0.03%	0.03%	1	49	4	0	2	1
T6 utility	0.01%	0.01%	0	4	1	0	0	0
T6TS	0.30%	0.30%	74	139	851	1	5	2
T7 Ag	0.00%	0.00%	0	4	1	0	0	0
T7 CAIRP	0.23%	0.23%	25	244	132	1	14	9
T7 CAIRP construction	0.02%	0.02%	2	23	12	0	1	1
T7 NNOOS	0.26%	0.26%	27	211	145	2	14	8
T7 NOOS	0.08%	0.08%	10	93	53	0	5	3
T7 other port	0.00%	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0.00%	0	0	0	0	0	0
T7 POLA	0.32%	0.32%	57	848	292	2	24	16
T7 public	0.01%	0.01%	1	66	7	0	1	0
T7 Single	0.12%	0.12%	8	203	42	1	7	4
T7 single construction	0.06%	0.06%	4	93	19	0	3	2
T7 SWCV	0.04%	0.04%	3	138	17	0	2	1
T7 tractor	0.33%	0.33%	25	471	127	2	20	12
T7 tractor construction	0.04%	0.04%	4	68	18	0	3	2
T7 utility	0.00%	0.00%	0	4	1	0	0	0
T7IS	0.03%	0.03%	8	47	335	0	0	0
UBUS	0.22%	0.22%	48	608	335	1	57	29
TOTAL	100%	100%	**6,187**	**11,034**	**51,624**	**161**	**1,821**	**814**

Based on the emission factors for Orange County - South Coast Air Basin

Year 2012

Based on EMFAC2011

	Emission year	Daily						
	2012	**14,628,528**				**lbs/day**		
	Percent of VMT	**Adjust % VMT**	**ROG**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
All Other Buses	0.04%	0.04%	5	111	19	0	6	5
LDA	51.25%	51.25%	4,030	3,069	36,245	60	789	339
LDT1	5.75%	5.75%	987	748	8,610	8	94	43
LDT2	19.11%	19.11%	1,543	1,965	16,802	31	292	124
LHD1	4.02%	4.02%	622	2,705	4,621	8	85	41
LHD2	0.59%	0.59%	76	553	526	1	17	9
MCY	0.46%	0.46%	647	193	4,201	0	7	3
MDV	15.62%	15.62%	1,470	2,264	18,093	32	240	102
MH	0.22%	0.22%	21	166	531	0	7	4
Motor Coach	0.04%	0.04%	7	161	34	0	7	6
OBUS	0.06%	0.06%	31	63	348	0	1	0
PTO	0.02%	0.02%	6	106	30	0	4	3
SBUS	0.05%	0.05%	19	162	187	0	14	8
T6 Ag	0.00%	0.00%	0	5	1	0	0	0
T6 CAIRP heavy	0.00%	0.00%	0	2	0	0	0	0
T6 CAIRP small	0.00%	0.00%	0	4	1	0	0	0
T6 instate construction heavy	0.04%	0.04%	5	110	18	0	5	4
T6 instate construction small	0.11%	0.11%	9	225	38	0	13	9
T6 instate heavy	0.24%	0.24%	27	642	105	1	32	24
T6 instate small	0.68%	0.68%	55	1,312	222	2	76	54
T6 OOS heavy	0.00%	0.00%	0	1	0	0	0	0
T6 OOS small	0.00%	0.00%	0	2	0	0	0	0
T6 public	0.03%	0.03%	2	79	9	0	3	2
T6 utility	0.00%	0.00%	0	11	1	0	0	0
T6TS	0.27%	0.27%	141	280	1,648	1	4	2
T7 Ag	0.00%	0.00%	1	11	3	0	1	0
T7 CAIRP	0.18%	0.18%	35	592	162	1	31	25
T7 CAIRP construction	0.01%	0.01%	3	48	13	0	2	2
T7 NNOOS	0.20%	0.20%	31	423	147	1	23	17
T7 NOOS	0.07%	0.07%	13	217	60	0	11	9
T7 other port	0.00%	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0.00%	0	0	0	0	0	0
T7 POLA	0.21%	0.21%	28	589	141	1	17	12
T7 public	0.01%	0.01%	4	80	19	0	3	2
T7 Single	0.10%	0.10%	16	406	77	1	15	12
T7 single construction	0.04%	0.04%	6	158	30	0	6	5
T7 SWCV	0.03%	0.03%	2	179	10	0	2	1
T7 tractor	0.26%	0.26%	57	1,052	268	1	49	41
T7 tractor construction	0.03%	0.03%	7	120	31	0	6	5
T7 utility	0.00%	0.00%	0	8	1	0	0	0
T7IS	0.03%	0.03%	19	55	409	0	0	0
UBUS	0.21%	0.21%	58	730	472	1	55	29
TOTAL	100%	100%	**9,983**	**19,609**	**94,134**	**153**	**1,920**	**945**

Based on the emission factors for Orange County - South Coast Air Basin

Baseline in 2035 (MTons/Year)

Based on EMFAC2011

	Emission year		GWP	GWP			
	Baseline in 2035	**5,076,099,216**	**310**	**1**	**MTons**		**MTons**
	Percent of VMT	**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.06%	4	0	3,134	3,169	2,821	2,856
LDA	47.75%	153	5	879,440	880,946	524,297	525,802
LDT1	5.96%	23	1	127,329	127,557	78,584	78,811
LDT2	20.40%	81	3	509,445	510,242	346,888	347,685
LHD1	4.37%	164	5	131,765	133,380	118,589	120,204
LHD2	0.63%	25	1	18,282	18,530	16,454	16,702
MCY	0.30%	19	1	2,588	2,773	2,329	2,514
MDV	15.90%	91	3	508,780	509,680	357,599	358,500
MH	0.38%	14	0	13,229	13,372	11,906	12,049
Motor Coach	0.06%	6	0	5,086	5,148	4,577	4,639
OBUS	0.04%	3	0	1,385	1,411	1,247	1,272
PTO	0.04%	4	0	3,910	3,947	3,519	3,556
SBUS	0.05%	9	0	2,872	2,961	2,585	2,674
T6 Ag	0.00%	0	0	88	89	80	80
T6 CAIRP heavy	0.00%	0	0	59	59	53	53
T6 CAIRP small	0.00%	0	0	203	205	183	184
T6 instate construction heavy	0.05%	3	0	3,062	3,093	2,756	2,786
T6 instate construction small	0.16%	8	0	9,038	9,116	8,134	8,212
T6 instate heavy	0.29%	17	1	16,610	16,775	14,949	15,114
T6 instate small	0.87%	43	1	48,915	49,335	44,023	44,443
T6 OOS heavy	0.00%	0	0	34	34	30	31
T6 OOS small	0.00%	0	0	116	117	105	106
T6 public	0.04%	2	0	2,331	2,354	2,098	2,120
T6 utility	0.01%	0	0	400	403	360	363
T6TS	0.31%	9	0	9,502	9,591	8,552	8,641
T7 Ag	0.00%	0	0	174	176	156	159
T7 CAIRP	0.28%	38	1	25,955	26,335	23,360	23,739
T7 CAIRP construction	0.02%	3	0	1,873	1,901	1,686	1,714
T7 NNOOS	0.32%	38	1	29,382	29,757	26,444	26,818
T7 NOOS	0.10%	15	0	9,612	9,759	8,651	8,798
T7 other port	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0	0	0	0	0	0
T7 POLA	0.63%	96	3	56,118	57,064	50,506	51,452
T7 public	0.02%	5	0	1,893	1,937	1,703	1,748
T7 Single	0.15%	14	0	13,523	13,660	12,171	12,308
T7 single construction	0.05%	5	0	4,694	4,742	4,225	4,272
T7 SWCV	0.05%	10	0	4,700	4,798	4,230	4,328
T7 tractor	0.40%	44	1	34,724	35,159	31,251	31,687
T7 tractor construction	0.04%	5	0	3,497	3,544	3,147	3,194
T7 utility	0.00%	0	0	210	212	189	192
T7IS	0.04%	8	0	1,103	1,186	993	1,076
UBUS	0.24%	59	2	22,667	23,251	20,400	20,985
TOTAL	100%	**1,018**	**32**	**2,507,730**	**2,517,767**	**1,741,830**	**1,751,867**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors for Orange County - South Coast Air Basin

Current GP **(MTons/Year)**

Based on EMFAC2011

	Emission year		GWP	GWP			
	Current GP	**5,146,567,050**	**310**	**1**	**MTons**		**MTons**
	Percent of VMT	**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.06%	4	0	3,178	3,213	2,860	2,895
LDA	47.75%	155	5	891,649	893,175	531,575	533,102
LDT1	5.96%	23	1	129,097	129,328	79,674	79,905
LDT2	20.40%	82	3	516,517	517,326	351,704	352,512
LHD1	4.37%	166	5	133,594	135,232	120,235	121,873
LHD2	0.63%	26	1	18,536	18,787	16,682	16,934
MCY	0.30%	19	1	2,624	2,811	2,361	2,549
MDV	15.90%	93	3	515,843	516,756	362,564	363,477
MH	0.38%	15	0	13,413	13,557	12,071	12,216
Motor Coach	0.06%	6	0	5,157	5,219	4,641	4,704
OBUS	0.04%	3	0	1,404	1,430	1,264	1,290
PTO	0.04%	4	0	3,964	4,002	3,568	3,606
SBUS	0.05%	9	0	2,912	3,002	2,620	2,711
T6 Ag	0.00%	0	0	90	91	81	82
T6 CAIRP heavy	0.00%	0	0	60	60	54	54
T6 CAIRP small	0.00%	0	0	206	208	185	187
T6 instate construction heavy	0.05%	3	0	3,105	3,136	2,794	2,825
T6 instate construction small	0.16%	8	0	9,164	9,242	8,247	8,326
T6 instate heavy	0.29%	17	1	16,841	17,007	15,157	15,323
T6 instate small	0.87%	43	1	49,594	50,020	44,634	45,060
T6 OOS heavy	0.00%	0	0	34	34	31	31
T6 OOS small	0.00%	0	0	118	119	106	107
T6 public	0.04%	2	0	2,363	2,386	2,127	2,150
T6 utility	0.01%	0	0	405	408	365	368
T6TS	0.31%	9	0	9,634	9,724	8,670	8,761
T7 Ag	0.00%	0	0	176	178	158	161
T7 CAIRP	0.28%	39	1	26,315	26,700	23,684	24,069
T7 CAIRP construction	0.02%	3	0	1,899	1,927	1,710	1,737
T7 NNOOS	0.32%	38	1	29,790	30,170	26,811	27,191
T7 NOOS	0.10%	15	0	9,746	9,895	8,771	8,920
T7 other port	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0	0	0	0	0	0
T7 POLA	0.63%	97	3	56,897	57,856	51,207	52,166
T7 public	0.02%	5	0	1,919	1,964	1,727	1,772
T7 Single	0.15%	14	0	13,711	13,850	12,340	12,479
T7 single construction	0.05%	5	0	4,759	4,807	4,283	4,332
T7 SWCV	0.05%	10	0	4,766	4,865	4,289	4,388
T7 tractor	0.40%	45	1	35,206	35,647	31,685	32,126
T7 tractor construction	0.04%	5	0	3,546	3,593	3,191	3,239
T7 utility	0.00%	0	0	213	215	191	194
T7IS	0.04%	9	0	1,119	1,203	1,007	1,091
UBUS	0.24%	60	2	22,982	23,574	20,684	21,276
TOTAL	100%	**1,032**	**33**	**2,542,543**	**2,552,719**	**1,766,011**	**1,776,187**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors for Orange County - South Coast Air Basin

Proposed Project (MTons/Year)

Based on EMFAC2011

	Emission year		GWP	GWP			
	Proposed Proje	**6,313,214,941**	**310**	**1**	**MTons**		**MTons**
	Percent of VMT	**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.06%	4	0	3,898	3,941	3,509	3,552
LDA	47.75%	190	6	1,093,772	1,095,644	652,075	653,948
LDT1	5.96%	29	1	158,361	158,645	97,735	98,019
LDT2	20.40%	101	3	633,604	634,595	431,430	432,421
LHD1	4.37%	204	6	163,878	165,887	147,490	149,499
LHD2	0.63%	31	1	22,738	23,046	20,464	20,772
MCY	0.30%	23	1	3,219	3,448	2,897	3,126
MDV	15.90%	114	4	632,777	633,897	444,751	445,871
MH	0.38%	18	1	16,453	16,630	14,808	14,985
Motor Coach	0.06%	8	0	6,326	6,402	5,693	5,770
OBUS	0.04%	3	0	1,723	1,755	1,550	1,582
PTO	0.04%	5	0	4,863	4,910	4,376	4,423
SBUS	0.05%	11	0	3,572	3,682	3,214	3,325
Source: 2010 and 2035 VMT is b	0.00%	0	0	110	111	99	100
VMT (forecasted) is approximate	0.00%	0	0	73	74	66	66
Adjusted Daily vehicles miles tra	0.00%	0	0	253	255	227	229
T6 instate construction heavy	0.05%	4	0	3,809	3,846	3,428	3,465
T6 instate construction small	0.16%	10	0	11,241	11,337	10,117	10,213
T6 instate heavy	0.29%	21	1	20,658	20,863	18,592	18,797
T6 instate small	0.87%	53	2	60,836	61,358	54,752	55,275
T6 OOS heavy	0.00%	0	0	42	42	38	38
T6 OOS small	0.00%	0	0	145	146	130	132
T6 public	0.04%	3	0	2,899	2,927	2,609	2,637
T6 utility	0.01%	0	0	497	501	448	451
T6TS	0.31%	11	0	11,818	11,928	10,636	10,746
T7 Ag	0.00%	0	0	216	219	194	197
T7 CAIRP	0.28%	48	2	32,281	32,753	29,053	29,525
T7 CAIRP construction	0.02%	3	0	2,330	2,364	2,097	2,131
T7 NNOOS	0.32%	47	2	36,543	37,009	32,889	33,354
T7 NOOS	0.10%	19	1	11,955	12,138	10,760	10,942
T7 other port	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0	0	0	0	0	0
T7 POLA	0.63%	119	4	69,795	70,971	62,815	63,991
T7 public	0.02%	6	0	2,354	2,410	2,118	2,174
T7 Single	0.15%	17	1	16,819	16,989	15,137	15,307
T7 single construction	0.05%	6	0	5,838	5,897	5,254	5,313
T7 SWCV	0.05%	12	0	5,846	5,968	5,261	5,383
T7 tractor	0.40%	55	2	43,186	43,728	38,868	39,409
T7 tractor construction	0.04%	6	0	4,349	4,408	3,915	3,973
T7 utility	0.00%	0	0	261	264	235	238
T7IS	0.04%	10	0	1,372	1,476	1,235	1,338
UBUS	0.24%	74	2	28,191	28,918	25,372	26,099
TOTAL	100%	**1,266**	**40**	**3,118,899**	**3,131,382**	**2,166,338**	**2,178,821**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors for Orange County - South Coast Air Basin

Year 2020 (MTons/Year)

Based on EMFAC2011

	Emission year		GWP	GWP			
	2020	**5,290,627,047**	**310**	**1**	**MTons**		**MTons**
	Percent of VMT	**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.05%	7	0	2,721	2,792	2,449	2,520
LDA	50.89%	224	7	977,141	979,353	674,213	676,425
LDT1	5.64%	62	2	125,135	125,742	91,296	91,902
LDT2	19.32%	137	4	503,479	504,828	379,787	381,136
LHD1	4.19%	301	10	131,880	134,852	118,692	121,664
LHD2	0.59%	55	2	17,949	18,494	16,154	16,699
MCY	0.47%	31	1	4,180	4,485	3,762	4,067
MDV	15.08%	210	7	502,057	504,128	398,401	400,473
MH	0.23%	17	1	8,202	8,373	7,382	7,552
Motor Coach	0.05%	10	0	4,414	4,513	3,973	4,071
OBUS	0.05%	6	0	1,781	1,841	1,603	1,663
PTO	0.03%	9	0	3,365	3,457	3,029	3,121
SBUS	0.05%	21	1	3,194	3,398	2,875	3,079
T6 Ag	0.00%	0	0	104	107	94	97
T6 CAIRP heavy	0.00%	0	0	53	54	48	49
T6 CAIRP small	0.00%	0	0	182	184	164	166
T6 instate construction heavy	0.06%	11	0	3,617	3,725	3,255	3,363
T6 instate construction small	0.16%	13	0	9,694	9,822	8,725	8,852
T6 instate heavy	0.27%	44	1	15,922	16,351	14,329	14,759
T6 instate small	0.76%	56	2	44,708	45,262	40,237	40,791
T6 OOS heavy	0.00%	0	0	31	31	28	28
T6 OOS small	0.00%	0	0	104	105	94	95
T6 public	0.03%	8	0	1,963	2,040	1,767	1,843
T6 utility	0.01%	1	0	343	349	308	314
T6TS	0.30%	22	1	9,634	9,849	8,670	8,885
T7 Ag	0.00%	1	0	203	210	183	189
T7 CAIRP	0.23%	38	1	22,154	22,532	19,939	20,317
T7 CAIRP construction	0.02%	4	0	2,044	2,080	1,840	1,875
T7 NNOOS	0.26%	33	1	25,113	25,441	22,602	22,930
T7 NOOS	0.08%	15	0	8,195	8,340	7,376	7,521
T7 other port	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0	0	0	0	0	0
T7 POLA	0.32%	133	4	31,047	32,363	27,942	29,258
T7 public	0.01%	10	0	1,601	1,703	1,441	1,543
T7 Single	0.12%	32	1	11,596	11,912	10,437	10,752
T7 single construction	0.06%	15	0	5,148	5,293	4,633	4,778
T7 SWCV	0.04%	22	1	3,962	4,176	3,566	3,780
T7 tractor	0.33%	74	2	29,854	30,585	26,869	27,600
T7 tractor construction	0.04%	11	0	3,835	3,940	3,451	3,556
T7 utility	0.00%	1	0	180	186	162	168
T7IS	0.03%	7	0	911	984	820	893
UBUS	0.22%	96	3	22,618	23,561	20,356	21,299
TOTAL		**1,737**	**55**	**2,540,316**	**2,557,437**	**1,932,951**	**1,950,072**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors for Orange County - South Coast Air Basin

Year 2012 MTons/Year)

Based on EMFAC2011

	Emission year		GWP	GWP			
	2012	**5,076,099,216**	**310**	**1**	**MTons**		**MTons**
	Percent of VMT	**NOx**	**N2O**	**CO2**	**CO2e**	**CO2w/Pavley + LCF**	**CO2e w/ Pavley + LCFS**
All Other Buses	0.04%	18	1	2,305	2,478	2,294	2,466
LDA	51.25%	483	15	942,227	946,989	893,260	898,022
LDT1	5.75%	118	4	121,597	122,758	116,181	117,342
LDT2	19.11%	309	10	478,660	481,709	461,056	464,104
LHD1	4.02%	426	14	121,432	125,629	120,825	125,022
LHD2	0.59%	87	3	17,157	18,015	17,071	17,929
MCY	0.46%	30	1	3,588	3,888	3,570	3,870
MDV	15.62%	356	11	496,166	499,679	483,883	487,395
MH	0.22%	26	1	7,673	7,931	7,635	7,892
Motor Coach	0.04%	25	1	3,658	3,908	3,640	3,890
OBUS	0.06%	10	0	1,973	2,070	1,963	2,061
PTO	0.02%	17	1	2,555	2,720	2,542	2,707
SBUS	0.05%	26	1	3,203	3,455	3,187	3,439
T6 Ag	0.00%	1	0	104	112	103	111
T6 CAIRP heavy	0.00%	0	0	46	49	46	49
T6 CAIRP small	0.00%	1	0	155	161	154	161
T6 instate construction heavy	0.04%	17	1	2,342	2,514	2,331	2,502
T6 instate construction small	0.11%	35	1	6,429	6,778	6,397	6,746
T6 instate heavy	0.24%	101	3	14,064	15,060	13,993	14,990
T6 instate small	0.68%	207	7	39,227	41,263	39,031	41,067
T6 OOS heavy	0.00%	0	0	27	28	26	28
T6 OOS small	0.00%	0	0	89	92	88	92
T6 public	0.03%	12	0	1,601	1,723	1,593	1,715
T6 utility	0.00%	2	0	290	307	289	305
T6TS	0.27%	44	1	8,398	8,833	8,356	8,791
T7 Ag	0.00%	2	0	200	217	199	216
T7 CAIRP	0.18%	93	3	16,480	17,398	16,397	17,316
T7 CAIRP construction	0.01%	8	0	1,313	1,387	1,307	1,381
T7 NNOOS	0.20%	67	2	18,833	19,490	18,739	19,396
T7 NOOS	0.07%	34	1	6,058	6,395	6,027	6,365
T7 other port	0.00%	0	0	0	0	0	0
T7 POAK	0.00%	0	0	0	0	0	0
T7 POLA	0.21%	93	3	19,481	20,395	19,383	20,298
T7 public	0.01%	13	0	1,300	1,425	1,294	1,418
T7 Single	0.10%	64	2	8,685	9,315	8,642	9,272
T7 single construction	0.04%	25	1	3,328	3,574	3,312	3,557
T7 SWCV	0.03%	28	1	3,311	3,588	3,294	3,572
T7 tractor	0.26%	166	5	22,575	24,208	22,462	24,095
T7 tractor construction	0.03%	19	1	2,483	2,669	2,470	2,657
T7 utility	0.00%	1	0	153	164	152	163
T7IS	0.03%	9	0	814	899	810	895
UBUS	0.21%	115	4	21,931	23,063	21,821	22,953
TOTAL	100%	**3,086**	**98**	**2,401,910**	**2,432,336**	**2,315,823**	**2,346,249**

N2O emissions were calculated using an off-model adjustment provided by CARB in AB 32 Technical Appendices. The off-model adjustment uses a linear regression correlating N2O with NOx. (N2O = 0.0167 + 0.0318 x NOx)

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the Climate Change Scoping Plan Measure Documentation Supplement.

Based on the emission factors for Orange County - South Coast Air Basin

Orange County 2035 Annual					Tons/Day							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	817	47,868	0.1%	5.286E-03	6.606E-02	2.413E-02	5.617E-04	9.947E-03	5.347E-03	5.888E+01	5.299E+01
LDA - TOT	AllMYr	1,226,829	41,308,032	47.8%	3.046E+00	2.869E+00	3.310E+01	1.654E-01	2.183E+00	9.427E-01	1.652E+04	9.849E+03
LDT1 - TOT	AllMYr	150,727	5,155,730	6.0%	7.289E-01	4.342E-01	5.190E+00	2.396E-02	2.717E-01	1.170E-01	2.392E+03	1.476E+03
LDT2 - TOT	AllMYr	481,960	17,649,762	20.4%	2.216E+00	1.519E+00	1.672E+01	9.580E-02	9.302E-01	4.006E-01	9.570E+03	6.516E+03
LHD1 - TOT	AllMYr	94,649	3,776,753	4.4%	9.199E-01	3.078E+00	5.019E+00	2.456E-02	2.479E-01	1.085E-01	2.475E+03	2.228E+03
LHD2 - TOT	AllMYr	13,677	544,895	0.6%	8.411E-02	4.724E-01	5.650E-01	3.370E-03	4.782E-02	2.172E-02	3.434E+02	3.091E+02
MCY - TOT	AllMYr	37,438	259,852	0.3%	1.081E+00	3.517E-01	6.176E+00	6.087E-04	1.294E-02	5.188E-03	4.861E+01	4.375E+01
MDV - TOT	AllMYr	396,794	13,753,433	15.9%	2.756E+00	1.716E+00	1.853E+01	9.571E-02	7.227E-01	3.101E-01	9.557E+03	6.717E+03
MH - TOT	AllMYr	26,855	329,680	0.4%	1.229E-02	2.715E-01	8.702E-02	2.449E-03	2.574E-02	1.196E-02	2.485E+02	2.236E+02
Motor Coach - TOT	AllMYr	327	48,996	0.1%	1.409E-02	1.177E-01	7.414E-02	9.115E-04	1.152E-02	6.707E-03	9.554E+01	8.599E+01
OBUS - TOT	AllMYr	1,025	36,934	0.0%	3.810E-02	4.889E-02	3.054E-01	2.652E-04	1.844E-03	7.430E-04	2.602E+01	2.342E+01
PTO - TOT	AllMYr	0	31,471	0.0%	9.194E-03	7.168E-02	2.829E-02	7.007E-04	1.536E-03	1.413E-03	7.344E+01	6.610E+01
SBUS - TOT	AllMYr	1,185	41,362	0.0%	1.491E-02	1.696E-01	9.376E-02	5.208E-04	2.506E-02	1.144E-02	5.394E+01	4.855E+01
T6 Ag - TOT	AllMYr	38	1,339	0.0%	1.478E-04	1.826E-03	7.004E-04	1.583E-05	2.761E-04	1.476E-04	1.660E+00	1.494E+00
T6 CAIRP heavy - TOT	AllMYr	14	898	0.0%	8.461E-05	9.753E-04	3.873E-04	1.053E-05	1.781E-04	9.244E-05	1.103E+00	9.929E-01
T6 CAIRP small - TOT	AllMYr	43	3,109	0.0%	2.779E-04	3.103E-03	1.269E-03	3.640E-05	6.079E-04	3.122E-04	3.816E+00	3.434E+00
T6 instate construction heavy - TOT	AllMYr	813	46,759	0.1%	4.786E-03	5.769E-02	2.198E-02	5.488E-04	9.487E-03	5.012E-03	5.752E+01	5.177E+01
T6 instate construction small - TOT	AllMYr	2,027	138,258	0.2%	1.290E-02	1.479E-01	5.896E-02	1.620E-03	2.735E-02	1.417E-02	1.698E+02	1.528E+02
T6 instate heavy - TOT	AllMYr	4,413	253,617	0.3%	2.598E-02	3.133E-01	1.193E-01	2.977E-03	5.147E-02	2.720E-02	3.120E+02	2.808E+02
T6 instate small - TOT	AllMYr	10,975	748,246	0.9%	6.985E-02	8.009E-01	3.192E-01	8.766E-03	1.480E-01	7.671E-02	9.188E+02	8.269E+02
T6 OOS heavy - TOT	AllMYr	8	515	0.0%	4.851E-05	5.591E-04	2.220E-04	6.034E-06	1.021E-04	5.300E-05	6.325E-01	5.693E-01
T6 OOS small - TOT	AllMYr	25	1,783	0.0%	1.593E-04	1.779E-03	7.276E-04	2.087E-05	3.485E-04	1.790E-04	2.188E+00	1.969E+00
T6 public - TOT	AllMYr	1,893	34,684	0.0%	3.093E-03	4.330E-02	1.647E-02	4.177E-04	6.615E-03	3.330E-03	4.378E+01	3.940E+01
T6 utility - TOT	AllMYr	298	5,976	0.0%	5.028E-04	5.364E-03	2.679E-03	7.166E-05	1.121E-03	5.566E-04	7.511E+00	6.760E+00
T6TS - TOT	AllMYr	6,185	264,009	0.3%	1.261E-01	1.693E-01	1.140E+00	1.802E-03	1.313E-02	5.262E-03	1.785E+02	1.606E+02
T7 Ag - TOT	AllMYr	23	1,674	0.0%	4.972E-04	4.267E-03	2.611E-03	3.112E-05	3.206E-04	1.944E-04	3.262E+00	2.936E+00
T7 CAIRP - TOT	AllMYr	1,003	243,346	0.3%	8.800E-02	7.229E-01	4.677E-01	4.651E-03	4.773E-02	2.930E-02	4.876E+02	4.388E+02
T7 CAIRP construction - TOT	AllMYr	72	17,564	0.0%	6.353E-03	5.219E-02	3.377E-02	3.357E-04	3.445E-03	2.115E-03	3.519E+01	3.167E+01
T7 NNOOS - TOT	AllMYr	991	273,755	0.3%	9.493E-02	7.129E-01	5.072E-01	5.266E-03	4.972E-02	2.931E-02	5.519E+02	4.967E+02
T7 NOOS - TOT	AllMYr	365	88,620	0.1%	3.521E-02	2.797E-01	1.882E-01	1.723E-03	1.743E-02	1.071E-02	1.806E+02	1.625E+02
T7 other port - TOT	AllMYr	0	0	0.0%	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
T7 POAK - TOT	AllMYr	0	0	0.0%	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
T7 POLA - TOT	AllMYr	2,739	541,972	0.6%	1.862E-01	1.801E+00	9.742E-01	1.006E-02	1.181E-01	7.613E-02	1.054E+03	9.487E+02
T7 public - TOT	AllMYr	638	15,829	0.0%	7.930E-03	8.565E-02	4.331E-02	3.392E-04	2.647E-03	1.485E-03	3.555E+01	3.199E+01
T7 Single - TOT	AllMYr	1,653	130,907	0.2%	3.336E-02	2.615E-01	1.754E-01	2.423E-03	2.277E-02	1.309E-02	2.540E+02	2.286E+02
T7 single construction - TOT	AllMYr	575	45,437	0.1%	1.159E-02	9.086E-02	6.094E-02	8.412E-04	7.905E-03	4.545E-03	8.817E+01	7.936E+01
T7 SWCV - TOT	AllMYr	864	42,888	0.0%	1.456E-02	1.867E-01	7.794E-02	8.424E-04	7.409E-03	4.242E-03	8.829E+01	7.946E+01
T7 tractor - TOT	AllMYr	2,064	343,347	0.4%	8.701E-02	8.295E-01	4.501E-01	6.223E-03	6.694E-02	4.097E-02	6.523E+02	5.870E+02
T7 tractor construction - TOT	AllMYr	421	33,877	0.0%	1.001E-02	8.937E-02	5.241E-02	6.267E-04	6.633E-03	4.069E-03	6.569E+01	5.912E+01
T7 utility - TOT	AllMYr	71	1,761	0.0%	9.388E-04	5.478E-03	5.155E-03	3.756E-05	2.843E-04	1.559E-04	3.937E+00	3.544E+00
T7IS - TOT	AllMYr	263	31,826	0.0%	1.820E-02	1.584E-01	1.124E+00	2.251E-04	1.577E-03	6.297E-04	2.072E+01	1.865E+01
UBUS - TOT	AllMYr	1,857	204,309	0.2%	6.934E-02	1.113E+00	4.516E-01	4.088E-03	1.657E-01	8.108E-02	4.258E+02	3.832E+02
			86,501,072	100%								

Orange County 2035 Annual

Veh & Tech	MdlYr	Pop	VMT	Percent of VMT
All Other Buses - TOT	AllMYr	817	47,868	0.1%
LDA - TOT	AllMYr	1,226,829	41,308,032	47.8%
LDT1 - TOT	AllMYr	150,727	5,155,730	6.0%
LDT2 - TOT	AllMYr	481,960	17,649,762	20.4%
LHD1 - TOT	AllMYr	94,649	3,776,753	4.4%
LHD2 - TOT	AllMYr	13,677	544,895	0.6%
MCY - TOT	AllMYr	37,438	259,852	0.3%
MDV - TOT	AllMYr	396,794	13,753,433	15.9%
MH - TOT	AllMYr	26,855	329,680	0.4%
Motor Coach - TOT	AllMYr	327	48,996	0.1%
OBUS - TOT	AllMYr	1,025	36,934	0.0%
PTO - TOT	AllMYr	0	31,471	0.0%
SBUS - TOT	AllMYr	1,185	41,362	0.0%
T6 Ag - TOT	AllMYr	38	1,339	0.0%
T6 CAIRP heavy - TOT	AllMYr	14	898	0.0%
T6 CAIRP small - TOT	AllMYr	43	3,109	0.0%
T6 instate construction heavy - TOT	AllMYr	813	46,759	0.1%
T6 instate construction small - TOT	AllMYr	2,027	138,258	0.2%
T6 instate heavy - TOT	AllMYr	4,413	253,617	0.3%
T6 instate small - TOT	AllMYr	10,975	748,246	0.9%
T6 OOS heavy - TOT	AllMYr	8	515	0.0%
T6 OOS small - TOT	AllMYr	25	1,783	0.0%
T6 public - TOT	AllMYr	1,893	34,684	0.0%
T6 utility - TOT	AllMYr	298	5,976	0.0%
T6TS - TOT	AllMYr	6,185	264,009	0.3%
T7 Ag - TOT	AllMYr	23	1,674	0.0%
T7 CAIRP - TOT	AllMYr	1,003	243,346	0.3%
T7 CAIRP construction - TOT	AllMYr	72	17,564	0.0%
T7 NNOOS - TOT	AllMYr	991	273,755	0.3%
T7 NOOS - TOT	AllMYr	365	88,620	0.1%
T7 other port - TOT	AllMYr	0	0	0.0%
T7 POAK - TOT	AllMYr	0	0	0.0%
T7 POLA - TOT	AllMYr	2,739	541,972	0.6%
T7 public - TOT	AllMYr	638	15,829	0.0%
T7 Single - TOT	AllMYr	1,653	130,907	0.2%
T7 single construction - TOT	AllMYr	575	45,437	0.1%
T7 SWCV - TOT	AllMYr	864	42,888	0.0%
T7 tractor - TOT	AllMYr	2,064	343,347	0.4%
T7 tractor construction - TOT	AllMYr	421	33,877	0.0%
T7 utility - TOT	AllMYr	71	1,761	0.0%
T7IS - TOT	AllMYr	263	31,826	0.0%
UBUS - TOT	AllMYr	1,857	204,309	0.2%
			86,501,072	100%

Orange County 2035 Annual					9.072E-01	MTons/Mile							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT		ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	817	47,868	0.1%		1.002E-07	1.252E-06	4.574E-07	1.065E-08	1.885E-07	1.013E-07	1.116E-03	1.004E-03
LDA - TOT	AllMYr	1,226,829	41,308,032	47.8%		6.688E-08	6.300E-08	7.268E-07	3.633E-09	4.793E-08	2.070E-08	3.628E-04	2.163E-04
LDT1 - TOT	AllMYr	150,727	5,155,730	6.0%		1.282E-07	7.640E-08	9.132E-07	4.216E-09	4.781E-08	2.059E-08	4.209E-04	2.597E-04
LDT2 - TOT	AllMYr	481,960	17,649,762	20.4%		1.139E-07	7.806E-08	8.593E-07	4.924E-09	4.781E-08	2.059E-08	4.919E-04	3.349E-04
LHD1 - TOT	AllMYr	94,649	3,776,753	4.4%		2.210E-07	7.394E-07	1.206E-06	5.900E-09	5.954E-08	2.606E-08	5.945E-04	5.351E-04
LHD2 - TOT	AllMYr	13,677	544,895	0.6%		1.400E-07	7.866E-07	9.406E-07	5.610E-09	7.962E-08	3.617E-08	5.718E-04	5.146E-04
MCY - TOT	AllMYr	37,438	259,852	0.3%		3.775E-06	1.228E-06	2.156E-05	2.125E-09	4.517E-08	1.811E-08	1.697E-04	1.527E-04
MDV - TOT	AllMYr	396,794	13,753,433	15.9%		1.818E-07	1.132E-07	1.222E-06	6.313E-09	4.767E-08	2.046E-08	6.304E-04	4.431E-04
MH - TOT	AllMYr	26,855	329,680	0.4%		3.382E-08	7.472E-07	2.395E-07	6.738E-09	7.084E-08	3.291E-08	6.838E-04	6.154E-04
Motor Coach - TOT	AllMYr	327	48,996	0.1%		2.609E-07	2.180E-06	1.373E-06	1.688E-08	2.133E-07	1.242E-07	1.769E-03	1.592E-03
OBUS - TOT	AllMYr	1,025	36,934	0.0%		9.358E-07	1.201E-06	7.502E-06	6.513E-09	4.529E-08	1.825E-08	6.391E-04	5.752E-04
PTO - TOT	AllMYr	0	31,471	0.0%		2.650E-07	2.066E-06	8.155E-07	2.020E-08	4.428E-08	4.074E-08	2.117E-03	1.905E-03
SBUS - TOT	AllMYr	1,185	41,362	0.0%		3.271E-07	3.720E-06	2.056E-06	1.142E-08	5.496E-07	2.509E-07	1.183E-03	1.065E-03
T6 Ag - TOT	AllMYr	38	1,339	0.0%		1.001E-07	1.237E-06	4.745E-07	1.073E-08	1.871E-07	1.000E-07	1.124E-03	1.012E-03
T6 CAIRP heavy - TOT	AllMYr	14	898	0.0%		8.546E-08	9.851E-07	3.912E-07	1.063E-08	1.799E-07	9.338E-08	1.114E-03	1.003E-03
T6 CAIRP small - TOT	AllMYr	43	3,109	0.0%		8.109E-08	9.054E-07	3.703E-07	1.062E-08	1.774E-07	9.109E-08	1.113E-03	1.002E-03
T6 instate construction heavy - TOT	AllMYr	813	46,759	0.1%		9.285E-08	1.119E-06	4.264E-07	1.065E-08	1.841E-07	9.725E-08	1.116E-03	1.004E-03
T6 instate construction small - TOT	AllMYr	2,027	138,258	0.2%		8.466E-08	9.704E-07	3.869E-07	1.063E-08	1.794E-07	9.299E-08	1.114E-03	1.003E-03
T6 instate heavy - TOT	AllMYr	4,413	253,617	0.3%		9.294E-08	1.121E-06	4.268E-07	1.065E-08	1.841E-07	9.729E-08	1.116E-03	1.004E-03
T6 instate small - TOT	AllMYr	10,975	748,246	0.9%		8.469E-08	9.710E-07	3.870E-07	1.063E-08	1.795E-07	9.300E-08	1.114E-03	1.003E-03
T6 OOS heavy - TOT	AllMYr	8	515	0.0%		8.546E-08	9.851E-07	3.912E-07	1.063E-08	1.799E-07	9.338E-08	1.114E-03	1.003E-03
T6 OOS small - TOT	AllMYr	25	1,783	0.0%		8.109E-08	9.054E-07	3.703E-07	1.062E-08	1.774E-07	9.109E-08	1.113E-03	1.002E-03
T6 public - TOT	AllMYr	1,893	34,684	0.0%		8.090E-08	1.133E-06	4.307E-07	1.093E-08	1.730E-07	8.709E-08	1.145E-03	1.031E-03
T6 utility - TOT	AllMYr	298	5,976	0.0%		7.633E-08	8.144E-07	4.068E-07	1.088E-08	1.702E-07	8.451E-08	1.140E-03	1.026E-03
T6TS - TOT	AllMYr	6,185	264,009	0.3%		4.335E-07	5.818E-07	3.919E-06	6.191E-09	4.511E-08	1.808E-08	6.133E-04	5.520E-04
T7 Ag - TOT	AllMYr	23	1,674	0.0%		2.694E-07	2.312E-06	1.415E-06	1.686E-08	1.737E-07	1.053E-07	1.767E-03	1.591E-03
T7 CAIRP - TOT	AllMYr	1,003	243,346	0.3%		3.281E-07	2.695E-06	1.744E-06	1.734E-08	1.779E-07	1.092E-07	1.818E-03	1.636E-03
T7 CAIRP construction - TOT	AllMYr	72	17,564	0.0%		3.281E-07	2.696E-06	1.744E-06	1.734E-08	1.779E-07	1.092E-07	1.818E-03	1.636E-03
T7 NNOOS - TOT	AllMYr	991	273,755	0.3%		3.146E-07	2.362E-06	1.681E-06	1.745E-08	1.648E-07	9.712E-08	1.829E-03	1.646E-03
T7 NOOS - TOT	AllMYr	365	88,620	0.1%		3.605E-07	2.863E-06	1.926E-06	1.763E-08	1.784E-07	1.097E-07	1.848E-03	1.664E-03
T7 other port - TOT	AllMYr	0	0	0.0%									
T7 POAK - TOT	AllMYr	0	0	0.0%									
T7 POLA - TOT	AllMYr	2,739	541,972	0.6%		3.117E-07	3.015E-06	1.631E-06	1.683E-08	1.977E-07	1.274E-07	1.764E-03	1.588E-03
T7 public - TOT	AllMYr	638	15,829	0.0%		4.545E-07	4.909E-06	2.482E-06	1.944E-08	1.517E-07	8.513E-08	2.037E-03	1.834E-03
T7 Single - TOT	AllMYr	1,653	130,907	0.2%		2.312E-07	1.812E-06	1.216E-06	1.679E-08	1.578E-07	9.072E-08	1.760E-03	1.584E-03
T7 single construction - TOT	AllMYr	575	45,437	0.1%		2.313E-07	1.814E-06	1.217E-06	1.680E-08	1.578E-07	9.075E-08	1.760E-03	1.584E-03
T7 SWCV - TOT	AllMYr	864	42,888	0.0%		3.080E-07	3.950E-06	1.649E-06	1.782E-08	1.567E-07	8.973E-08	1.868E-03	1.681E-03
T7 tractor - TOT	AllMYr	2,064	343,347	0.4%		2.299E-07	2.192E-06	1.189E-06	1.644E-08	1.769E-07	1.083E-07	1.723E-03	1.551E-03
T7 tractor construction - TOT	AllMYr	421	33,877	0.0%		2.679E-07	2.393E-06	1.404E-06	1.678E-08	1.776E-07	1.090E-07	1.759E-03	1.583E-03
T7 utility - TOT	AllMYr	71	1,761	0.0%		4.837E-07	2.822E-06	2.656E-06	1.935E-08	1.465E-07	8.031E-08	2.029E-03	1.826E-03
T7IS - TOT	AllMYr	263	31,826	0.0%		5.187E-07	4.516E-06	3.203E-05	6.416E-09	4.496E-08	1.795E-08	5.907E-04	5.317E-04
UBUS - TOT	AllMYr	1,857	204,309	0.2%		3.079E-07	4.943E-06	2.005E-06	1.815E-08	7.357E-07	3.600E-07	1.891E-03	1.702E-03
			86,501,072	100%									

Orange County 2035 Annual					2.000E+03	lbs/Mile							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT		ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	817	47,868	0.1%		2.209E-04	2.760E-03	1.008E-03	2.347E-05	4.156E-04	2.234E-04	2.460E+00	2.214E+00
LDA - TOT	AllMYr	1,226,829	41,308,032	47.8%		1.475E-04	1.389E-04	1.602E-03	8.010E-06	1.057E-04	4.564E-05	7.998E-01	4.768E-01
LDT1 - TOT	AllMYr	150,727	5,155,730	6.0%		2.827E-04	1.684E-04	2.013E-03	9.295E-06	1.054E-04	4.539E-05	9.278E-01	5.726E-01
LDT2 - TOT	AllMYr	481,960	17,649,762	20.4%		2.512E-04	1.721E-04	1.894E-03	1.086E-05	1.054E-04	4.539E-05	1.084E+00	7.384E-01
LHD1 - TOT	AllMYr	94,649	3,776,753	4.4%		4.871E-04	1.630E-03	2.658E-03	1.301E-05	1.313E-04	5.745E-05	1.311E+00	1.180E+00
LHD2 - TOT	AllMYr	13,677	544,895	0.6%		3.087E-04	1.734E-03	2.074E-03	1.237E-05	1.755E-04	7.973E-05	1.260E+00	1.134E+00
MCY - TOT	AllMYr	37,438	259,852	0.3%		8.321E-03	2.707E-03	4.754E-02	4.685E-06	9.957E-05	3.993E-05	3.742E-01	3.367E-01
MDV - TOT	AllMYr	396,794	13,753,433	15.9%		4.008E-04	2.495E-04	2.694E-03	1.392E-05	1.051E-04	4.510E-05	1.390E+00	9.768E-01
MH - TOT	AllMYr	26,855	329,680	0.4%		7.456E-05	1.647E-03	5.279E-04	1.486E-05	1.562E-04	7.255E-05	1.508E+00	1.357E+00
Motor Coach - TOT	AllMYr	327	48,996	0.1%		5.751E-04	4.805E-03	3.026E-03	3.721E-05	4.703E-04	2.738E-04	3.900E+00	3.510E+00
OBUS - TOT	AllMYr	1,025	36,934	0.0%		2.063E-03	2.648E-03	1.654E-02	1.436E-05	9.985E-05	4.024E-05	1.409E+00	1.268E+00
PTO - TOT	AllMYr	0	31,471	0.0%		5.843E-04	4.556E-03	1.798E-03	4.453E-05	9.762E-05	8.981E-05	4.667E+00	4.201E+00
SBUS - TOT	AllMYr	1,185	41,362	0.0%		7.211E-04	8.202E-03	4.534E-03	2.518E-05	1.212E-03	5.532E-04	2.608E+00	2.347E+00
T6 Ag - TOT	AllMYr	38	1,339	0.0%		2.207E-04	2.727E-03	1.046E-03	2.365E-05	4.124E-04	2.205E-04	2.479E+00	2.231E+00
T6 CAIRP heavy - TOT	AllMYr	14	898	0.0%		1.884E-04	2.172E-03	8.624E-04	2.344E-05	3.965E-04	2.059E-04	2.457E+00	2.211E+00
T6 CAIRP small - TOT	AllMYr	43	3,109	0.0%		1.788E-04	1.996E-03	8.163E-04	2.342E-05	3.910E-04	2.008E-04	2.455E+00	2.209E+00
T6 instate construction heavy - TOT	AllMYr	813	46,759	0.1%		2.047E-04	2.468E-03	9.400E-04	2.347E-05	4.058E-04	2.144E-04	2.460E+00	2.214E+00
T6 instate construction small - TOT	AllMYr	2,027	138,258	0.2%		1.866E-04	2.139E-03	8.529E-04	2.343E-05	3.956E-04	2.050E-04	2.456E+00	2.210E+00
T6 instate heavy - TOT	AllMYr	4,413	253,617	0.3%		2.049E-04	2.471E-03	9.409E-04	2.347E-05	4.059E-04	2.145E-04	2.460E+00	2.214E+00
T6 instate small - TOT	AllMYr	10,975	748,246	0.9%		1.867E-04	2.141E-03	8.533E-04	2.343E-05	3.956E-04	2.050E-04	2.456E+00	2.210E+00
T6 OOS heavy - TOT	AllMYr	8	515	0.0%		1.884E-04	2.172E-03	8.624E-04	2.344E-05	3.965E-04	2.059E-04	2.457E+00	2.211E+00
T6 OOS small - TOT	AllMYr	25	1,783	0.0%		1.788E-04	1.996E-03	8.163E-04	2.342E-05	3.910E-04	2.008E-04	2.455E+00	2.209E+00
T6 public - TOT	AllMYr	1,893	34,684	0.0%		1.784E-04	2.497E-03	9.495E-04	2.409E-05	3.815E-04	1.920E-04	2.525E+00	2.272E+00
T6 utility - TOT	AllMYr	298	5,976	0.0%		1.683E-04	1.795E-03	8.968E-04	2.398E-05	3.753E-04	1.863E-04	2.514E+00	2.262E+00
T6TS - TOT	AllMYr	6,185	264,009	0.3%		9.556E-04	1.283E-03	8.640E-03	1.365E-05	9.944E-05	3.986E-05	1.352E+00	1.217E+00
T7 Ag - TOT	AllMYr	23	1,674	0.0%		5.939E-04	5.098E-03	3.119E-03	3.717E-05	3.829E-04	2.322E-04	3.896E+00	3.507E+00
T7 CAIRP - TOT	AllMYr	1,003	243,346	0.3%		7.233E-04	5.942E-03	3.844E-03	3.823E-05	3.923E-04	2.408E-04	4.007E+00	3.606E+00
T7 CAIRP construction - TOT	AllMYr	72	17,564	0.0%		7.234E-04	5.943E-03	3.845E-03	3.823E-05	3.923E-04	2.408E-04	4.007E+00	3.606E+00
T7 NNOOS - TOT	AllMYr	991	273,755	0.3%		6.935E-04	5.208E-03	3.705E-03	3.847E-05	3.632E-04	2.141E-04	4.032E+00	3.629E+00
T7 NOOS - TOT	AllMYr	365	88,620	0.1%		7.947E-04	6.313E-03	4.247E-03	3.888E-05	3.933E-04	2.418E-04	4.075E+00	3.667E+00
T7 other port - TOT	AllMYr	0	0	0.0%									
T7 POAK - TOT	AllMYr	0	0	0.0%									
T7 POLA - TOT	AllMYr	2,739	541,972	0.6%		6.871E-04	6.648E-03	3.595E-03	3.711E-05	4.359E-04	2.809E-04	3.890E+00	3.501E+00
T7 public - TOT	AllMYr	638	15,829	0.0%		1.002E-03	1.082E-02	5.472E-03	4.285E-05	3.345E-04	1.877E-04	4.492E+00	4.043E+00
T7 Single - TOT	AllMYr	1,653	130,907	0.2%		5.097E-04	3.996E-03	2.680E-03	3.703E-05	3.479E-04	2.000E-04	3.881E+00	3.493E+00
T7 single construction - TOT	AllMYr	575	45,437	0.1%		5.100E-04	3.999E-03	2.683E-03	3.703E-05	3.480E-04	2.001E-04	3.881E+00	3.493E+00
T7 SWCV - TOT	AllMYr	864	42,888	0.0%		6.791E-04	8.708E-03	3.634E-03	3.928E-05	3.455E-04	1.978E-04	4.117E+00	3.706E+00
T7 tractor - TOT	AllMYr	2,064	343,347	0.4%		5.069E-04	4.832E-03	2.622E-03	3.625E-05	3.899E-04	2.387E-04	3.799E+00	3.419E+00
T7 tractor construction - TOT	AllMYr	421	33,877	0.0%		5.907E-04	5.276E-03	3.094E-03	3.700E-05	3.916E-04	2.402E-04	3.878E+00	3.490E+00
T7 utility - TOT	AllMYr	71	1,761	0.0%		1.066E-03	6.222E-03	5.855E-03	4.267E-05	3.230E-04	1.771E-04	4.473E+00	4.025E+00
T7IS - TOT	AllMYr	263	31,826	0.0%		1.144E-03	9.956E-03	7.062E-02	1.414E-05	9.913E-05	3.957E-05	1.302E+00	1.172E+00
UBUS - TOT	AllMYr	1,857	204,309	0.2%		6.788E-04	1.090E-02	4.421E-03	4.002E-05	1.622E-03	7.937E-04	4.168E+00	3.751E+00
			86,501,072	100%									

Orange County 2020 Annual					Tons/Day							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	667	36,900	0.0	4.009E-03	1.219E-01	1.793E-02	4.372E-04	7.777E-03	4.222E-03	4.583E+01	4.125E+01
LDA - TOT	AllMYr	######	41,139,994	0.5	4.646E+00	3.779E+00	4.456E+01	1.650E-01	2.139E+00	9.063E-01	1.646E+04	1.136E+04
LDT1 - TOT	AllMYr	135,201	4,561,398	0.1	1.617E+00	1.037E+00	1.178E+01	2.124E-02	2.444E-01	1.073E-01	2.108E+03	1.538E+03
LDT2 - TOT	AllMYr	423,264	15,620,106	0.2	2.574E+00	2.306E+00	2.270E+01	8.504E-02	8.103E-01	3.425E-01	8.481E+03	6.397E+03
LHD1 - TOT	AllMYr	83,222	3,390,445	0.0	1.394E+00	5.078E+00	8.101E+00	2.211E-02	2.325E-01	1.066E-01	2.221E+03	1.999E+03
LHD2 - TOT	AllMYr	12,014	478,737	0.0	1.366E-01	9.308E-01	7.541E-01	2.971E-03	4.477E-02	2.163E-02	3.023E+02	2.721E+02
MCY - TOT	AllMYr	50,851	383,754	0.0	1.562E+00	5.215E-01	9.508E+00	8.914E-04	1.917E-02	7.707E-03	7.040E+01	6.336E+01
MDV - TOT	AllMYr	346,831	12,194,196	0.2	3.458E+00	3.540E+00	3.146E+01	8.495E-02	6.358E-01	2.704E-01	8.457E+03	6.711E+03
MH - TOT	AllMYr	15,750	184,105	0.0	1.862E-02	2.912E-01	2.982E-01	1.366E-03	1.796E-02	1.000E-02	1.382E+02	1.243E+02
Motor Coach - TOT	AllMYr	264	37,769	0.0	1.064E-02	1.683E-01	5.531E-02	7.094E-04	9.086E-03	5.358E-03	7.436E+01	6.692E+01
OBUS - TOT	AllMYr	1,097	42,862	0.0	5.528E-02	1.020E-01	5.732E-01	3.097E-04	2.167E-03	8.872E-04	3.001E+01	2.701E+01
PTO - TOT	AllMYr	0	24,035	0.0	6.530E-03	1.569E-01	2.057E-02	5.409E-04	1.335E-03	1.228E-03	5.669E+01	5.102E+01
SBUS - TOT	AllMYr	1,106	40,297	0.0	2.118E-02	3.489E-01	2.107E-01	5.210E-04	2.643E-02	1.223E-02	5.380E+01	4.842E+01
T6 Ag - TOT	AllMYr	42	1,404	0.0	3.041E-04	5.166E-03	1.263E-03	1.676E-05	4.018E-04	2.581E-04	1.756E+00	1.581E+00
T6 CAIRP heavy - TOT	AllMYr	11	729	0.0	6.872E-05	1.578E-03	3.096E-04	8.595E-06	1.462E-04	7.661E-05	9.009E-01	8.108E-01
T6 CAIRP small - TOT	AllMYr	34	2,493	0.0	2.427E-04	3.022E-03	1.100E-03	2.925E-05	5.060E-04	2.674E-04	3.066E+00	2.759E+00
T6 instate construction heavy - TOT	AllMYr	907	48,888	0.0	4.899E-03	1.841E-01	2.185E-02	5.813E-04	1.020E-02	5.496E-03	6.093E+01	5.483E+01
T6 instate construction small - TOT	AllMYr	1,982	132,420	0.0	1.513E-02	2.179E-01	6.829E-02	1.558E-03	2.903E-02	1.619E-02	1.633E+02	1.470E+02
T6 instate heavy - TOT	AllMYr	3,873	215,571	0.0	2.150E-02	7.334E-01	9.616E-02	2.559E-03	4.469E-02	2.398E-02	2.682E+02	2.414E+02
T6 instate small - TOT	AllMYr	8,988	611,084	0.0	6.765E-02	9.466E-01	3.055E-01	7.185E-03	1.318E-01	7.271E-02	7.531E+02	6.778E+02
T6 OOS heavy - TOT	AllMYr	6	418	0.0	3.940E-05	9.046E-04	1.775E-04	4.928E-06	8.384E-05	4.392E-05	5.165E-01	4.649E-01
T6 OOS small - TOT	AllMYr	20	1,429	0.0	1.391E-04	1.733E-03	6.304E-04	1.677E-05	2.901E-04	1.533E-04	1.758E+00	1.582E+00
T6 public - TOT	AllMYr	1,429	25,771	0.0	1.984E-03	1.309E-01	9.833E-03	3.155E-04	5.039E-03	2.588E-03	3.307E+01	2.976E+01
T6 utility - TOT	AllMYr	227	4,556	0.0	3.672E-04	9.914E-03	1.914E-03	5.508E-05	8.637E-04	4.325E-04	5.774E+00	5.196E+00
T6TS - TOT	AllMYr	5,468	240,160	0.0	1.953E-01	3.673E-01	2.256E+00	1.660E-03	1.219E-02	5.012E-03	1.623E+02	1.460E+02
T7 Ag - TOT	AllMYr	26	1,755	0.0	6.939E-04	1.170E-02	3.421E-03	3.260E-05	5.110E-04	3.648E-04	3.417E+00	3.075E+00
T7 CAIRP - TOT	AllMYr	757	186,531	0.0	6.681E-02	6.458E-01	3.508E-01	3.560E-03	3.699E-02	2.283E-02	3.732E+02	3.359E+02
T7 CAIRP construction - TOT	AllMYr	70	17,212	0.0	6.159E-03	6.038E-02	3.232E-02	3.285E-04	3.414E-03	2.107E-03	3.444E+01	3.099E+01
T7 NNOOS - TOT	AllMYr	746	209,840	0.0	7.259E-02	5.598E-01	3.857E-01	4.036E-03	3.808E-02	2.243E-02	4.230E+02	3.807E+02
T7 NOOS - TOT	AllMYr	276	67,930	0.0	2.655E-02	2.472E-01	1.401E-01	1.317E-03	1.351E-02	8.350E-03	1.380E+02	1.242E+02
T7 other port - TOT	AllMYr	0	0	0.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
T7 POAK - TOT	AllMYr	0	0	0.0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
T7 POLA - TOT	AllMYr	1,486	260,698	0.0	1.511E-01	2.248E+00	7.743E-01	4.989E-03	6.397E-02	4.320E-02	5.230E+02	4.707E+02
T7 public - TOT	AllMYr	474	11,761	0.0	3.799E-03	1.753E-01	1.974E-02	2.572E-04	2.198E-03	1.317E-03	2.696E+01	2.427E+01
T7 Single - TOT	AllMYr	1,288	100,343	0.0	2.187E-02	5.388E-01	1.124E-01	1.864E-03	1.776E-02	1.032E-02	1.953E+02	1.758E+02
T7 single construction - TOT	AllMYr	577	44,526	0.0	9.677E-03	2.472E-01	4.972E-02	8.273E-04	7.904E-03	4.598E-03	8.672E+01	7.805E+01
T7 SWCV - TOT	AllMYr	642	31,867	0.0	8.596E-03	3.651E-01	4.453E-02	6.368E-04	6.076E-03	3.677E-03	6.675E+01	6.007E+01
T7 tractor - TOT	AllMYr	1,614	263,185	0.0	6.609E-02	1.248E+00	3.361E-01	4.798E-03	5.266E-02	3.265E-02	5.029E+02	4.526E+02
T7 tractor construction - TOT	AllMYr	421	33,197	0.0	9.342E-03	1.793E-01	4.799E-02	6.163E-04	6.688E-03	4.160E-03	6.460E+01	5.814E+01
T7 utility - TOT	AllMYr	54	1,343	0.0	5.838E-04	1.004E-02	3.185E-03	2.896E-05	2.216E-04	1.233E-04	3.035E+00	2.732E+00
T7IS - TOT	AllMYr	190	23,553	0.0	2.016E-02	1.245E-01	8.879E-01	1.677E-04	1.174E-03	4.720E-04	1.534E+01	1.381E+01
UBUS - TOT	AllMYr	1,587	174,562	0.0	1.283E-01	1.611E+00	8.876E-01	3.665E-03	1.500E-01	7.701E-02	3.810E+02	3.429E+02
			80,847,824	100%								

Orange County 2020 Annual					9.072E-01	MTons/Mile							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT		ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	667	36,900	0.0		9.856E-08	2.996E-06	4.408E-07	1.075E-08	1.912E-07	1.038E-07	1.127E-03	1.014E-03
LDA - TOT	AllMYr	######	41,139,994	0.5		1.025E-07	8.332E-08	9.825E-07	3.639E-09	4.716E-08	1.998E-08	3.630E-04	2.504E-04
LDT1 - TOT	AllMYr	135,201	4,561,398	0.1		3.216E-07	2.062E-07	2.343E-06	4.224E-09	4.861E-08	2.133E-08	4.192E-04	3.059E-04
LDT2 - TOT	AllMYr	423,264	15,620,106	0.2		1.495E-07	1.339E-07	1.318E-06	4.939E-09	4.706E-08	1.989E-08	4.926E-04	3.715E-04
LHD1 - TOT	AllMYr	83,222	3,390,445	0.0		3.731E-07	1.359E-06	2.168E-06	5.916E-09	6.220E-08	2.853E-08	5.944E-04	5.350E-04
LHD2 - TOT	AllMYr	12,014	478,737	0.0		2.588E-07	1.764E-06	1.429E-06	5.630E-09	8.484E-08	4.099E-08	5.729E-04	5.156E-04
MCY - TOT	AllMYr	50,851	383,754	0.0		3.693E-06	1.233E-06	2.248E-05	2.107E-09	4.531E-08	1.822E-08	1.664E-04	1.498E-04
MDV - TOT	AllMYr	346,831	12,194,196	0.2		2.573E-07	2.633E-07	2.340E-06	6.320E-09	4.730E-08	2.011E-08	6.292E-04	4.993E-04
MH - TOT	AllMYr	15,750	184,105	0.0		9.177E-08	1.435E-06	1.469E-06	6.731E-09	8.848E-08	4.928E-08	6.808E-04	6.127E-04
Motor Coach - TOT	AllMYr	264	37,769	0.0		2.555E-07	4.041E-06	1.329E-06	1.704E-08	2.182E-07	1.287E-07	1.786E-03	1.607E-03
OBUS - TOT	AllMYr	1,097	42,862	0.0		1.170E-06	2.159E-06	1.213E-05	6.555E-09	4.586E-08	1.878E-08	6.351E-04	5.716E-04
PTO - TOT	AllMYr	0	24,035	0.0		2.465E-07	5.923E-06	7.764E-07	2.041E-08	5.038E-08	4.635E-08	2.140E-03	1.926E-03
SBUS - TOT	AllMYr	1,106	40,297	0.0		4.769E-07	7.855E-06	4.744E-06	1.173E-08	5.949E-07	2.753E-07	1.211E-03	1.090E-03
T6 Ag - TOT	AllMYr	42	1,404	0.0		1.965E-07	3.338E-06	8.164E-07	1.083E-08	2.597E-07	1.668E-07	1.135E-03	1.022E-03
T6 CAIRP heavy - TOT	AllMYr	11	729	0.0		8.552E-08	1.964E-06	3.853E-07	1.070E-08	1.820E-07	9.535E-08	1.121E-03	1.009E-03
T6 CAIRP small - TOT	AllMYr	34	2,493	0.0		8.831E-08	1.100E-06	4.001E-07	1.064E-08	1.841E-07	9.732E-08	1.116E-03	1.004E-03
T6 instate construction heavy - TOT	AllMYr	907	48,888	0.0		9.091E-08	3.416E-06	4.054E-07	1.079E-08	1.892E-07	1.020E-07	1.131E-03	1.018E-03
T6 instate construction small - TOT	AllMYr	1,982	132,420	0.0		1.037E-07	1.493E-06	4.678E-07	1.067E-08	1.989E-07	1.109E-07	1.119E-03	1.007E-03
T6 instate heavy - TOT	AllMYr	3,873	215,571	0.0		9.048E-08	3.086E-06	4.047E-07	1.077E-08	1.881E-07	1.009E-07	1.129E-03	1.016E-03
T6 instate small - TOT	AllMYr	8,988	611,084	0.0		1.004E-07	1.405E-06	4.535E-07	1.067E-08	1.957E-07	1.079E-07	1.118E-03	1.006E-03
T6 OOS heavy - TOT	AllMYr	6	418	0.0		8.552E-08	1.964E-06	3.853E-07	1.070E-08	1.820E-07	9.535E-08	1.121E-03	1.009E-03
T6 OOS small - TOT	AllMYr	20	1,429	0.0		8.831E-08	1.100E-06	4.001E-07	1.064E-08	1.841E-07	9.732E-08	1.116E-03	1.004E-03
T6 public - TOT	AllMYr	1,429	25,771	0.0		6.985E-08	4.608E-06	3.461E-07	1.111E-08	1.774E-07	9.110E-08	1.164E-03	1.048E-03
T6 utility - TOT	AllMYr	227	4,556	0.0		7.311E-08	1.974E-06	3.810E-07	1.097E-08	1.720E-07	8.611E-08	1.150E-03	1.035E-03
T6TS - TOT	AllMYr	5,468	240,160	0.0		7.378E-07	1.387E-06	8.523E-06	6.269E-09	4.603E-08	1.893E-08	6.130E-04	5.517E-04
T7 Ag - TOT	AllMYr	26	1,755	0.0		3.587E-07	6.047E-06	1.768E-06	1.685E-08	2.641E-07	1.885E-07	1.766E-03	1.590E-03
T7 CAIRP - TOT	AllMYr	757	186,531	0.0		3.249E-07	3.141E-06	1.706E-06	1.732E-08	1.799E-07	1.110E-07	1.815E-03	1.633E-03
T7 CAIRP construction - TOT	AllMYr	70	17,212	0.0		3.246E-07	3.182E-06	1.703E-06	1.732E-08	1.799E-07	1.111E-07	1.815E-03	1.634E-03
T7 NNOOS - TOT	AllMYr	746	209,840	0.0		3.138E-07	2.420E-06	1.668E-06	1.745E-08	1.646E-07	9.699E-08	1.829E-03	1.646E-03
T7 NOOS - TOT	AllMYr	276	67,930	0.0		3.545E-07	3.301E-06	1.871E-06	1.759E-08	1.804E-07	1.115E-07	1.844E-03	1.659E-03
T7 other port - TOT	AllMYr	0	0	0.0									
T7 POAK - TOT	AllMYr	0	0	0.0									
T7 POLA - TOT	AllMYr	1,486	260,698	0.0		5.258E-07	7.823E-06	2.695E-06	1.736E-08	2.226E-07	1.503E-07	1.820E-03	1.638E-03
T7 public - TOT	AllMYr	474	11,761	0.0		2.930E-07	1.353E-05	1.523E-06	1.984E-08	1.696E-07	1.016E-07	2.080E-03	1.872E-03
T7 Single - TOT	AllMYr	1,288	100,343	0.0		1.977E-07	4.871E-06	1.017E-06	1.685E-08	1.606E-07	9.328E-08	1.766E-03	1.589E-03
T7 single construction - TOT	AllMYr	577	44,526	0.0		1.972E-07	5.036E-06	1.013E-06	1.686E-08	1.610E-07	9.369E-08	1.767E-03	1.590E-03
T7 SWCV - TOT	AllMYr	642	31,867	0.0		2.447E-07	1.039E-05	1.268E-06	1.813E-08	1.730E-07	1.047E-07	1.900E-03	1.710E-03
T7 tractor - TOT	AllMYr	1,614	263,185	0.0		2.278E-07	4.303E-06	1.159E-06	1.654E-08	1.815E-07	1.125E-07	1.733E-03	1.560E-03
T7 tractor construction - TOT	AllMYr	421	33,197	0.0		2.553E-07	4.900E-06	1.311E-06	1.684E-08	1.828E-07	1.137E-07	1.765E-03	1.589E-03
T7 utility - TOT	AllMYr	54	1,343	0.0		3.945E-07	6.782E-06	2.152E-06	1.957E-08	1.498E-07	8.332E-08	2.051E-03	1.846E-03
T7IS - TOT	AllMYr	190	23,553	0.0		7.765E-07	4.796E-06	3.420E-05	6.461E-09	4.522E-08	1.818E-08	5.910E-04	5.319E-04
UBUS - TOT	AllMYr	1,587	174,562	0.0		6.669E-07	8.371E-06	4.613E-06	1.905E-08	7.793E-07	4.002E-07	1.980E-03	1.782E-03
			80,847,824	100%									

Orange County 2020 Annual					2.000E+03	**lbs/Mile**							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT		ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	667	36,900	0.0		2.173E-04	6.606E-03	9.718E-04	2.370E-05	4.215E-04	2.288E-04	2.484E+00	2.236E+00
LDA - TOT	AllMYr	######	41,139,994	0.5		2.259E-04	1.837E-04	2.166E-03	8.023E-06	1.040E-04	4.406E-05	8.002E-01	5.521E-01
LDT1 - TOT	AllMYr	135,201	4,561,398	0.1		7.091E-04	4.545E-04	5.166E-03	9.313E-06	1.072E-04	4.703E-05	9.242E-01	6.743E-01
LDT2 - TOT	AllMYr	423,264	15,620,106	0.2		3.295E-04	2.952E-04	2.906E-03	1.089E-05	1.038E-04	4.386E-05	1.086E+00	8.191E-01
LHD1 - TOT	AllMYr	83,222	3,390,445	0.0		8.225E-04	2.996E-03	4.779E-03	1.304E-05	1.371E-04	6.289E-05	1.310E+00	1.179E+00
LHD2 - TOT	AllMYr	12,014	478,737	0.0		5.705E-04	3.889E-03	3.150E-03	1.241E-05	1.870E-04	9.036E-05	1.263E+00	1.137E+00
MCY - TOT	AllMYr	50,851	383,754	0.0		8.141E-03	2.718E-03	4.955E-02	4.646E-06	9.990E-05	4.017E-05	3.669E-01	3.302E-01
MDV - TOT	AllMYr	346,831	12,194,196	0.2		5.672E-04	5.806E-04	5.159E-03	1.393E-05	1.043E-04	4.434E-05	1.387E+00	1.101E+00
MH - TOT	AllMYr	15,750	184,105	0.0		2.023E-04	3.164E-03	3.239E-03	1.484E-05	1.951E-04	1.086E-04	1.501E+00	1.351E+00
Motor Coach - TOT	AllMYr	264	37,769	0.0		5.632E-04	8.909E-03	2.929E-03	3.757E-05	4.811E-04	2.837E-04	3.938E+00	3.544E+00
OBUS - TOT	AllMYr	1,097	42,862	0.0		2.580E-03	4.760E-03	2.675E-02	1.445E-05	1.011E-04	4.140E-05	1.400E+00	1.260E+00
PTO - TOT	AllMYr	0	24,035	0.0		5.434E-04	1.306E-02	1.712E-03	4.501E-05	1.111E-04	1.022E-04	4.717E+00	4.246E+00
SBUS - TOT	AllMYr	1,106	40,297	0.0		1.051E-03	1.732E-02	1.046E-02	2.586E-05	1.312E-03	6.069E-04	2.670E+00	2.403E+00
T6 Ag - TOT	AllMYr	42	1,404	0.0		4.333E-04	7.359E-03	1.800E-03	2.387E-05	5.724E-04	3.677E-04	2.502E+00	2.252E+00
T6 CAIRP heavy - TOT	AllMYr	11	729	0.0		1.885E-04	4.329E-03	8.494E-04	2.358E-05	4.012E-04	2.102E-04	2.472E+00	2.225E+00
T6 CAIRP small - TOT	AllMYr	34	2,493	0.0		1.947E-04	2.424E-03	8.821E-04	2.347E-05	4.060E-04	2.145E-04	2.460E+00	2.214E+00
T6 instate construction heavy - TOT	AllMYr	907	48,888	0.0		2.004E-04	7.531E-03	8.938E-04	2.378E-05	4.172E-04	2.249E-04	2.493E+00	2.243E+00
T6 instate construction small - TOT	AllMYr	1,982	132,420	0.0		2.286E-04	3.291E-03	1.031E-03	2.353E-05	4.385E-04	2.445E-04	2.466E+00	2.220E+00
T6 instate heavy - TOT	AllMYr	3,873	215,571	0.0		1.995E-04	6.804E-03	8.921E-04	2.374E-05	4.146E-04	2.225E-04	2.488E+00	2.239E+00
T6 instate small - TOT	AllMYr	8,988	611,084	0.0		2.214E-04	3.098E-03	9.998E-04	2.352E-05	4.314E-04	2.380E-04	2.465E+00	2.218E+00
T6 OOS heavy - TOT	AllMYr	6	418	0.0		1.885E-04	4.329E-03	8.494E-04	2.358E-05	4.012E-04	2.102E-04	2.472E+00	2.225E+00
T6 OOS small - TOT	AllMYr	20	1,429	0.0		1.947E-04	2.424E-03	8.821E-04	2.347E-05	4.060E-04	2.145E-04	2.460E+00	2.214E+00
T6 public - TOT	AllMYr	1,429	25,771	0.0		1.540E-04	1.016E-02	7.631E-04	2.448E-05	3.911E-04	2.009E-04	2.566E+00	2.310E+00
T6 utility - TOT	AllMYr	227	4,556	0.0		1.612E-04	4.352E-03	8.400E-04	2.418E-05	3.791E-04	1.898E-04	2.534E+00	2.281E+00
T6TS - TOT	AllMYr	5,468	240,160	0.0		1.627E-03	3.059E-03	1.879E-02	1.382E-05	1.015E-04	4.174E-05	1.351E+00	1.216E+00
T7 Ag - TOT	AllMYr	26	1,755	0.0		7.907E-04	1.333E-02	3.899E-03	3.715E-05	5.823E-04	4.157E-04	3.894E+00	3.504E+00
T7 CAIRP - TOT	AllMYr	757	186,531	0.0		7.163E-04	6.924E-03	3.761E-03	3.817E-05	3.966E-04	2.448E-04	4.001E+00	3.601E+00
T7 CAIRP construction - TOT	AllMYr	70	17,212	0.0		7.156E-04	7.016E-03	3.755E-03	3.818E-05	3.967E-04	2.449E-04	4.001E+00	3.601E+00
T7 NNOOS - TOT	AllMYr	746	209,840	0.0		6.918E-04	5.336E-03	3.676E-03	3.847E-05	3.629E-04	2.138E-04	4.032E+00	3.629E+00
T7 NOOS - TOT	AllMYr	276	67,930	0.0		7.816E-04	7.278E-03	4.125E-03	3.878E-05	3.977E-04	2.458E-04	4.064E+00	3.658E+00
T7 other port - TOT	AllMYr	0	0	0.0									
T7 POAK - TOT	AllMYr	0	0	0.0									
T7 POLA - TOT	AllMYr	1,486	260,698	0.0		1.159E-03	1.725E-02	5.940E-03	3.828E-05	4.908E-04	3.315E-04	4.012E+00	3.611E+00
T7 public - TOT	AllMYr	474	11,761	0.0		6.460E-04	2.982E-02	3.357E-03	4.374E-05	3.739E-04	2.239E-04	4.585E+00	4.127E+00
T7 Single - TOT	AllMYr	1,288	100,343	0.0		4.358E-04	1.074E-02	2.241E-03	3.714E-05	3.540E-04	2.056E-04	3.893E+00	3.504E+00
T7 single construction - TOT	AllMYr	577	44,526	0.0		4.347E-04	1.110E-02	2.233E-03	3.716E-05	3.550E-04	2.065E-04	3.895E+00	3.506E+00
T7 SWCV - TOT	AllMYr	642	31,867	0.0		5.395E-04	2.291E-02	2.795E-03	3.997E-05	3.813E-04	2.308E-04	4.189E+00	3.770E+00
T7 tractor - TOT	AllMYr	1,614	263,185	0.0		5.023E-04	9.487E-03	2.554E-03	3.646E-05	4.002E-04	2.481E-04	3.822E+00	3.439E+00
T7 tractor construction - TOT	AllMYr	421	33,197	0.0		5.628E-04	1.080E-02	2.891E-03	3.713E-05	4.029E-04	2.506E-04	3.892E+00	3.503E+00
T7 utility - TOT	AllMYr	54	1,343	0.0		8.697E-04	1.495E-02	4.745E-03	4.314E-05	3.302E-04	1.837E-04	4.522E+00	4.070E+00
T7IS - TOT	AllMYr	190	23,553	0.0		1.712E-03	1.057E-02	7.540E-02	1.424E-05	9.969E-05	4.008E-05	1.303E+00	1.173E+00
UBUS - TOT	AllMYr	1,587	174,562	0.0		1.470E-03	1.846E-02	1.017E-02	4.199E-05	1.718E-03	8.823E-04	4.365E+00	3.929E+00
			80,847,824	100%									

Orange County 2012 Annual					Tons/Day							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT	ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	531	30,181	0.0%	1.311E-02	2.891E-01	4.878E-02	3.629E-04	1.575E-02	1.209E-02	3.804E+01	3.785E+01
LDA - TOT	AllMYr	1,143,115	38,950,639	51.3%	1.047E+01	7.972E+00	9.415E+01	1.568E-01	2.051E+00	8.797E-01	1.555E+04	1.474E+04
LDT1 - TOT	AllMYr	127,918	4,368,740	5.7%	2.564E+00	1.944E+00	2.236E+01	2.042E-02	2.446E-01	1.120E-01	2.007E+03	1.917E+03
LDT2 - TOT	AllMYr	392,552	14,523,762	19.1%	4.009E+00	5.103E+00	4.364E+01	7.960E-02	7.584E-01	3.227E-01	7.899E+03	7.609E+03
LHD1 - TOT	AllMYr	72,236	3,055,492	4.0%	1.616E+00	7.026E+00	1.200E+01	2.002E-02	2.215E-01	1.068E-01	2.004E+03	1.994E+03
LHD2 - TOT	AllMYr	10,813	447,100	0.6%	1.963E-01	1.437E+00	1.367E+00	2.792E-03	4.523E-02	2.317E-02	2.831E+02	2.817E+02
MCY - TOT	AllMYr	46,696	348,839	0.5%	1.680E+00	5.015E-01	1.091E+01	8.021E-04	1.791E-02	7.376E-03	5.922E+01	5.892E+01
MDV - TOT	AllMYr	320,449	11,868,463	15.6%	3.817E+00	5.880E+00	4.700E+01	8.254E-02	6.224E-01	2.662E-01	8.188E+03	7.986E+03
MH - TOT	AllMYr	14,403	167,271	0.2%	5.352E-02	4.307E-01	1.380E+00	1.270E-03	1.877E-02	1.125E-02	1.266E+02	1.260E+02
Motor Coach - TOT	AllMYr	209	30,406	0.0%	1.906E-02	4.187E-01	8.926E-02	5.759E-04	1.825E-02	1.437E-02	6.037E+01	6.006E+01
OBUS - TOT	AllMYr	1,051	46,499	0.1%	7.932E-02	1.637E-01	9.039E-01	3.411E-04	2.457E-03	1.050E-03	3.255E+01	3.239E+01
PTO - TOT	AllMYr	0	17,798	0.0%	1.626E-02	2.755E-01	7.723E-02	4.023E-04	9.604E-03	8.836E-03	4.217E+01	4.195E+01
SBUS - TOT	AllMYr	1,048	39,552	0.1%	4.839E-02	4.217E-01	4.847E-01	5.155E-04	3.634E-02	2.131E-02	5.285E+01	5.259E+01
T6 Ag - TOT	AllMYr	39	1,344	0.0%	7.739E-04	1.348E-02	2.776E-03	1.633E-05	8.046E-04	6.334E-04	1.711E+00	1.703E+00
T6 CAIRP heavy - TOT	AllMYr	10	611	0.0%	1.538E-04	4.114E-03	6.224E-04	7.297E-06	2.195E-04	1.534E-04	7.649E-01	7.610E-01
T6 CAIRP small - TOT	AllMYr	29	2,044	0.0%	4.325E-04	1.073E-02	1.818E-03	2.438E-05	6.818E-04	4.648E-04	2.556E+00	2.543E+00
T6 instate construction heavy - TOT	AllMYr	568	30,798	0.0%	1.216E-02	2.870E-01	4.650E-02	3.688E-04	1.413E-02	1.055E-02	3.866E+01	3.846E+01
T6 instate construction small - TOT	AllMYr	1,308	84,786	0.1%	2.430E-02	5.843E-01	9.800E-02	1.012E-03	3.328E-02	2.388E-02	1.061E+02	1.056E+02
T6 instate heavy - TOT	AllMYr	3,371	185,036	0.2%	7.102E-02	1.668E+00	2.720E-01	2.214E-03	8.310E-02	6.175E-02	2.321E+02	2.309E+02
T6 instate small - TOT	AllMYr	7,911	517,747	0.7%	1.429E-01	3.409E+00	5.773E-01	6.176E-03	1.978E-01	1.408E-01	6.474E+02	6.441E+02
T6 OOS heavy - TOT	AllMYr	6	350	0.0%	8.815E-05	2.359E-03	3.568E-04	4.184E-06	1.259E-04	8.796E-05	4.385E-01	4.363E-01
T6 OOS small - TOT	AllMYr	17	1,172	0.0%	2.480E-04	6.150E-03	1.042E-03	1.398E-05	3.909E-04	2.665E-04	1.465E+00	1.458E+00
T6 public - TOT	AllMYr	1,138	20,539	0.0%	6.149E-03	2.047E-01	2.456E-02	2.520E-04	8.629E-03	6.306E-03	2.642E+01	2.629E+01
T6 utility - TOT	AllMYr	190	3,747	0.0%	5.986E-04	2.766E-02	2.728E-03	4.572E-05	1.171E-03	7.798E-04	4.792E+00	4.768E+00
T6TS - TOT	AllMYr	4,833	202,701	0.3%	3.666E-01	7.283E-01	4.282E+00	1.459E-03	1.105E-02	4.886E-03	1.386E+02	1.379E+02
T7 Ag - TOT	AllMYr	24	1,691	0.0%	1.487E-03	2.873E-02	7.109E-03	3.145E-05	1.307E-03	1.101E-03	3.296E+00	3.280E+00
T7 CAIRP - TOT	AllMYr	595	137,701	0.2%	9.182E-02	1.537E+00	4.220E-01	2.595E-03	7.925E-02	6.464E-02	2.720E+02	2.706E+02
T7 CAIRP construction - TOT	AllMYr	48	10,973	0.0%	7.390E-03	1.243E-01	3.392E-02	2.067E-04	6.395E-03	5.225E-03	2.167E+01	2.156E+01
T7 NNOOS - TOT	AllMYr	584	154,908	0.2%	7.998E-02	1.100E+00	3.828E-01	2.965E-03	5.901E-02	4.499E-02	3.108E+02	3.093E+02
T7 NOOS - TOT	AllMYr	217	50,147	0.1%	3.427E-02	5.647E-01	1.558E-01	9.538E-04	2.884E-02	2.352E-02	9.997E+01	9.947E+01
T7 other port - TOT	AllMYr	0	0	0.0%	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
T7 POAK - TOT	AllMYr	0	0	0.0%	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
T7 POLA - TOT	AllMYr	1,087	160,092	0.2%	7.155E-02	1.531E+00	3.653E-01	3.067E-03	4.489E-02	3.169E-02	3.215E+02	3.199E+02
T7 public - TOT	AllMYr	380	9,432	0.0%	1.121E-02	2.081E-01	4.852E-02	2.047E-04	6.642E-03	5.545E-03	2.146E+01	2.135E+01
T7 Single - TOT	AllMYr	984	74,076	0.1%	4.261E-02	1.055E+00	1.994E-01	1.367E-03	3.806E-02	3.057E-02	1.433E+02	1.426E+02
T7 single construction - TOT	AllMYr	380	28,385	0.0%	1.651E-02	4.104E-01	7.720E-02	5.241E-04	1.476E-02	1.187E-02	5.493E+01	5.466E+01
T7 SWCV - TOT	AllMYr	514	25,557	0.0%	5.268E-03	4.653E-01	2.564E-02	5.212E-04	5.450E-03	3.480E-03	5.463E+01	5.436E+01
T7 tractor - TOT	AllMYr	1,214	194,288	0.3%	1.473E-01	2.733E+00	6.966E-01	3.554E-03	1.283E-01	1.064E-01	3.726E+02	3.707E+02
T7 tractor construction - TOT	AllMYr	275	21,163	0.0%	1.736E-02	3.123E-01	8.164E-02	3.909E-04	1.435E-02	1.193E-02	4.097E+01	4.077E+01
T7 utility - TOT	AllMYr	45	1,111	0.0%	7.709E-04	1.962E-02	3.785E-03	2.401E-05	4.605E-04	3.570E-04	2.517E+00	2.504E+00
T7IS - TOT	AllMYr	180	20,330	0.0%	4.838E-02	1.417E-01	1.062E+00	1.521E-04	1.077E-03	4.578E-04	1.344E+01	1.337E+01
UBUS - TOT	AllMYr	1,464	161,061	0.2%	1.504E-01	1.895E+00	1.225E+00	3.487E-03	1.439E-01	7.614E-02	3.619E+02	3.601E+02
			75,996,533									

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Veh & Tech	MdlYr	Pop	VMT	Percent of VMT
All Other Buses - TOT	AllMYr	531	30,181	0.0%
LDA - TOT	AllMYr	1,143,115	38,950,639	51.3%
LDT1 - TOT	AllMYr	127,918	4,368,740	5.7%
LDT2 - TOT	AllMYr	392,552	14,523,762	19.1%
LHD1 - TOT	AllMYr	72,236	3,055,492	4.0%
LHD2 - TOT	AllMYr	10,813	447,100	0.6%
MCY - TOT	AllMYr	46,696	348,839	0.5%
MDV - TOT	AllMYr	320,449	11,868,463	15.6%
MH - TOT	AllMYr	14,403	167,271	0.2%
Motor Coach - TOT	AllMYr	209	30,406	0.0%
OBUS - TOT	AllMYr	1,051	46,499	0.1%
PTO - TOT	AllMYr	0	17,798	0.0%
SBUS - TOT	AllMYr	1,048	39,552	0.1%
T6 Ag - TOT	AllMYr	39	1,344	0.0%
T6 CAIRP heavy - TOT	AllMYr	10	611	0.0%
T6 CAIRP small - TOT	AllMYr	29	2,044	0.0%
T6 instate construction heavy - TOT	AllMYr	568	30,798	0.0%
T6 instate construction small - TOT	AllMYr	1,308	84,786	0.1%
T6 instate heavy - TOT	AllMYr	3,371	185,036	0.2%
T6 instate small - TOT	AllMYr	7,911	517,747	0.7%
T6 OOS heavy - TOT	AllMYr	6	350	0.0%
T6 OOS small - TOT	AllMYr	17	1,172	0.0%
T6 public - TOT	AllMYr	1,138	20,539	0.0%
T6 utility - TOT	AllMYr	190	3,747	0.0%
T6TS - TOT	AllMYr	4,833	202,701	0.3%
T7 Ag - TOT	AllMYr	24	1,691	0.0%
T7 CAIRP - TOT	AllMYr	595	137,701	0.2%
T7 CAIRP construction - TOT	AllMYr	48	10,973	0.0%
T7 NNOOS - TOT	AllMYr	584	154,908	0.2%
T7 NOOS - TOT	AllMYr	217	50,147	0.1%
T7 other port - TOT	AllMYr	0	0	0.0%
T7 POAK - TOT	AllMYr	0	0	0.0%
T7 POLA - TOT	AllMYr	1,087	160,092	0.2%
T7 public - TOT	AllMYr	380	9,432	0.0%
T7 Single - TOT	AllMYr	984	74,076	0.1%
T7 single construction - TOT	AllMYr	380	28,385	0.0%
T7 SWCV - TOT	AllMYr	514	25,557	0.0%
T7 tractor - TOT	AllMYr	1,214	194,288	0.3%
T7 tractor construction - TOT	AllMYr	275	21,163	0.0%
T7 utility - TOT	AllMYr	45	1,111	0.0%
T7IS - TOT	AllMYr	180	20,330	0.0%
UBUS - TOT	AllMYr	1,464	161,061	0.2%
			75,996,533	

Orange County 2012 Annual					9.072E-01	MTons/Mile							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT		ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	531	30,181	0.0%		3.940E-07	8.690E-06	1.466E-06	1.091E-08	4.734E-07	3.635E-07	1.143E-03	1.138E-03
LDA - TOT	AllMYr	1,143,115	38,950,639	51.3%		2.438E-07	1.857E-07	2.193E-06	3.653E-09	4.776E-08	2.049E-08	3.622E-04	3.433E-04
LDT1 - TOT	AllMYr	127,918	4,368,740	5.7%		5.323E-07	4.037E-07	4.644E-06	4.239E-09	5.079E-08	2.326E-08	4.167E-04	3.981E-04
LDT2 - TOT	AllMYr	392,552	14,523,762	19.1%		2.504E-07	3.187E-07	2.726E-06	4.972E-09	4.737E-08	2.016E-08	4.934E-04	4.753E-04
LHD1 - TOT	AllMYr	72,236	3,055,492	4.0%		4.797E-07	2.086E-06	3.563E-06	5.945E-09	6.578E-08	3.171E-08	5.950E-04	5.920E-04
LHD2 - TOT	AllMYr	10,813	447,100	0.6%		3.984E-07	2.916E-06	2.775E-06	5.665E-09	9.177E-08	4.701E-08	5.745E-04	5.716E-04
MCY - TOT	AllMYr	46,696	348,839	0.5%		4.370E-06	1.304E-06	2.838E-05	2.086E-09	4.657E-08	1.918E-08	1.540E-04	1.532E-04
MDV - TOT	AllMYr	320,449	11,868,463	15.6%		2.918E-07	4.495E-07	3.592E-06	6.309E-09	4.758E-08	2.035E-08	6.259E-04	6.104E-04
MH - TOT	AllMYr	14,403	167,271	0.2%		2.903E-07	2.336E-06	7.486E-06	6.887E-09	1.018E-07	6.102E-08	6.868E-04	6.834E-04
Motor Coach - TOT	AllMYr	209	30,406	0.0%		5.686E-07	1.249E-05	2.663E-06	1.718E-08	5.444E-07	4.288E-07	1.801E-03	1.792E-03
OBUS - TOT	AllMYr	1,051	46,499	0.1%		1.547E-06	3.194E-06	1.763E-05	6.654E-09	4.794E-08	2.049E-08	6.351E-04	6.320E-04
PTO - TOT	AllMYr	0	17,798	0.0%		8.286E-07	1.404E-05	3.936E-06	2.050E-08	4.895E-07	4.504E-07	2.149E-03	2.138E-03
SBUS - TOT	AllMYr	1,048	39,552	0.1%		1.110E-06	9.674E-06	1.112E-05	1.182E-08	8.336E-07	4.887E-07	1.212E-03	1.206E-03
T6 Ag - TOT	AllMYr	39	1,344	0.0%		5.223E-07	9.096E-06	1.874E-06	1.102E-08	5.430E-07	4.274E-07	1.155E-03	1.149E-03
T6 CAIRP heavy - TOT	AllMYr	10	611	0.0%		2.284E-07	6.111E-06	9.245E-07	1.084E-08	3.261E-07	2.279E-07	1.136E-03	1.130E-03
T6 CAIRP small - TOT	AllMYr	29	2,044	0.0%		1.919E-07	4.761E-06	8.067E-07	1.082E-08	3.026E-07	2.063E-07	1.134E-03	1.129E-03
T6 instate construction heavy - TOT	AllMYr	568	30,798	0.0%		3.582E-07	8.454E-06	1.370E-06	1.086E-08	4.161E-07	3.107E-07	1.139E-03	1.133E-03
T6 instate construction small - TOT	AllMYr	1,308	84,786	0.1%		2.600E-07	6.252E-06	1.049E-06	1.083E-08	3.561E-07	2.555E-07	1.135E-03	1.130E-03
T6 instate heavy - TOT	AllMYr	3,371	185,036	0.2%		3.482E-07	8.179E-06	1.333E-06	1.086E-08	4.074E-07	3.027E-07	1.138E-03	1.132E-03
T6 instate small - TOT	AllMYr	7,911	517,747	0.7%		2.503E-07	5.972E-06	1.011E-06	1.082E-08	3.466E-07	2.467E-07	1.134E-03	1.129E-03
T6 OOS heavy - TOT	AllMYr	6	350	0.0%		2.284E-07	6.111E-06	9.245E-07	1.084E-08	3.261E-07	2.279E-07	1.136E-03	1.130E-03
T6 OOS small - TOT	AllMYr	17	1,172	0.0%		1.919E-07	4.761E-06	8.067E-07	1.082E-08	3.026E-07	2.063E-07	1.134E-03	1.129E-03
T6 public - TOT	AllMYr	1,138	20,539	0.0%		2.716E-07	9.042E-06	1.085E-06	1.113E-08	3.811E-07	2.785E-07	1.167E-03	1.161E-03
T6 utility - TOT	AllMYr	190	3,747	0.0%		1.450E-07	6.698E-06	6.607E-07	1.107E-08	2.836E-07	1.888E-07	1.160E-03	1.155E-03
T6TS - TOT	AllMYr	4,833	202,701	0.3%		1.641E-06	3.260E-06	1.916E-05	6.531E-09	4.944E-08	2.187E-08	6.203E-04	6.172E-04
T7 Ag - TOT	AllMYr	24	1,691	0.0%		7.977E-07	1.541E-05	3.813E-06	1.687E-08	7.012E-07	5.907E-07	1.768E-03	1.759E-03
T7 CAIRP - TOT	AllMYr	595	137,701	0.2%		6.049E-07	1.013E-05	2.780E-06	1.709E-08	5.221E-07	4.259E-07	1.792E-03	1.783E-03
T7 CAIRP construction - TOT	AllMYr	48	10,973	0.0%		6.109E-07	1.028E-05	2.804E-06	1.709E-08	5.287E-07	4.320E-07	1.792E-03	1.783E-03
T7 NNOOS - TOT	AllMYr	584	154,908	0.2%		4.684E-07	6.442E-06	2.242E-06	1.737E-08	3.456E-07	2.635E-07	1.820E-03	1.811E-03
T7 NOOS - TOT	AllMYr	217	50,147	0.1%		6.200E-07	1.022E-05	2.818E-06	1.725E-08	5.217E-07	4.255E-07	1.809E-03	1.799E-03
T7 other port - TOT	AllMYr	0	0	0.0%									
T7 POAK - TOT	AllMYr	0	0	0.0%									
T7 POLA - TOT	AllMYr	1,087	160,092	0.2%		4.055E-07	8.674E-06	2.070E-06	1.738E-08	2.544E-07	1.796E-07	1.822E-03	1.813E-03
T7 public - TOT	AllMYr	380	9,432	0.0%		1.078E-06	2.001E-05	4.667E-06	1.969E-08	6.388E-07	5.333E-07	2.064E-03	2.054E-03
T7 Single - TOT	AllMYr	984	74,076	0.1%		5.218E-07	1.292E-05	2.442E-06	1.675E-08	4.661E-07	3.744E-07	1.755E-03	1.747E-03
T7 single construction - TOT	AllMYr	380	28,385	0.0%		5.275E-07	1.312E-05	2.467E-06	1.675E-08	4.717E-07	3.795E-07	1.756E-03	1.747E-03
T7 SWCV - TOT	AllMYr	514	25,557	0.0%		1.870E-07	1.651E-05	9.103E-07	1.850E-08	1.935E-07	1.235E-07	1.939E-03	1.930E-03
T7 tractor - TOT	AllMYr	1,214	194,288	0.3%		6.878E-07	1.276E-05	3.253E-06	1.660E-08	5.991E-07	4.967E-07	1.740E-03	1.731E-03
T7 tractor construction - TOT	AllMYr	275	21,163	0.0%		7.440E-07	1.339E-05	3.499E-06	1.676E-08	6.149E-07	5.113E-07	1.756E-03	1.747E-03
T7 utility - TOT	AllMYr	45	1,111	0.0%		6.296E-07	1.602E-05	3.091E-06	1.961E-08	3.761E-07	2.915E-07	2.055E-03	2.045E-03
T7IS - TOT	AllMYr	180	20,330	0.0%		2.159E-06	6.325E-06	4.739E-05	6.789E-09	4.807E-08	2.043E-08	5.998E-04	5.968E-04
UBUS - TOT	AllMYr	1,464	161,061	0.2%		8.469E-07	1.068E-05	6.899E-06	1.964E-08	8.105E-07	4.288E-07	2.039E-03	2.028E-03
			75,996,533										

Orange County 2012 Annual					2.000E+03	**lbs/Mile**							
Veh & Tech	MdlYr	Pop	VMT	Percent of VMT		ROG_TOTAL	NOx_TOTEX	CO_TOTEX	SOx_TOTEX	PM10_TOTAL	PM2_5_TOTAL	CO2_TOTEX	CO2_TOTEX (Pavley I + LCFS)
All Other Buses - TOT	AllMYr	531	30,181	0.0%		8.687E-04	1.916E-02	3.233E-03	2.405E-05	1.044E-03	8.013E-04	2.521E+00	2.508E+00
LDA - TOT	AllMYr	1,143,115	38,950,639	51.3%		5.375E-04	4.093E-04	4.834E-03	8.053E-06	1.053E-04	4.517E-05	7.984E-01	7.569E-01
LDT1 - TOT	AllMYr	127,918	4,368,740	5.7%		1.174E-03	8.899E-04	1.024E-02	9.346E-06	1.120E-04	5.128E-05	9.187E-01	8.778E-01
LDT2 - TOT	AllMYr	392,552	14,523,762	19.1%		5.521E-04	7.027E-04	6.010E-03	1.096E-05	1.044E-04	4.444E-05	1.088E+00	1.048E+00
LHD1 - TOT	AllMYr	72,236	3,055,492	4.0%		1.058E-03	4.599E-03	7.856E-03	1.311E-05	1.450E-04	6.992E-05	1.312E+00	1.305E+00
LHD2 - TOT	AllMYr	10,813	447,100	0.6%		8.783E-04	6.429E-03	6.117E-03	1.249E-05	2.023E-04	1.036E-04	1.267E+00	1.260E+00
MCY - TOT	AllMYr	46,696	348,839	0.5%		9.635E-03	2.875E-03	6.257E-02	4.599E-06	1.027E-04	4.229E-05	3.395E-01	3.378E-01
MDV - TOT	AllMYr	320,449	11,868,463	15.6%		6.433E-04	9.909E-04	7.920E-03	1.391E-05	1.049E-04	4.487E-05	1.380E+00	1.346E+00
MH - TOT	AllMYr	14,403	167,271	0.2%		6.399E-04	5.150E-03	1.650E-02	1.518E-05	2.245E-04	1.345E-04	1.514E+00	1.507E+00
Motor Coach - TOT	AllMYr	209	30,406	0.0%		1.254E-03	2.754E-02	5.871E-03	3.788E-05	1.200E-03	9.453E-04	3.971E+00	3.951E+00
OBUS - TOT	AllMYr	1,051	46,499	0.1%		3.412E-03	7.041E-03	3.888E-02	1.467E-05	1.057E-04	4.516E-05	1.400E+00	1.393E+00
PTO - TOT	AllMYr	0	17,798	0.0%		1.827E-03	3.096E-02	8.678E-03	4.520E-05	1.079E-03	9.929E-04	4.738E+00	4.714E+00
SBUS - TOT	AllMYr	1,048	39,552	0.1%		2.447E-03	2.133E-02	2.451E-02	2.607E-05	1.838E-03	1.077E-03	2.673E+00	2.659E+00
T6 Ag - TOT	AllMYr	39	1,344	0.0%		1.151E-03	2.005E-02	4.130E-03	2.429E-05	1.197E-03	9.424E-04	2.546E+00	2.534E+00
T6 CAIRP heavy - TOT	AllMYr	10	611	0.0%		5.035E-04	1.347E-02	2.038E-03	2.389E-05	7.188E-04	5.024E-04	2.505E+00	2.492E+00
T6 CAIRP small - TOT	AllMYr	29	2,044	0.0%		4.232E-04	1.050E-02	1.778E-03	2.386E-05	6.671E-04	4.548E-04	2.500E+00	2.488E+00
T6 instate construction heavy - TOT	AllMYr	568	30,798	0.0%		7.897E-04	1.864E-02	3.020E-03	2.395E-05	9.173E-04	6.849E-04	2.510E+00	2.498E+00
T6 instate construction small - TOT	AllMYr	1,308	84,786	0.1%		5.732E-04	1.378E-02	2.312E-03	2.388E-05	7.850E-04	5.633E-04	2.503E+00	2.490E+00
T6 instate heavy - TOT	AllMYr	3,371	185,036	0.2%		7.676E-04	1.803E-02	2.939E-03	2.393E-05	8.982E-04	6.674E-04	2.509E+00	2.496E+00
T6 instate small - TOT	AllMYr	7,911	517,747	0.7%		5.519E-04	1.317E-02	2.230E-03	2.386E-05	7.640E-04	5.440E-04	2.501E+00	2.488E+00
T6 OOS heavy - TOT	AllMYr	6	350	0.0%		5.035E-04	1.347E-02	2.038E-03	2.389E-05	7.188E-04	5.024E-04	2.505E+00	2.492E+00
T6 OOS small - TOT	AllMYr	17	1,172	0.0%		4.232E-04	1.050E-02	1.778E-03	2.386E-05	6.671E-04	4.548E-04	2.500E+00	2.488E+00
T6 public - TOT	AllMYr	1,138	20,539	0.0%		5.987E-04	1.993E-02	2.391E-03	2.454E-05	8.402E-04	6.141E-04	2.572E+00	2.560E+00
T6 utility - TOT	AllMYr	190	3,747	0.0%		3.196E-04	1.477E-02	1.457E-03	2.441E-05	6.252E-04	4.163E-04	2.558E+00	2.545E+00
T6TS - TOT	AllMYr	4,833	202,701	0.3%		3.618E-03	7.186E-03	4.225E-02	1.440E-05	1.090E-04	4.821E-05	1.367E+00	1.361E+00
T7 Ag - TOT	AllMYr	24	1,691	0.0%		1.759E-03	3.398E-02	8.407E-03	3.719E-05	1.546E-03	1.302E-03	3.898E+00	3.879E+00
T7 CAIRP - TOT	AllMYr	595	137,701	0.2%		1.334E-03	2.233E-02	6.129E-03	3.769E-05	1.151E-03	9.389E-04	3.950E+00	3.930E+00
T7 CAIRP construction - TOT	AllMYr	48	10,973	0.0%		1.347E-03	2.265E-02	6.182E-03	3.768E-05	1.166E-03	9.523E-04	3.950E+00	3.930E+00
T7 NNOOS - TOT	AllMYr	584	154,908	0.2%		1.033E-03	1.420E-02	4.942E-03	3.828E-05	7.619E-04	5.809E-04	4.013E+00	3.993E+00
T7 NOOS - TOT	AllMYr	217	50,147	0.1%		1.367E-03	2.252E-02	6.213E-03	3.804E-05	1.150E-03	9.380E-04	3.987E+00	3.967E+00
T7 other port - TOT	AllMYr	0	0	0.0%									
T7 POAK - TOT	AllMYr	0	0	0.0%									
T7 POLA - TOT	AllMYr	1,087	160,092	0.2%		8.939E-04	1.912E-02	4.563E-03	3.832E-05	5.608E-04	3.959E-04	4.016E+00	3.996E+00
T7 public - TOT	AllMYr	380	9,432	0.0%		2.377E-03	4.412E-02	1.029E-02	4.341E-05	1.408E-03	1.176E-03	4.550E+00	4.527E+00
T7 Single - TOT	AllMYr	984	74,076	0.1%		1.150E-03	2.848E-02	5.384E-03	3.692E-05	1.028E-03	8.254E-04	3.870E+00	3.851E+00
T7 single construction - TOT	AllMYr	380	28,385	0.0%		1.163E-03	2.892E-02	5.439E-03	3.693E-05	1.040E-03	8.366E-04	3.870E+00	3.851E+00
T7 SWCV - TOT	AllMYr	514	25,557	0.0%		4.122E-04	3.641E-02	2.007E-03	4.079E-05	4.265E-04	2.723E-04	4.276E+00	4.254E+00
T7 tractor - TOT	AllMYr	1,214	194,288	0.3%		1.516E-03	2.814E-02	7.171E-03	3.659E-05	1.321E-03	1.095E-03	3.835E+00	3.816E+00
T7 tractor construction - TOT	AllMYr	275	21,163	0.0%		1.640E-03	2.952E-02	7.715E-03	3.694E-05	1.356E-03	1.127E-03	3.872E+00	3.852E+00
T7 utility - TOT	AllMYr	45	1,111	0.0%		1.388E-03	3.532E-02	6.814E-03	4.323E-05	8.291E-04	6.427E-04	4.532E+00	4.509E+00
T7IS - TOT	AllMYr	180	20,330	0.0%		4.759E-03	1.394E-02	1.045E-01	1.497E-05	1.060E-04	4.504E-05	1.322E+00	1.316E+00
UBUS - TOT	AllMYr	1,464	161,061	0.2%		1.867E-03	2.354E-02	1.521E-02	4.330E-05	1.787E-03	9.454E-04	4.494E+00	4.472E+00
			75,996,533										

Area Sources - Criteria Air Pollutants

2012	ROG Exhaust	NO_x Exhaust	CO Exhaust	SO_2 Exhaust	PM_{10} Exhaust	$PM_{2.5}$ Exhaust*
			lbs/day			
Construction Equipment	283	1,947	1,698	2	121	119
Lawn & Garden Equipment	1,295	335	15,879	1	47	46
Light Commercial Equipment	480	962	12,196	1	102	101
TOTAL	2,058	3,244	29,773	5	269	267

2020	ROG Exhaust	NO_x Exhaust	CO Exhaust	SO2 Exhaust	PM10 Exhaust	PM2.5 Exhaust*
			lbs/day			
Construction Equipment	316	2,171	1,894	3	135	133
Lawn & Garden Equipment	1,444	374	17,704	1	52	51
Light Commercial Equipment	535	1,072	13,598	2	114	113
TOTAL	2,295	3,617	33,195	6	300	297

Project	ROG Exhaust	NO_x Exhaust	CO Exhaust	SO2 Exhaust	PM10 Exhaust	PM2.5 Exhaust*
			lbs/day			
Construction Equipment	377	2,590	2,260	3	161	159
Lawn & Garden Equipment	1,776	460	21,770	2	64	63
Light Commercial Equipment	658	1,319	16,721	2	140	138
TOTAL	2,810	4,368	40,750	7	364	361

Current General Plan	ROG Exhaust	NO_x Exhaust	CO Exhaust	SO2 Exhaust	PM10 Exhaust	PM2.5 Exhaust*
			lbs/day			
Construction Equipment	307	2,111	1,842	3	131	130
Lawn & Garden Equipment	1,405	364	17,222	1	51	50
Light Commercial Equipment	520	1,043	13,227	2	111	109
TOTAL	2,232	3,518	32,291	5	292	289

* assumes PM2.5 is 99 percent of PM10

Sources

Building Permits

Source: U.S. Census Bureau

http://censtats.census.gov/bldg/bldgprmt.shtml

Employment

Source. U.S. Census Bureau. 2010. Longitudinal Employer-Household Dynamics.

Population

Source. U.S. Census Bureau, 2010.

Other Emissions Sources - Off-road Equipment

Source: OFFROAD2007. Based on equipment use in Orange County.

Year 2012 BAU	2012 MTons of CO_2e	Notes
Light Commercial Equipment	18,761	Based on the percentage of employment in Anaheim compared to Orange County.
Lawn & Garden Equipment	10,387	Based on the percentage of residential units in Anaheim compared to Orange County.
Construction Equipment	33,118	Based on the percentage of residential building permits issued in Anaheim compared to Orange County.
TOTAL	62,267	

Year 2020 BAU	2020 MTons of CO_2e	Notes
Light Commercial Equipment	20,542	proportional to employment growth
Lawn & Garden Equipment	11,728	proportional to population growth
Construction Equipment	33,118	similar to historic
TOTAL	65,388	

Project BAU	Project MTons of CO_2e	Notes
Light Commercial Equipment	23,880	proportional to employment growth
Lawn & Garden Equipment	14,241	proportional to population growth
Construction Equipment	33,118	similar to historic
TOTAL	71,239	

Current General Plan BAU	Current GP MTons of CO_2e	Notes
Light Commercial Equipment	18,889	proportional to employment growth
Lawn & Garden Equipment	11,835	proportional to population growth
Construction Equipment	33,118	similar to historic
TOTAL	63,842	

Other Emissions Sources - Off-road Equipment

Source: OFFROAD2007. Based on equipment use in Orange County.

Adjusted Business as Usual - Low Carbon Fuel Standard

On December 29, 2011, the U.S. District Court for the Eastern District of California issued several rulings in the federal lawsuits challenging the LCFS. One of the court's rulings preliminarily enjoins the CARB from enforcing the regulation during the pendency of the litigation. In January 2012, CARB appealed the decision and on April 23, 2012, the Night Circuit Court granted CARB's motion for a stay of the injunction while it continues to consider CARB's appeal of the lower court's decision.

Year 2020 Adjusted	2020 MTons of CO_2e	Notes
Light Commercial Equipment	18,488	With LCFS (10% reduction)
Lawn & Garden Equipment	10,555	With LCFS (10% reduction)
Construction Equipment	29,806	With LCFS (10% reduction)
TOTAL	58,849	
reduction	6,539	

Project Adjusted	Project MTons of CO_2e	Notes
Light Commercial Equipment	21,492	With LCFS (10% reduction)
Lawn & Garden Equipment	12,817	With LCFS (10% reduction)
Construction Equipment	29,806	With LCFS (10% reduction)
TOTAL	64,115	
reduction	7,124	

Current General Plan Adjusted	Current GP MTons of CO_2e	Notes
Light Commercial Equipment	17,000	With LCFS (10% reduction)
Lawn & Garden Equipment	10,651	With LCFS (10% reduction)
Construction Equipment	29,806	With LCFS (10% reduction)
TOTAL	57,458	
reduction	6,384	

Sources

Building Permits

Source: U.S. Census Bureau
http://censtats.census.gov/cgi-bin/bldgprmt/bldgdisp.pl

Employment

Source. U.S. Census Bureau. 2010. Longitudinal Employer-Household Dynamics. http://lehd.ces.census.gov/

Population

Source. U.S. Census Bureau, 2010.

Construction

										Tons/Day										MTons/Year
Equipment	Fuel	MaxHP	C/R	Pre	Hand	Port	County	Population	Activity	Consumption	ROG Exhaust	NOX Exhaust	CO Exhaust	SO2 Exhaust	PM Exhaust	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e	CO2e
Tampers/Rammers	G2	15	U	P	NHH	NP	Orange	413.9909	2.07E+02	4.17E+01	2.62E-03	1.99E-03	1.13E-01	8.86E-06	1.80E-03	2.15E-01	3.21E-04	1.63E-04	3.18E-01	100
Plate Compactors	G2	15	U	P	NHH	NP	Orange	35.51225	2.01E+01	4.04E+00	2.54E-04	1.93E-04	1.09E-02	8.60E-07	1.75E-04	2.09E-02	3.12E-05	1.58E-05	3.09E-02	10
Asphalt Pavers	G4	15	U	P	NHH	NP	Orange	9.028493	9.80E+00	5.63E+00	4.24E-04	3.09E-04	1.60E-02	7.86E-07	2.31E-04	2.76E-02	2.81E-05	2.43E-05	3.68E-02	12
Asphalt Pavers	G4	25	U	P	NHH	NP	Orange	15.44003	1.68E+01	2.43E+01	1.87E-03	1.20E-03	7.11E-02	2.92E-06	9.66E-04	1.15E-01	7.41E-05	1.07E-04	1.40E-01	44
Asphalt Pavers	G4	50	U	P	NHH	NP	Orange	8.082569	8.69E+00	2.02E+01	7.41E-04	1.07E-03	2.13E-02	1.93E-06	1.21E-05	1.58E-01	4.81E-05	4.24E-05	1.74E-01	55
Asphalt Pavers	G4	120	U	P	NHH	NP	Orange	4.439721	4.77E+00	1.87E+01	5.05E-04	1.50E-03	8.98E-03	1.58E-06	1.27E-05	1.64E-01	4.12E-05	2.89E-05	1.77E-01	56
Tampers/Rammers	G4	15	U	P	NHH	NP	Orange	19.10377	9.53E+00	4.60E+00	3.54E-04	2.44E-04	1.31E-02	6.37E-07	1.87E-04	2.23E-02	2.44E-05	2.03E-05	3.03E-02	10
Plate Compactors	G4	5	U	P	NHH	NP	Orange	701.3438	3.46E+02	6.24E+01	8.74E-03	3.87E-03	1.33E-01	1.24E-05	1.18E-04	3.61E-01	5.70E-04	5.01E-04	5.48E-01	172
Plate Compactors	G4	15	U	P	NHH	NP	Orange	743.8693	4.20E+02	1.79E+02	1.35E-02	9.68E-03	5.10E-01	2.50E-05	7.34E-03	8.75E-01	1.02E-03	7.73E-04	1.21E+00	380
Rollers	G4	5	U	P	NHH	NP	Orange	78.1161	1.78E+01	4.77E+00	5.69E-04	2.52E-04	1.13E-02	9.01E-07	8.51E-06	2.61E-02	3.32E-05	3.26E-05	3.71E-02	12
Rollers	G4	15	U	P	NHH	NP	Orange	126.3989	1.07E+02	5.80E+01	4.32E-03	3.15E-03	1.65E-01	8.09E-06	2.38E-03	2.84E-01	2.96E-04	2.48E-04	3.81E-01	120
Rollers	G4	25	U	P	NHH	NP	Orange	85.31271	7.25E+01	8.51E+01	6.50E-03	4.15E-03	2.49E-01	1.02E-05	3.39E-03	4.04E-01	2.85E-04	3.73E-04	5.01E-01	158
Rollers	G4	50	U	P	NHH	NP	Orange	5.69195	9.69E+00	2.57E+01	1.18E-03	1.46E-03	3.28E-02	2.33E-06	1.47E-05	1.92E-01	6.08E-05	6.77E-05	2.12E-01	67
Rollers	G4	120	U	P	NHH	NP	Orange	10.70087	1.82E+01	8.44E+01	2.97E-03	7.34E-03	5.09E-02	6.99E-06	5.60E-05	7.23E-01	1.85E-04	1.70E-04	7.84E-01	247
Paving Equipment	G4	5	U	P	NHH	NP	Orange	981.4888	4.58E+02	8.89E+01	1.23E-02	5.45E-03	1.91E-01	1.77E-05	1.67E-04	5.11E-01	7.78E-04	7.06E-04	7.67E-01	242
Paving Equipment	G4	15	U	P	NHH	NP	Orange	1660.327	9.11E+02	5.20E+02	3.91E-02	2.81E-02	1.48E+00	7.25E-05	2.13E-02	2.54E+00	2.57E-03	2.24E-03	3.39E+00	1,066
Paving Equipment	G4	25	U	P	NHH	NP	Orange	36.89906	2.02E+01	2.62E+01	2.01E-03	1.27E-03	7.68E-02	3.15E-06	1.04E-03	1.24E-01	8.34E-05	1.15E-04	1.53E-01	48
Paving Equipment	G4	50	U	P	NHH	NP	Orange	22.08476	1.06E+01	2.39E+01	5.12E-04	8.72E-04	1.85E-02	2.43E-06	1.53E-05	2.00E-01	4.61E-05	2.93E-05	2.15E-01	68
Paving Equipment	G4	120	U	P	NHH	NP	Orange	5.691949	2.73E+00	9.95E+00	1.39E-04	4.94E-04	2.96E-03	8.77E-07	7.03E-06	9.08E-02	1.64E-05	7.99E-06	9.61E-02	30
Surfacing Equipment	G4	5	U	P	NHH	NP	Orange	180.1773	9.88E+01	1.97E+01	2.82E-03	1.25E-03	4.11E-02	3.96E-06	3.74E-05	1.15E-01	1.74E-04	1.62E-04	1.72E-01	54
Surfacing Equipment	G4	15	U	P	NHH	NP	Orange	535.429	7.39E+02	2.81E+02	2.19E-02	1.60E-02	7.98E-01	3.91E-05	1.15E-02	1.37E+00	1.73E-03	1.25E-03	1.93E+00	608
Surfacing Equipment	G4	25	U	P	NHH	NP	Orange	7.327473	1.01E+01	9.40E+00	7.52E-04	4.80E-04	2.75E-02	1.13E-06	3.73E-04	4.45E-02	3.60E-05	4.30E-05	5.66E-02	18
Signal Boards	G4	5	U	P	NHH	NP	Orange	2.224411	7.93E-01	2.55E-01	3.25E-05	1.44E-05	5.82E-04	4.93E-08	4.65E-07	1.43E-03	1.69E-06	1.86E-06	1.99E-03	1
Signal Boards	G4	15	U	P	NHH	NP	Orange	15.83258	1.23E+01	7.24E+00	5.36E-04	3.92E-04	2.06E-02	1.01E-06	2.97E-04	3.55E-02	3.54E-05	3.08E-05	4.71E-02	15
Trenchers	G4	15	U	P	NHH	NP	Orange	146.4186	1.74E+02	1.11E+02	8.49E-03	6.20E-03	3.17E-01	1.55E-05	4.56E-03	5.44E-01	5.31E-04	4.86E-04	7.19E-01	226
Trenchers	G4	25	U	P	NHH	NP	Orange	113.445	1.35E+02	1.87E+02	1.46E-02	9.32E-03	5.47E-01	2.24E-05	7.43E-03	8.86E-01	5.87E-04	8.35E-04	1.09E+00	342
Trenchers	G4	50	U	P	NHH	NP	Orange	51.79675	5.71E+01	1.26E+02	4.98E-03	7.04E-03	1.39E-01	1.19E-05	7.48E-05	9.76E-01	3.20E-04	2.85E-04	1.08E+00	340
Trenchers	G4	120	U	P	NHH	NP	Orange	17.18969	1.89E+01	8.07E+01	2.39E-03	6.93E-03	4.15E-02	6.81E-06	5.46E-05	7.05E-01	1.81E-04	1.37E-04	7.64E-01	240
Bore/Drill Rigs	G4	15	U	P	NHH	P	Orange	4.187128	1.42E+00	1.09E+00	8.18E-05	5.63E-05	3.13E-03	1.52E-07	4.46E-05	5.32E-03	4.59E-06	4.69E-06	6.84E-03	2
Bore/Drill Rigs	G4	25	U	P	NHH	P	Orange	20.80479	7.07E+00	1.01E+01	7.61E-04	4.64E-04	2.96E-02	1.21E-06	3.99E-04	4.76E-02	2.98E-05	4.36E-05	5.78E-02	18
Bore/Drill Rigs	G4	50	U	P	NHH	P	Orange	2.504458	7.35E-01	1.96E+00	5.91E-05	1.07E-04	1.67E-03	1.95E-07	1.23E-06	1.60E-02	4.44E-06	3.39E-06	1.75E-02	6
Bore/Drill Rigs	G4	120	U	P	NHH	P	Orange	11.49774	3.37E+00	2.24E+01	4.87E-04	1.89E-03	8.70E-03	1.93E-06	1.55E-05	2.00E-01	4.00E-05	2.79E-05	2.13E-01	67
Bore/Drill Rigs	G4	175	U	P	NHH	P	Orange	2.845975	8.35E-01	7.54E+00	9.68E-05	7.37E-04	2.16E-03	6.86E-07	5.50E-06	6.90E-02	1.26E-05	5.55E-06	7.30E-02	23
Concrete/Industrial Saws	G4	5	U	P	NHH	NP	Orange	76.80761	2.74E+01	7.24E+00	9.21E-04	4.08E-04	1.65E-02	1.40E-06	1.32E-05	4.04E-02	5.25E-05	5.28E-05	5.78E-02	18
Concrete/Industrial Saws	G4	15	U	P	NHH	NP	Orange	345.438	2.94E+02	1.99E+02	1.48E-02	1.08E-02	5.67E-01	2.78E-05	8.18E-03	9.76E-01	9.14E-04	8.51E-04	1.28E+00	402
Concrete/Industrial Saws	G4	25	U	P	NHH	NP	Orange	108.0802	9.19E+01	1.21E+02	9.27E-03	5.92E-03	3.55E-01	1.46E-05	4.83E-03	5.77E-01	3.85E-04	5.31E-04	7.07E-01	223
Concrete/Industrial Saws	G4	50	U	P	NHH	NP	Orange	9.334799	1.56E+01	4.32E+01	4.47E-04	6.47E-04	3.01E-02	4.47E-06	2.82E-05	3.68E-01	5.16E-05	2.56E-05	3.85E-01	121
Concrete/Industrial Saws	G4	120	U	P	NHH	NP	Orange	5.350433	8.95E+00	4.22E+01	1.84E-04	4.14E-04	8.20E-03	3.80E-06	3.05E-05	3.93E-01	3.14E-05	1.05E-05	4.03E-01	127
Cement and Mortar Mixers	G4	5	U	P	NHH	NP	Orange	1394.706	3.52E+02	8.87E+01	1.10E-02	4.87E-03	2.06E-01	1.70E-05	1.60E-04	4.91E-01	6.48E-04	6.31E-04	7.05E-01	222
Cement and Mortar Mixers	G4	15	U	P	NHH	NP	Orange	2363.11	5.96E+02	2.93E+02	2.96E-02	1.26E-02	8.82E-01	3.80E-05	1.09E-02	1.33E+00	1.37E-03	1.70E-03	1.79E+00	564
Cement and Mortar Mixers	G4	25	U	P	NHH	NP	Orange	9.944429	2.51E+00	3.88E+00	3.67E-04	1.49E-04	1.18E-02	4.44E-07	1.43E-04	1.75E-02	1.00E-05	2.10E-05	2.11E-02	7
Cranes	G4	50	U	P	NHH	P	Orange	2.845975	3.24E+00	6.28E+00	2.51E-04	3.52E-04	7.01E-03	5.91E-07	3.72E-06	4.86E-02	1.70E-05	1.44E-05	5.42E-02	17
Cranes	G4	120	U	P	NHH	P	Orange	5.69195	6.48E+00	2.21E+01	6.60E-04	1.90E-03	1.15E-02	1.86E-06	1.49E-05	1.92E-01	5.50E-05	3.78E-05	2.10E-01	66
Cranes	G4	175	U	P	NHH	P	Orange	0.227678	2.59E-01	1.39E+00	2.09E-05	1.44E-04	4.43E-04	1.26E-07	1.01E-06	1.26E-02	3.09E-06	1.20E-06	1.36E-02	4
Crushing/Proc. Equipment	G4	15	U	P	NHH	P	Orange	3.794584	3.01E+00	2.22E+00	1.65E-04	1.20E-04	6.32E-03	3.10E-07	9.13E-05	1.09E-02	9.77E-06	9.45E-06	1.41E-02	4
Crushing/Proc. Equipment	G4	25	U	P	NHH	P	Orange	2.486107	1.97E+00	2.67E+00	2.03E-04	1.30E-04	7.82E-03	3.21E-07	1.06E-04	1.27E-02	8.34E-06	1.16E-05	1.55E-02	5
Crushing/Proc. Equipment	G4	120	U	P	NHH	P	Orange	3.301331	2.18E+00	1.72E+01	4.36E-04	1.46E-03	7.66E-03	1.47E-06	1.18E-05	1.52E-01	2.86E-05	2.50E-05	1.61E-01	51
Rough Terrain Forklifts	G4	50	U	P	NHH	NP	Orange	1.13839	1.29E+00	4.25E+00	1.70E-04	2.38E-04	4.74E-03	4.01E-07	2.52E-06	3.30E-02	8.97E-06	9.74E-06	3.59E-02	11
Rough Terrain Forklifts	G4	120	U	P	NHH	NP	Orange	16.16514	1.83E+01	9.60E+01	2.87E-03	8.25E-03	4.97E-02	8.09E-06	6.48E-05	8.37E-01	1.96E-04	1.64E-04	9.01E-01	284
Rough Terrain Forklifts	G4	175	U	P	NHH	NP	Orange	0.569195	6.45E-01	5.27E+00	7.93E-05	5.45E-04	1.68E-03	4.76E-07	3.81E-06	4.79E-02	9.63E-06	4.54E-06	5.10E-02	16
Rubber Tired Loaders	G4	50	U	P	NHH	NP	Orange	2.845975	4.00E+00	9.76E+00	4.11E-04	5.44E-04	1.15E-02	9.06E-07	5.71E-06	7.45E-02	2.36E-05	2.35E-05	8.23E-02	26
Rubber Tired Loaders	G4	120	U	P	NHH	NP	Orange	18.89727	2.65E+01	1.02E+02	3.22E-03	8.66E-03	5.59E-02	8.51E-06	6.82E-05	8.81E-01	2.38E-04	1.84E-04	9.58E-01	302
Tractors/Loaders/Backhoes	G4	120	U	P	NHH	NP	Orange	10.01783	2.39E+01	7.03E+01	1.38E-03	3.25E-03	3.56E-02	5.96E-06	4.78E-05	6.17E-01	1.29E-04	7.84E-05	6.59E-01	207
Skid Steer Loaders	G4	15	U	P	NHH	NP	Orange	7.458321	6.52E+00	5.12E+00	3.87E-04	2.82E-04	1.46E-02	7.15E-07	2.10E-04	2.51E-02	2.21E-05	2.22E-05	3.24E-02	10
Skid Steer Loaders	G4	25	U	P	NHH	NP	Orange	498.6607	4.36E+02	4.79E+02	3.70E-02	2.37E-02	1.40E+00	5.77E-05	1.91E-02	2.28E+00	1.67E-03	2.12E-03	2.84E+00	893
Skid Steer Loaders	G4	50	U	P	NHH	NP	Orange	77.63819	6.60E+01	1.26E+02	1.69E-03	2.69E-03	9.76E-02	1.29E-05	8.10E-05	1.06E+00	2.07E-04	9.69E-05	1.12E+00	354
Skid Steer Loaders	G4	120	U	P	NHH	NP	Orange	46.44632	3.95E+01	1.69E+02	1.17E-03	3.54E-03	4.05E-02	1.51E-05	1.21E-04	1.56E+00	1.73E-04	6.70E-05	1.62E+00	510
Dumpers/Tenders	G4	5	U	P	NHH	NP	Orange	71.18116	2.91E+01	3.88E+00	5.54E-04	2.45E-04	8.13E-03	7.80E-07	7.36E-06	2.26E-02	4.12E-05	3.18E-05	3.60E-02	11
Dumpers/Tenders	G4	15	U	P	NHH	NP	Orange	151.7834	6.20E+01	2.36E+01	2.32E-03	1.08E-03	7.03E-02	3.09E-06	8.90E-04	1.08E-01	1.29E-04	1.33E-04	1.51E-01	48
Dumpers/Tenders	G4	25	U	P	NHH	NP	Orange	28.13226	1.15E+01	9.31E+00	8.69E-04	3.82E-04	2.81E-02	1.07E-06	3.48E-04	4.24E-02	3.36E-05	4.98E-05	5.38E-02	17
Dumpers/Tenders	G4	120	U	P	NHH	NP	Orange	2.049102	7.14E-01	1.84E+00	4.12E-05	1.56E-04	7.33E-04	1.59E-07	1.28E-06	1.65E-02	5.13E-06	2.36E-06	1.81E-02	6
Other Construction Equipment	G4	175	U	P	NHH	NP	Orange	7.96873	8.11E+00	4.44E+01	1.91E-04	7.68E-04	1.32E-02	4.04E-06	3.24E-05	4.07E-01	3.82E-05	1.09E-05	4.19E-01	132
Pavers	D	25	U	P	NHH	NP	Orange	2.116483	4.76E+00	4.05E+00	6.07E-05	3.64E-04	1.93E-04	5.64E-07	1.91E-05	4.44E-02	0.00E+00	5.48E-06	4.45E-02	14
Pavers	D	50	U	P	NHH	NP	Orange	123.0382	2.81E+02	3.69E+02	2.04E-02	4.27E-02	5.18E-02	5.09E-05	4.60E-03	3.94E+00	0.00E+00	1.84E-03	3.97E+00	1,251
Pavers	D	120	U	P	NHH	NP	Orange	145.0497	3.32E+02	1.05E+03	2.44E-02	1.46E-01	8.47E-02	1.35E-04	1.29E-02	1.15E+01	0.00E+00	2.20E-03	1.15E+01	3,625
Pavers	D	175	U	P	NHH	NP	Orange	90.16222	2.06E+02	1.21E+03	1.92E-02	1.49E-01	8.07E-02	1.49E-04	8.45E-03	1.32E+01	0.00E+00	1.74E-03	1.33E+01	4,173
Pavers	D	250	U	N	NHH	NP	Orange	10.86462	2.49E+01	2.19E+02	2.71E-03	2.57E-02	7.89E-03	2.72E-05	1.02E-03	2.41E+00	0.00E+00	2.44E-04	2.42E+00	761
Pavers	D	500	U	N	NHH	NP	Orange	11.14681	2.55E+01	2.71E+02	3.03E-03	2.86E-02	1.27E-02	2.92E-05	1.12E-03	2.97E+00	0.00E+00	2.74E-04	2.98E+00	937
Plate Compactors	D	15	U	P	NHH	NP	Orange	45.43384	7.48E+01	1.47E+01	1.88E-04	1.17E-03	9.84E-04	2.51E-06	4.69E-05	1.61E-01	0.00E+00	1.69E-05	1.61E-01	51
Rollers	D	15	U	P	NHH	NP	Orange	85.36483	1.63E+02	4.69E+01	5.98E-04	3.74E-03	3.14E-03	7.99E-06	1.44E-04	5.14E-01	0.00E+00	5.39E-05	5.15E-01	162
Rollers	D	25	U	P	NHH	NP	Orange	35.69801	6.80E+01	4.13E+01	5.50E-04	3.50E-03	1.87E-03	5.75E-06	1.52E-04	4.53E-01	0.00E+00	4.96E-05	4.54E-01	143
Rollers	D	50	U	P	NHH	NP	Orange	111.0448	2.14E+02	2.59E+02	1.18E-02	2.86E-02	3.20E-02	3.59E-05	2.81E-03	2.77E+00	0.00E+00	1.07E-03	2.80E+00	880
Rollers	D	120	U	P	NHH	NP	Orange	596.1428	1.15E+03	3.10E+03	6.05E-02	3.80E-01	2.35E-01	3.97E-04	3.30E-02	3.38E+01	0.00E+00	5.46E-03	3.39E+01	10,677
Rollers	D	175	U	P	NHH	NP	Orange	239.727	4.61E+02	2.28E+03	3.05E-02	2.47E-01	1.43E-01	2.80E-04	1.36E-02	2.49E+01	0.00E+00	2.75E-03	2.50E+01	7,863
Rollers	D	250	U	N	NHH	NP	Orange	34.00483	6.54E+01	4.54E+02	4.40E-03	4.61E-02	1.33E-02	5.63E-05	1.63E-03	5.00E+00	0.00E+00	3.97E-04	5.01E+00	1,578
Rollers	D	500	U	N	NHH	NP	Orange	23.84571	4.59E+01	4.56E+02	4.02E-03	4.15E-02	1.55E-02	4.93E-05	1.49E-03	5.02E+00	0.00E+00	3.63E-04	5.03E+00	1,583
Scrapers	D	120	U	P	NHH	NP	Orange	5.502857	1.68E+01	7.24E+01	1.67E-03	9.87E-03	5.89E-03	9.25E-06	8.87E-04	7.88E-01	0.00E+00	1.51E-04	7.91E-01	249
Scrapers	D	175	U	P	NHH	NP	Orange	50.3723	1.54E+02	1.04E+03	1.67E-02	1.26E-01	7.04E-02	1.28E-04	7.28E-03	1.14E+01	0.00E+00	1.51E-03	1.14E+01	3,592
Scrapers	D	250	U	N	NHH	NP	Orange	49.10241	1.50E+02	1.43E+03	1.77E-02	1.64E-01	5.01E-02	1.77E-04	6.43E-03	1.57E+01	0.00E+00	1.60E-03	1.57E+01	4,949
Scrapers	D	500	U	N	NHH	NP	Orange	135.1728	4.13E+02	6.03E+03	6.87E-02	6.22E-01	2.67E-01	6.51E-04	2.45E-02	6.63E+01	0.00E+00	6.20E-03	6.64E+01	20,904
Scrapers	D	750	U	N	NHH	NP	Orange	11.20752	3.42E+01	8.64E+02	9.88E-03	9.09E-02	3.83E-02	9.54E-05	3.55E-03	9.49E+00	0.00E+00	8.92E-04	9.51E+00	2,994
Paving Equipment	D	25	U	P	NHH	NP	Orange	3.668571	8.34E+00	4.79E+00	6.38E-05	4.06E-04	2.17E-04	6.67E-07	1.77E-05	5.26E-02	0.00E+00	5.76E-06	5.27E-02	17
Paving Equipment	D	50	U	P	NHH	NP	Orange	3.104175	7.12E+00	7.99E+00	4.41E-04	9.21E-04	1.11E-03	1.10E-06	9.93E-05	8.51E-02	0.00E+00	3.98E-05	8.59E-02	27
Paving Equipment	D	120	U	P	NHH	NP	Orange	44.72834	1.03E+02	2.57E+02	5.90E-03	3.54E-02	2.05E-02	3.28E-05	3.13E-03	2.79E+00	0.00E+00	5.32E-04	2.80E+00	883
Paving Equipment	D	175	U	P	NHH	NP	Orange	21.02373	4.82E+01	2.23E+02	3.51E-03	2.74E-02	1.47E-02	2.74E-05	1.54E-03	2.43E+00	0.00E+00	3.17E-04	2.44E+00	768
Paving Equipment	D	250	U	N	NHH	NP	Orange	5.926155	1.36E+01	7.55E+01	9.15E-04	8.82E-03	2.68E-03	9.34E-06	3.44E-04	8.30E-01	0.00E+00	8.26E-05	8.32E-01	262
Surfacing Equipment	D	50	U	P	NHH	NP	Orange	2.821978	3.50E+00	2.29E+00	8.99E-05	2.47E-04	2.52E-04	3.19E-07	2.24E-05	2.47E-02	0.00E+00	8.11E-06	2.49E-02	8
Surfacing Equipment	D	120	U	P	NHH	NP	Orange	0.5643956	7.01E-01	2.04E+00	3.65E-05	2.41E-04	1.49E-04	2.62E-07	1.95E-05	2.23E-02	0.00E+00	3.29E-06	2.24E-02	7
Surfacing Equipment	D	175	U	P	NHH	NP	Orange	0.4232967	5.25E-01	2.05E+00	2.50E-05	2.15E-04	1.25E-04	2.53E-07	1.11E-05	2.25E-02	0.00E+00	2.25E-06	2.26E-02	7
Surfacing Equipment	D	250	U	N	NHH	NP	Orange	0.8465933	1.05E+00	6.42E+00	5.75E-05	6.30E-04	1.85E-04	7.97E-07	2.17E-05	7.08E-02	0.00E+00	5.19E-06	7.09E-02	22
Surfacing Equipment	D	500	U	N	NHH	NP	Orange	7.054943	8.76E+00	8.78E+01	7.13E-04	7.80E-03	2.98E-03	9.50E-06	2.72E-04	9.68E-01	0.00E+00	6.43E-05	9.69E-01	305
Surfacing Equipment	D	750	U	N	NHH	NP	Orange	2.141564	2.66E+00	4.18E+01	3.45E-04	3.80E-03	1.42E-03	4.63E-06	1.31E-04	4.61E-01	0.00E+00	3.12E-05	4.62E-01	145
Signal Boards	D	15	U	P	NHH	NP	Orange	397.1934	8.17E+02	2.30E+02	2.93E-03	1.84E-02	1.54E-02	3.92E-05	7.12E-04	2.52E+00	0.00E+00	2.64E-04	2.52E+00	794
Signal Boards	D	50	U	P	NHH	NP	Orange	1.975384	2.90E+00	4.86E+00	1.84E-04	5.16E-04	5.20E-04	6.77E-07	4.69E-05	5.24E-02	0.00E+00	1.66E-05	5.27E-02	17
Signal Boards	D	120	U	P	NHH	NP	Orange	32.31165	4.74E+01	1.74E+02	3.05E-03	1.98E-02	1.25E-02	2.23E-05	1.67E-03	1.90E+00	0.00E+00	2.75E-04	1.91E+00	600
Signal Boards	D	175	U	P	NHH	NP	Orange	20.03604	2.94E+01	2.07E+02	2.44E-03	2.10E-02	1.23E-02	2.55E-05	1.10E-03	2.27E+00	0.00E+00	2.21E-04	2.27E+00	716
Signal Boards	D	250	U	N	NHH	NP	Orange	4.232967	6.21E+00	7.18E+01	5.42E-04	6.71E-03	1.71E-03	8.91E-06	1.98E-04	7.92E-01	0.00E+00	4.89E-05	7.93E-01	250
Trenchers	D	15	U	P	NHH	NP	Orange	10.58242	1.79E+01	6.93E+00	8.83E-05	5.53E-04	4.63E-04	1.18E-06	2.14E-05	7.58E-02	0.00E+00	7.96E-06	7.60E-02	24
Trenchers	D	25	U	P	NHH	NP	Orange	11.14681	1.89E+01	2.83E+01	3.75E-04	2.38E-03	1.28E-03	3.94E-06	9.49E-05	3.11E-01	0.00E+00	3.39E-05	3.11E-01	98
Trenchers	D	50	U	P	NHH	NP	Orange	424.2843	7.35E+02	1.13E+03	6.09E-02	1.30E-01	1.53E-01	1.56E-04	1.37E-02	1.21E+01	0.00E+00	5.49E-03	1.22E+01	3,841
Trenchers	D	120	U	P	NHH	NP	Orange	574.978	9.96E+02	2.97E+03	6.75E-02	4.11E-01	2.36E-01	3.79E-04	3.53E-02	3.23E+01	0.00E+00	6.09E-03	3.24E+01	10,206
Trenchers	D	175	U	P	NHH	NP	Orange	62.93011	1.09E+02	7.17E+02	1.12E-02	8.89E-02	4.73E-02	8.82E-05	4.91E-03	7.84E+00	0.00E+00	1.01E-03	7.86E+00	2,474
Trenchers	D	250	U	N	NHH	NP	Orange	5.643954	9.78E+00	9.90E+01	1.21E-03	1.17E-02	3.62E-03	1.23E-05	4.64E-04	1.09E+00	0.00E+00	1.09E-04	1.09E+00	343
Trenchers	D	500	U	N	NHH	NP	Orange	7.196044	1.25E+01	1.77E+02	1.95E-03	1.88E-02	8.70E-03	1.90E-05	7.40E-04	1.94E+00	0.00E+00	1.76E-04	1.94E+00	611
Trenchers	D	750	U	N	NHH	NP	Orange	0.4283126	7.42E-01	1.98E+01	2.21E-04	2.15E-03	9.77E-04	2.19E-06	8.38E-05	2.18E-01	0.00E+00	1.99E-05	2.18E-01	69
Bore/Drill Rigs	D	15	U	P	NHH	P	Orange	1.410989	3.14E+00	1.48E+00	1.89E-05	1.18E-04	9.90E-05	2.52E-07	4.56E-06	1.62E-02	0.00E+00	1.70E-06	1.63E-02	5
Bore/Drill Rigs	D	25	U	P	NHH	P	Orange	4.232966	9.41E+00	6.85E+00	9.12E-05	5.80E-04	3.10E-04	9.54E-07	2.52E-05	7.52E-02	0.00E+00	8.23E-06	7.54E-02	24
Bore/Drill Rigs	D	50	U	P	NHH	P	Orange	18.48396	4.27E+01	6.06E+01	7.48E-04	5.91E-03	4.98E-03	8.56E-06	3.19E-04	6.62E-01	0.00E+00	6.75E-05	6.64E-01	209

Construction

										Tons/Day										MTons/Year
Equipment	Fuel	MaxHP	C/R	Pre	Hand	Port	County	Population	Activity	Consumption	ROG Exhaust	NOX Exhaust	CO Exhaust	SO2 Exhaust	PM Exhaust	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e	CO2e
Bore/Drill Rigs	D	120	U	P	NHH	P	Orange	56.72176	1.31E+02	4.60E+02	3.36E-03	3.29E-02	3.09E-02	5.92E-05	2.15E-03	5.05E+00	0.00E+00	3.03E-04	5.06E+00	1,592
Bore/Drill Rigs	D	175	U	P	NHH	P	Orange	13.1222	3.03E+01	1.95E+02	1.14E-03	1.13E-02	1.14E-02	2.40E-05	5.55E-04	2.14E+00	0.00E+00	1.03E-04	2.14E+00	673
Bore/Drill Rigs	D	250	U	N	NHH	P	Orange	11.28791	2.61E+01	2.22E+02	1.09E-03	1.14E-02	4.48E-03	2.76E-05	3.49E-04	2.45E+00	0.00E+00	9.84E-05	2.45E+00	772
Bore/Drill Rigs	D	500	U	N	NHH	P	Orange	25.1156	5.80E+01	8.17E+02	3.92E-03	3.81E-02	1.60E-02	8.86E-05	1.26E-03	9.03E+00	0.00E+00	3.54E-04	9.03E+00	2,844
Bore/Drill Rigs	D	750	U	N	NHH	P	Orange	6.638848	1.53E+01	4.26E+02	2.06E-03	2.02E-02	8.37E-03	4.74E-05	6.64E-04	4.71E+00	0.00E+00	1.86E-04	4.72E+00	1,485
Bore/Drill Rigs	D	1000	U	N	NHH	P	Orange	11.13613	2.57E+01	1.08E+03	5.77E-03	8.50E-02	2.15E-02	1.20E-04	2.18E-03	1.19E+01	0.00E+00	5.21E-04	1.19E+01	3,757
Excavators	D	25	U	P	NHH	NP	Orange	5.220659	2.00E+01	1.49E+01	1.98E-04	1.25E-03	6.76E-04	2.08E-06	4.78E-05	1.64E-01	0.00E+00	1.79E-05	1.65E-01	52
Excavators	D	50	U	P	NHH	NP	Orange	196.5508	7.67E+02	8.92E+02	3.51E-02	9.84E-02	1.13E-01	1.24E-04	9.08E-03	9.59E+00	0.00E+00	3.16E-03	9.65E+00	3,039
Excavators	D	120	U	P	NHH	NP	Orange	533.7771	2.08E+03	7.02E+03	1.23E-01	7.61E-01	5.43E-01	8.99E-04	6.86E-02	7.66E+01	0.00E+00	1.11E-02	7.69E+01	24,193
Excavators	D	175	U	P	NHH	NP	Orange	1029.74	4.02E+03	2.06E+04	2.59E-01	1.93E+00	1.34E+00	2.54E-03	1.14E-01	2.25E+02	0.00E+00	2.34E-02	2.26E+02	71,078
Excavators	D	250	U	N	NHH	NP	Orange	418.7815	1.63E+03	1.17E+04	1.06E-01	1.02E+00	2.96E-01	1.46E-03	3.39E-02	1.30E+02	0.00E+00	9.59E-03	1.30E+02	40,849
Excavators	D	500	U	N	NHH	NP	Orange	302.0927	1.18E+03	1.25E+04	1.06E-01	9.50E-01	3.23E-01	1.35E-03	3.38E-02	1.38E+02	0.00E+00	9.59E-03	1.38E+02	43,400
Excavators	D	750	U	N	NHH	NP	Orange	3.355116	1.31E+01	2.30E+02	1.97E-03	1.80E-02	5.95E-03	2.55E-05	6.33E-04	2.53E+00	0.00E+00	1.78E-04	2.54E+00	799
Concrete/Industrial Saws	D	25	U	P	NHH	NP	Orange	0.5643955	9.16E-01	6.87E-01	9.11E-06	5.77E-05	3.11E-05	9.57E-08	2.30E-06	7.54E-03	0.00E+00	8.22E-07	7.56E-03	2
Concrete/Industrial Saws	D	50	U	P	NHH	NP	Orange	4.938461	7.85E+00	1.10E+01	4.11E-04	1.17E-03	1.18E-03	1.53E-06	1.05E-04	1.19E-01	0.00E+00	3.71E-05	1.19E-01	38
Concrete/Industrial Saws	D	120	U	P	NHH	NP	Orange	8.607033	1.37E+01	4.64E+01	7.91E-04	5.22E-03	3.34E-03	5.95E-06	4.38E-04	5.07E-01	0.00E+00	7.14E-05	5.09E-01	160
Concrete/Industrial Saws	D	175	U	P	NHH	NP	Orange	0.2821978	4.49E-01	3.28E+00	3.79E-05	3.26E-04	1.96E-04	4.04E-07	1.72E-05	3.59E-02	0.00E+00	3.42E-06	3.60E-02	11
Cement and Mortar Mixers	D	15	U	P	NHH	NP	Orange	72.10153	5.93E+01	1.71E+01	2.22E-04	1.41E-03	1.14E-03	2.91E-06	6.91E-05	1.87E-01	0.00E+00	2.01E-05	1.88E-01	59
Cement and Mortar Mixers	D	25	U	P	NHH	NP	Orange	6.490549	5.34E+00	4.28E+00	7.82E-05	4.13E-04	2.27E-04	5.94E-07	2.42E-05	4.68E-02	0.00E+00	7.06E-06	4.70E-02	15
Cranes	D	50	U	P	NHH	P	Orange	4.797362	1.68E+01	1.83E+01	9.29E-04	2.09E-03	2.51E-03	2.52E-06	2.17E-04	1.95E-01	0.00E+00	8.38E-05	1.97E-01	62
Cranes	D	120	U	P	NHH	P	Orange	52.62989	1.85E+02	4.25E+02	9.08E-03	5.40E-02	3.37E-02	5.43E-05	4.93E-03	4.63E+00	0.00E+00	8.20E-04	4.65E+00	1,463
Cranes	D	175	U	P	NHH	P	Orange	52.62989	1.85E+02	6.78E+02	1.01E-02	7.63E-02	4.47E-02	8.35E-05	4.44E-03	7.42E+00	0.00E+00	9.09E-04	7.44E+00	2,341
Cranes	D	250	U	N	NHH	P	Orange	102.0145	3.58E+02	1.82E+03	1.97E-02	1.92E-01	5.55E-02	2.26E-04	6.95E-03	2.01E+01	0.00E+00	1.78E-03	2.01E+01	6,331
Cranes	D	500	U	N	NHH	P	Orange	37.39122	1.31E+02	1.07E+03	1.07E-02	1.01E-01	3.73E-02	1.16E-04	3.74E-03	1.18E+01	0.00E+00	9.67E-04	1.18E+01	3,726
Cranes	D	750	U	N	NHH	P	Orange	13.92016	4.89E+01	6.72E+02	6.76E-03	6.46E-02	2.34E-02	7.44E-05	2.38E-03	7.40E+00	0.00E+00	6.10E-04	7.41E+00	2,334
Cranes	D	9999	U	N	NHH	P	Orange	17.48944	6.14E+01	2.71E+03	3.04E-02	3.36E-01	1.10E-01	2.99E-04	1.04E-02	2.98E+01	0.00E+00	2.74E-03	2.98E+01	9,384
Graders	D	50	U	P	NHH	NP	Orange	1.975385	5.15E+00	6.62E+00	3.05E-04	7.42E-04	8.67E-04	9.16E-07	7.37E-05	7.09E-02	0.00E+00	2.75E-05	7.15E-02	22
Graders	D	120	U	P	NHH	NP	Orange	131.7864	3.44E+02	1.18E+03	2.32E-02	1.41E-01	9.20E-02	1.51E-04	1.27E-02	1.29E+01	0.00E+00	2.09E-03	1.29E+01	4,066
Graders	D	175	U	P	NHH	NP	Orange	450.2465	1.17E+03	6.64E+03	9.14E-02	7.01E-01	4.32E-01	8.18E-04	4.04E-02	7.27E+01	0.00E+00	8.25E-03	7.29E+01	22,941
Graders	D	250	U	N	NHH	NP	Orange	279.3758	7.29E+02	5.69E+03	5.73E-02	5.59E-01	1.64E-01	7.05E-04	1.99E-02	6.27E+01	0.00E+00	5.17E-03	6.28E+01	19,758
Graders	D	500	U	N	NHH	NP	Orange	7.901538	2.06E+01	2.14E+02	2.00E-03	1.87E-02	6.83E-03	2.32E-05	6.90E-04	2.36E+00	0.00E+00	1.81E-04	2.37E+00	745
Graders	D	750	U	N	NHH	NP	Orange	0.2141564	5.59E-01	1.23E+01	1.16E-04	1.10E-03	3.92E-04	1.36E-06	4.02E-05	1.36E-01	0.00E+00	1.04E-05	1.36E-01	43
Off-Highway Trucks	D	175	U	P	NHH	NP	Orange	9.171428	5.00E+01	2.86E+02	3.84E-03	2.77E-02	1.90E-02	3.52E-05	1.67E-03	3.13E+00	0.00E+00	3.47E-04	3.13E+00	987
Off-Highway Trucks	D	250	U	N	NHH	NP	Orange	67.72749	3.70E+02	2.79E+03	2.71E-02	2.50E-01	7.28E-02	3.46E-04	8.51E-03	3.07E+01	0.00E+00	2.45E-03	3.08E+01	9,696
Off-Highway Trucks	D	500	U	N	NHH	NP	Orange	95.38286	5.21E+02	6.42E+03	5.88E-02	5.06E-01	1.73E-01	6.95E-04	1.83E-02	7.08E+01	0.00E+00	5.31E-03	7.09E+01	22,326
Off-Highway Trucks	D	750	U	N	NHH	NP	Orange	44.90145	2.45E+02	4.90E+03	4.52E-02	3.99E-01	1.32E-01	5.44E-04	1.42E-02	5.41E+01	0.00E+00	4.08E-03	5.42E+01	17,048
Off-Highway Trucks	D	1000	U	N	NHH	NP	Orange	21.05871	1.15E+02	3.25E+03	3.32E-02	3.67E-01	1.02E-01	3.60E-04	1.11E-02	3.58E+01	0.00E+00	3.00E-03	3.59E+01	11,298
Crushing/Proc. Equipment	D	50	U	P	NHH	P	Orange	22.57582	5.91E+01	1.21E+02	5.70E-03	1.34E-02	1.54E-02	1.68E-05	1.37E-03	1.30E+00	0.00E+00	5.14E-04	1.31E+00	413
Crushing/Proc. Equipment	D	120	U	P	NHH	P	Orange	63.63559	1.67E+02	6.35E+02	1.27E-02	7.64E-02	4.85E-02	8.12E-05	7.10E-03	6.92E+00	0.00E+00	1.15E-03	6.95E+00	2,186
Crushing/Proc. Equipment	D	175	U	P	NHH	P	Orange	26.94989	7.06E+01	5.39E+02	7.38E-03	5.77E-02	3.40E-02	6.63E-05	3.34E-03	5.90E+00	0.00E+00	6.65E-04	5.91E+00	1,861
Crushing/Proc. Equipment	D	250	U	N	NHH	P	Orange	2.680879	7.02E+00	7.78E+01	6.85E-04	7.69E-03	1.96E-03	9.65E-06	2.39E-04	8.58E-01	0.00E+00	6.18E-05	8.59E-01	270
Crushing/Proc. Equipment	D	500	U	N	NHH	P	Orange	15.09758	3.95E+01	6.69E+02	5.40E-03	5.82E-02	1.77E-02	7.24E-05	1.92E-03	7.38E+00	0.00E+00	4.87E-04	7.39E+00	2,326
Crushing/Proc. Equipment	D	750	U	N	NHH	P	Orange	0.3569273	9.35E-01	2.49E+01	2.04E-04	2.26E-03	6.49E-04	2.76E-06	7.28E-05	2.75E-01	0.00E+00	1.84E-05	2.75E-01	87
Crushing/Proc. Equipment	D	9999	U	N	NHH	P	Orange	0.3569273	9.35E-01	5.55E+01	5.66E-04	6.66E-03	1.88E-03	6.14E-06	1.96E-04	6.11E-01	0.00E+00	5.10E-05	6.12E-01	193
Rough Terrain Forklifts	D	50	U	P	NHH	NP	Orange	15.66198	4.87E+01	7.67E+01	3.20E-03	8.40E-03	9.51E-03	1.06E-05	8.04E-04	8.23E-01	0.00E+00	2.89E-04	8.29E-01	261
Rough Terrain Forklifts	D	120	U	P	NHH	NP	Orange	750.0817	2.33E+03	6.66E+03	1.21E-01	7.49E-01	5.08E-01	8.53E-04	6.83E-02	7.27E+01	0.00E+00	1.09E-02	7.29E+01	22,959
Rough Terrain Forklifts	D	175	U	P	NHH	NP	Orange	96.08834	2.99E+02	1.70E+03	2.16E-02	1.67E-01	1.08E-01	2.10E-04	9.74E-03	1.86E+01	0.00E+00	1.95E-03	1.87E+01	5,877
Rough Terrain Forklifts	D	250	U	N	NHH	NP	Orange	5.361757	1.67E+01	1.29E+02	1.13E-03	1.17E-02	3.24E-03	1.60E-05	3.81E-04	1.42E+00	0.00E+00	1.02E-04	1.42E+00	448
Rough Terrain Forklifts	D	500	U	N	NHH	NP	Orange	3.527472	1.10E+01	1.27E+02	1.04E-03	1.02E-02	3.27E-03	1.38E-05	3.52E-04	1.40E+00	0.00E+00	9.36E-05	1.41E+00	443
Rubber Tired Loaders	D	25	U	P	NHH	NP	Orange	1.975384	5.18E+00	3.99E+00	5.30E-05	3.35E-04	1.81E-04	5.56E-07	1.34E-05	4.38E-02	0.00E+00	4.78E-06	4.39E-02	14
Rubber Tired Loaders	D	50	U	P	NHH	NP	Orange	38.37889	1.03E+02	1.49E+02	6.76E-03	1.66E-02	1.93E-02	2.06E-05	1.64E-03	1.60E+00	0.00E+00	6.10E-04	1.61E+00	507
Rubber Tired Loaders	D	120	U	P	NHH	NP	Orange	1043.426	2.79E+03	7.53E+03	1.46E-01	8.93E-01	5.84E-01	9.63E-04	8.04E-02	8.21E+01	0.00E+00	1.32E-02	8.24E+01	25,936
Rubber Tired Loaders	D	175	U	P	NHH	NP	Orange	588.1002	1.57E+03	7.63E+03	1.03E-01	7.97E-01	4.94E-01	9.40E-04	4.59E-02	8.35E+01	0.00E+00	9.32E-03	8.37E+01	26,353
Rubber Tired Loaders	D	250	U	N	NHH	NP	Orange	584.855	1.56E+03	1.06E+04	1.04E-01	1.03E+00	3.00E-01	1.31E-03	3.61E-02	1.16E+02	0.00E+00	9.38E-03	1.17E+02	36,700
Rubber Tired Loaders	D	500	U	N	NHH	NP	Orange	243.3956	6.51E+02	6.99E+03	6.38E-02	6.04E-01	2.19E-01	7.56E-04	2.20E-02	7.71E+01	0.00E+00	5.75E-03	7.72E+01	24,295
Rubber Tired Loaders	D	750	U	N	NHH	NP	Orange	8.637643	2.31E+01	5.08E+02	4.67E-03	4.51E-02	1.59E-02	5.63E-05	1.62E-03	5.60E+00	0.00E+00	4.21E-04	5.61E+00	1,766
Rubber Tired Loaders	D	1000	U	N	NHH	NP	Orange	0.928011	2.48E+00	6.68E+01	6.79E-04	7.84E-03	2.42E-03	7.39E-06	2.36E-04	7.35E-01	0.00E+00	6.12E-05	7.37E-01	232
Rubber Tired Dozers	D	175	U	P	NHH	NP	Orange	1.410989	6.31E+00	3.74E+01	6.97E-04	5.14E-03	2.69E-03	4.59E-06	2.98E-04	4.08E-01	0.00E+00	6.29E-05	4.09E-01	129
Rubber Tired Dozers	D	250	U	N	NHH	NP	Orange	34.56923	1.55E+02	1.29E+03	1.96E-02	1.70E-01	5.49E-02	1.59E-04	7.27E-03	1.42E+01	0.00E+00	1.77E-03	1.42E+01	4,471
Rubber Tired Dozers	D	500	U	N	NHH	NP	Orange	53.19429	2.38E+02	2.87E+03	3.97E-02	3.42E-01	1.80E-01	3.09E-04	1.44E-02	3.15E+01	0.00E+00	3.58E-03	3.15E+01	9,929
Rubber Tired Dozers	D	750	U	N	NHH	NP	Orange	9.494269	4.24E+01	7.72E+02	1.07E-02	9.35E-02	4.85E-02	8.50E-05	3.89E-03	8.46E+00	0.00E+00	9.65E-04	8.48E+00	2,668
Rubber Tired Dozers	D	1000	U	N	NHH	NP	Orange	0.6424689	2.87E+00	7.76E+01	1.12E-03	1.12E-02	5.26E-03	8.53E-06	3.91E-04	8.48E-01	0.00E+00	1.01E-04	8.51E-01	268
Tractors/Loaders/Backhoes	D	25	U	P	NHH	NP	Orange	39.78989	1.03E+02	7.42E+01	1.02E-03	6.42E-03	3.40E-03	1.03E-05	3.14E-04	8.14E-01	0.00E+00	9.21E-05	8.16E-01	257
Tractors/Loaders/Backhoes	D	50	U	P	NHH	NP	Orange	237.7516	6.31E+02	8.88E+02	3.18E-02	9.55E-02	1.04E-01	1.24E-04	8.42E-03	9.56E+00	0.00E+00	2.87E-03	9.62E+00	3,028
Tractors/Loaders/Backhoes	D	120	U	P	NHH	NP	Orange	3180.086	8.44E+03	2.00E+04	3.21E-01	2.07E+00	1.50E+00	2.56E-03	1.83E-01	2.18E+02	0.00E+00	2.90E-02	2.19E+02	68,807
Tractors/Loaders/Backhoes	D	175	U	P	NHH	NP	Orange	237.3283	6.30E+02	2.91E+03	3.34E-02	2.61E-01	1.85E-01	3.59E-04	1.51E-02	3.19E+01	0.00E+00	3.01E-03	3.19E+01	10,057
Tractors/Loaders/Backhoes	D	250	U	N	NHH	NP	Orange	76.75778	2.04E+02	1.58E+03	1.29E-02	1.31E-01	3.82E-02	1.97E-04	4.23E-03	1.75E+01	0.00E+00	1.16E-03	1.75E+01	5,506
Tractors/Loaders/Backhoes	D	500	U	N	NHH	NP	Orange	123.8848	3.29E+02	5.13E+03	3.92E-02	3.72E-01	1.27E-01	6.37E-04	1.29E-02	5.66E+01	0.00E+00	3.54E-03	5.67E+01	17,843
Tractors/Loaders/Backhoes	D	750	U	N	NHH	NP	Orange	43.18821	1.15E+02	2.68E+03	2.07E-02	2.01E-01	6.62E-02	3.33E-04	6.86E-03	2.96E+01	0.00E+00	1.86E-03	2.96E+01	9,331
Crawler Tractors	D	50	U	P	NHH	NP	Orange	1.975385	5.68E+00	6.63E+00	3.59E-04	7.70E-04	9.47E-04	9.13E-07	8.22E-05	7.06E-02	0.00E+00	3.24E-05	7.13E-02	22
Crawler Tractors	D	120	U	P	NHH	NP	Orange	1120.748	3.22E+03	9.74E+03	2.22E-01	1.31E+00	7.90E-01	1.24E-03	1.18E-01	1.06E+02	0.00E+00	2.00E-02	1.06E+02	33,495
Crawler Tractors	D	175	U	P	NHH	NP	Orange	379.2738	1.09E+03	6.04E+03	9.60E-02	7.23E-01	4.08E-01	7.43E-04	4.18E-02	6.60E+01	0.00E+00	8.66E-03	6.62E+01	20,848
Crawler Tractors	D	250	U	N	NHH	NP	Orange	325.9385	9.38E+02	7.07E+03	8.68E-02	7.99E-01	2.44E-01	8.75E-04	3.12E-02	7.78E+01	0.00E+00	7.83E-03	7.80E+01	24,545
Crawler Tractors	D	500	U	N	NHH	NP	Orange	223.3596	6.42E+02	7.57E+03	8.53E-02	7.68E-01	3.27E-01	8.17E-04	3.02E-02	8.32E+01	0.00E+00	7.70E-03	8.34E+01	26,242
Crawler Tractors	D	750	U	N	NHH	NP	Orange	5.710835	1.64E+01	3.47E+02	3.93E-03	3.59E-02	1.50E-02	3.83E-05	1.40E-03	3.81E+00	0.00E+00	3.54E-04	3.82E+00	1,203
Crawler Tractors	D	1000	U	N	NHH	NP	Orange	5.710835	1.64E+01	4.91E+02	5.93E-03	6.36E-02	2.38E-02	5.42E-05	2.05E-03	5.40E+00	0.00E+00	5.35E-04	5.41E+00	1,702
Skid Steer Loaders	D	25	U	P	NHH	NP	Orange	270.9099	6.20E+02	3.90E+02	6.53E-03	3.68E-02	1.97E-02	5.42E-05	2.07E-03	4.27E+00	0.00E+00	5.89E-04	4.28E+00	1,348
Skid Steer Loaders	D	50	U	P	NHH	NP	Orange	2457.237	5.73E+03	6.73E+03	1.71E-01	6.87E-01	6.68E-01	9.44E-04	5.17E-02	7.30E+01	0.00E+00	1.54E-02	7.33E+01	23,082
Skid Steer Loaders	D	120	U	P	NHH	NP	Orange	1287.527	3.00E+03	5.86E+03	7.24E-02	5.31E-01	4.15E-01	7.52E-04	4.30E-02	6.41E+01	0.00E+00	6.54E-03	6.42E+01	20,220
Off-Highway Tractors	D	120	U	P	NHH	NP	Orange	0.1410989	4.33E-01	1.86E+00	4.81E-05	2.80E-04	1.57E-04	2.38E-07	2.47E-05	2.03E-02	0.00E+00	4.34E-06	2.03E-02	6
Off-Highway Tractors	D	175	U	P	NHH	NP	Orange	172.5639	5.29E+02	3.16E+03	5.65E-02	4.25E-01	2.22E-01	3.88E-04	2.44E-02	3.45E+01	0.00E+00	5.10E-03	3.46E+01	10,883
Off-Highway Tractors	D	250	U	N	NHH	NP	Orange	163.1104	5.00E+02	2.97E+03	4.29E-02	3.82E-01	1.22E-01	3.67E-04	1.61E-02	3.26E+01	0.00E+00	3.87E-03	3.27E+01	10,280
Off-Highway Tractors	D	750	U	N	NHH	NP	Orange	35.83549	1.10E+02	2.85E+03	3.74E-02	3.37E-01	1.70E-01	3.13E-04	1.38E-02	3.12E+01	0.00E+00	3.38E-03	3.12E+01	9,837
Off-Highway Tractors	D	1000	U	N	NHH	NP	Orange	3.78343	1.16E+01	4.31E+02	5.93E-03	6.08E-02	2.79E-02	4.74E-05	2.10E-03	4.71E+00	0.00E+00	5.35E-04	4.72E+00	1,487
Dumpers/Tenders	D	25	U	P	NHH	NP	Orange	3.386374	6.15E+00	2.13E+00	3.06E-05	1.89E-04	9.95E-05	2.97E-07	9.59E-06	2.34E-02	0.00E+00	2.76E-06	2.35E-02	7
Other Construction Equipment	D	15	U	P	NHH	NP	Orange	46.70373	8.84E+01	4.08E+01	5.19E-04	3.25E-03	2.72E-03	6.94E-06	1.25E-04	4.46E-01	0.00E+00	4.69E-05	4.47E-01	141
Other Construction Equipment	D	25	U	P	NHH	NP	Orange	7.901538	1.50E+01	8.99E+00	1.20E-04	7.61E-04	4.06E-04	1.25E-06	3.31E-05	9.87E-02	0.00E+00	1.08E-05	9.89E-02	31
Other Construction Equipment	D	50	U	P	NHH	NP	Orange	12.1345	2.34E+01	3.03E+01	9.86E-04	3.16E-03	3.20E-03	4.23E-06	2.67E-04	3.27E-01	0.00E+00	8.90E-05	3.29E-01	104
Other Construction Equipment	D	120	U	P	NHH	NP	Orange	20.03604	3.86E+01	1.43E+02	2.14E-03	1.46E-02	1.03E-02	1.83E-05	1.22E-03	1.56E+00	0.00E+00	1.93E-04	1.56E+00	492
Other Construction Equipment	D	175	U	P	NHH	NP	Orange	27.65538	5.33E+01	2.59E+02	2.69E-03	2.29E-02	1.57E-02	3.19E-05	1.25E-03	2.84E+00	0.00E+00	2.43E-04	2.84E+00	894
Other Construction Equipment	D	500	U	N	NHH	NP	Orange	64.2	1.24E+02	1.42E+03	9.38E-03	1.03E-01	3.35E-02	1.54E-04	3.37E-03	1.57E+01	0.00E+00	8.47E-04	1.57E+01	4,951
								33,105	65,083	263,123	3.872	26.607	23.212	0.032	1.650	2,863.407	0.017	0.340	2,876	905,260
								Population	Activity	Consumption	lbs/day					Tons/Day				MTons/Year
								1,211	2,381	9,626	283	1,947	1,698	2	121	105	0	0	105	33,118

As a percent of Total Building Permits issued. Orange County 1,864 Anaheim 68 Percent 3.66%

SOURCE: U.S. Census Bureau. http://censtats.census.gov/cgi-bin/bldgprmt/bldgdisp.pl

Annual GHG emissions (MTons/Year) multiplied by 347 days/year to account for reduced/limited construction activity on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology for transportation within the Climate Change Scoping Plan Measure Documentation Supplement.

Buildings Estimates with Imputation

	OC	ANA	
2012	2,600	128	4.9%
2011	2,035	48	2.4%
2010	1,801	63	3.5%
2009	1,435	56	3.9%
2008	1,450	46	3.2%
avg	1,864	68	3.6%

Lawn & Garden										Tons/Day											MTons/Year
Equipment	Fuel	MaxHP	C/R	Pre	Hand	Port	County	Population	Activity	Consumption	ROG Exhaust	NOX Exhaust	CO Exhaust	SO2 Exhaust	PM Exhaust	CO2 Exhaust	N2O Exhaust	CH4 Exhaust	CO2e		CO2e
Lawn Mowers	G2	15	C	N	NHH	NP	Orange	5.96E+03	3.73E+03	4.22E+02	4.77E-02	1.24E-02	8.57E-01	1.05E-04	8.02E-03	2.54E+00	3.30E-03	2.97E-03	3.63E+00		1,201
Lawn Mowers	G2	15	R	N	NHH	NP	Orange	4.47E+04	1.90E+03	2.77E+02	6.90E-02	7.04E-03	7.12E-01	5.33E-05	4.79E-03	1.30E+00	1.69E-03	4.29E-03	1.91E+00		632
Chainsaws	G2	2	C	N	HH	NP	Orange	1.07E+04	8.46E+03	5.04E+02	4.22E-01	6.51E-03	7.63E-01	8.49E-05	1.20E-03	2.06E+00	3.42E-03	2.62E-02	3.67E+00		1,216
Chainsaws	G2	2	R	N	HH	NP	Orange	1.20E+05	1.61E+03	9.38E+01	5.32E-02	1.28E-03	1.97E-01	1.62E-05	1.00E-03	3.93E-01	6.57E-04	3.31E-03	6.66E-01		220
Chainsaws	G2	15	C	N	HH	NP	Orange	7.52E+03	5.96E+03	8.59E+02	7.18E-01	1.11E-02	1.30E+00	1.45E-04	2.04E-03	3.51E+00	3.86E-03	4.46E-02	5.64E+00		1,869
Chainsaws	G2	15	R	N	HH	NP	Orange	8.46E+04	1.13E+03	1.52E+02	8.11E-02	2.13E-03	3.11E-01	2.75E-05	1.90E-03	6.69E-01	7.29E-04	5.04E-03	1.00E+00		331
Chainsaws Preempt	G2	15	C	P	HH	NP	Orange	9.36E+03	7.41E+03	1.07E+03	8.94E-01	1.38E-02	1.62E+00	1.80E-04	2.54E-03	4.37E+00	4.80E-03	5.56E-02	7.02E+00		2,326
Chainsaws Preempt	G2	15	R	P	HH	NP	Orange	1.05E+05	1.41E+03	2.14E+02	1.32E-01	2.18E-03	4.64E-01	3.43E-05	1.25E-03	8.33E-01	8.22E-04	8.23E-03	1.26E+00		417
Trimmers/Edgers/Brush Cutters	G2	2	C	N	HH	NP	Orange	3.48E+04	1.16E+04	5.13E+02	2.77E-01	7.78E-03	9.12E-01	1.02E-04	1.43E-03	2.46E+00	4.35E-03	1.72E-02	4.18E+00		1,383
Trimmers/Edgers/Brush Cutters	G2	2	R	N	HH	NP	Orange	3.88E+05	2.28E+04	9.72E+02	4.41E-01	1.59E-02	1.80E+00	2.00E-04	2.89E-03	4.87E+00	8.74E-03	2.74E-02	8.15E+00		2,699
Leaf Blowers/Vacuums	G2	2	C	N	HH	P	Orange	5.20E+04	2.80E+04	1.49E+03	1.03E+00	2.09E-02	2.45E+00	2.72E-04	3.85E-03	6.62E+00	1.11E-02	6.40E-02	1.14E+01		3,777
Leaf Blowers/Vacuums	G2	2	R	N	HH	P	Orange	1.34E+05	1.76E+03	9.95E+01	5.63E-02	1.36E-03	2.09E-01	1.72E-05	1.07E-03	4.17E-01	7.06E-04	3.50E-03	7.09E-01		235
Shredders	G2	15	C	P	NHH	NP	Orange	2.63E+02	9.76E+01	4.28E+01	2.41E-03	1.83E-03	1.16E-01	9.13E-06	1.86E-03	2.22E-01	2.16E-04	1.50E-04	2.92E-01		97
Shredders	G2	15	R	P	NHH	NP	Orange	9.35E+03	2.31E+01	1.18E+01	3.12E-03	3.26E-04	3.16E-02	2.16E-06	4.39E-04	5.24E-02	4.28E-05	1.94E-04	6.97E-02		23
Commercial Turf Equipment	G2	15	C	N	NHH	NP	Orange	1.39E+02	3.05E+02	1.25E+02	5.77E-03	4.28E-03	3.40E-01	2.68E-05	3.03E-04	6.50E-01	5.78E-04	3.59E-04	8.37E-01		277
Commercial Turf Equipment	G2	25	C	N	NHH	NP	Orange	6.87E+01	1.51E+02	1.34E+02	6.00E-03	4.47E-03	3.76E-01	2.79E-05	3.15E-04	6.77E-01	4.26E-04	3.73E-04	8.17E-01		271
Other Lawn & Garden Equipment	G2	2	C	N	HH	NP	Orange	5.88E+01	1.11E+01	6.17E-01	3.03E-04	9.58E-06	1.12E-03	1.25E-07	1.77E-06	3.04E-03	4.76E-06	1.89E-05	4.91E-03		2
Other Lawn & Garden Equipment	G2	2	R	N	HH	NP	Orange	1.80E+03	2.12E+01	1.39E+00	7.80E-04	1.90E-05	2.93E-03	2.40E-07	1.49E-05	5.83E-03	9.22E-06	4.84E-05	9.71E-03		3
Other Lawn & Garden Equipment	G2	15	C	N	HH	NP	Orange	2.56E+01	4.81E+00	1.34E+00	6.60E-04	2.09E-05	2.44E-03	2.72E-07	3.84E-06	6.60E-03	4.89E-06	4.10E-05	8.98E-03		3
Other Lawn & Garden Equipment	G2	15	R	N	HH	NP	Orange	7.85E+02	9.25E+00	2.88E+00	1.52E-03	4.05E-05	5.90E-03	5.23E-07	3.61E-05	1.27E-02	9.33E-06	9.43E-05	1.76E-02		6
Lawn Mowers	G4	5	C	N	NHH	NP	Orange	3.53E+04	2.21E+04	2.60E+03	3.06E-01	7.68E-02	5.63E+00	5.20E-04	4.75E-02	1.51E+01	1.95E-02	1.76E-02	2.15E+01		7,113
Lawn Mowers	G4	5	R	N	NHH	NP	Orange	5.59E+05	2.37E+04	3.29E+03	3.48E-01	9.27E-02	9.07E+00	5.59E-04	3.87E-02	1.62E+01	2.15E-02	2.00E-02	2.33E+01		7,707
Tillers	G4	5	C	N	NHH	NP	Orange	3.66E+03	5.61E+02	7.85E+01	6.98E-03	1.77E-03	1.95E-01	1.47E-05	1.12E-03	4.25E-01	4.65E-04	4.01E-04	5.77E-01		191
Tillers	G4	5	R	N	NHH	NP	Orange	1.42E+04	7.01E+02	1.09E+02	1.27E-02	3.09E-03	3.01E-01	1.83E-05	1.32E-03	5.31E-01	6.78E-04	7.28E-04	7.57E-01		251
Trimmers/Edgers/Brush Cutters	G4	5	C	P	NHH	NP	Orange	6.44E+03	2.39E+03	7.26E+01	9.40E-03	4.16E-03	1.64E-01	1.41E-05	1.33E-04	4.08E-01	1.46E-03	5.39E-04	8.72E-01		289
Trimmers/Edgers/Brush Cutters	G4	5	R	P	NHH	NP	Orange	3.00E+04	1.77E+03	6.41E+01	9.78E-03	2.53E-03	1.78E-01	1.04E-05	5.67E-04	3.01E-01	9.69E-04	5.61E-04	6.13E-01		203
Leaf Blowers/Vacuums	G4	5	C	N	NHH	P	Orange	1.64E+03	2.79E+02	1.82E+01	1.34E-03	3.28E-04	4.83E-02	3.29E-06	2.23E-04	9.52E-02	1.38E-04	7.71E-05	1.39E-01		46
Leaf Blowers/Vacuums	G4	5	R	N	NHH	P	Orange	1.41E+03	1.85E+01	1.42E+00	1.41E-04	3.14E-05	4.33E-03	2.18E-07	1.26E-05	6.32E-03	1.09E-05	8.07E-06	9.86E-03		3
Rear Engine Riding Mowers	G4	15	C	N	NHH	NP	Orange	1.93E+04	1.44E+04	4.69E+03	2.17E-01	1.54E-01	1.35E+01	6.63E-04	1.08E-02	2.32E+01	2.31E-02	1.25E-02	3.07E+01		10,161
Rear Engine Riding Mowers	G4	15	R	N	NHH	NP	Orange	1.69E+04	1.31E+03	4.33E+02	2.31E-02	1.47E-02	1.26E+00	6.04E-05	8.45E-04	2.12E+00	2.14E-03	1.32E-03	2.81E+00		930
Rear Engine Riding Mowers	G4	25	C	N	NHH	NP	Orange	8.83E+01	6.57E+01	4.17E+01	1.87E-03	1.35E-03	1.24E-01	5.09E-06	9.32E-05	2.01E-01	1.49E-04	1.07E-04	2.49E-01		83
Rear Engine Riding Mowers	G4	25	R	N	NHH	NP	Orange	7.62E+01	5.89E+00	3.78E+00	1.99E-04	1.16E-04	1.13E-02	4.56E-07	7.18E-06	1.80E-02	1.30E-05	1.14E-05	2.23E-02		7
Front Mowers	G4	15	C	N	NHH	NP	Orange	8.85E+02	6.58E+02	3.44E+02	1.59E-02	1.13E-02	9.88E-01	4.85E-05	7.89E-04	1.70E+00	1.36E-03	9.12E-04	2.14E+00		709
Front Mowers	G4	15	R	N	NHH	NP	Orange	2.86E+04	2.21E+03	1.17E+03	6.23E-02	3.97E-02	3.39E+00	1.63E-04	2.28E-03	5.72E+00	4.64E-03	3.57E-03	7.23E+00		2,394
Front Mowers	G4	25	C	N	NHH	NP	Orange	6.94E+02	5.16E+02	3.62E+02	1.62E-02	1.17E-02	1.07E+00	4.42E-05	8.09E-04	1.74E+00	1.24E-03	9.28E-04	2.15E+00		710
Front Mowers	G4	25	R	N	NHH	NP	Orange	2.24E+04	1.73E+03	1.23E+03	6.46E-02	3.77E-02	3.66E+00	1.48E-04	2.33E-03	5.85E+00	4.03E-03	3.70E-03	7.18E+00		2,378
Shredders	G4	5	C	P	NHH	NP	Orange	6.95E+02	2.59E+02	6.97E+01	9.02E-03	3.99E-03	1.57E-01	1.35E-05	1.28E-04	3.92E-01	5.05E-04	5.17E-04	5.59E-01		185
Shredders	G4	5	R	P	NHH	NP	Orange	2.59E+04	6.37E+01	2.20E+01	2.15E-03	6.19E-04	6.85E-02	3.33E-06	2.31E-04	9.66E-02	9.72E-05	1.23E-04	1.29E-01		43
Lawn & Garden Tractors	G4	15	C	N	NHH	NP	Orange	3.54E+03	1.25E+03	7.85E+02	3.05E-02	2.19E-02	2.26E+00	1.11E-04	1.53E-03	3.90E+00	2.61E-03	1.75E-03	4.75E+00		1,571
Lawn & Garden Tractors	G4	15	R	N	NHH	NP	Orange	2.30E+04	9.20E+02	5.85E+02	2.75E-02	1.85E-02	1.70E+00	8.20E-05	1.05E-03	2.87E+00	2.05E-03	1.58E-03	3.54E+00		1,174
Lawn & Garden Tractors	G4	25	C	N	NHH	NP	Orange	1.40E+03	4.92E+02	4.92E+02	1.89E-02	1.30E-02	1.46E+00	6.02E-05	9.32E-04	2.38E+00	1.28E-03	1.09E-03	2.79E+00		925
Lawn & Garden Tractors	G4	25	R	N	NHH	NP	Orange	9.07E+03	3.63E+02	3.67E+02	1.72E-02	1.04E-02	1.09E+00	4.44E-05	6.37E-04	1.75E+00	9.79E-04	9.87E-04	2.08E+00		688
Lawn & Garden Tractors	G4	50	U	N	NHH	NP	Orange	2.02E+01	5.76E+00	8.93E+00	1.91E-04	3.69E-04	6.90E-03	9.07E-07	5.71E-06	7.46E-02	2.24E-05	1.10E-05	8.17E-02		27
Wood Splitters	G4	5	C	N	NHH	NP	Orange	1.19E+03	4.19E+02	1.22E+02	1.28E-02	3.19E-03	2.81E-01	2.36E-05	2.01E-03	6.84E-01	5.59E-04	7.32E-04	8.73E-01		289
Wood Splitters	G4	5	R	N	NHH	NP	Orange	2.97E+04	8.96E+01	3.28E+01	2.68E-03	6.81E-04	1.02E-01	5.05E-06	2.61E-04	1.46E-01	1.17E-04	1.54E-04	1.86E-01		62
Chippers/Stump Grinders	G4	15	C	P	NHH	P	Orange	1.68E+01	5.80E+01	4.87E+01	3.82E-03	2.77E-03	1.40E-01	6.71E-06	1.97E-03	2.35E-01	2.06E-04	2.15E-04	3.04E-01		101
Chippers/Stump Grinders	G4	15	R	P	NHH	P	Orange	2.99E+01	1.35E+00	1.20E+00	9.21E-05	4.34E-05	3.64E-03	1.57E-07	4.09E-05	5.50E-03	3.90E-06	5.28E-06	6.82E-03		2
Chippers/Stump Grinders	G4	25	C	P	NHH	P	Orange	9.52E+01	3.29E+02	4.66E+02	3.75E-02	2.38E-02	1.38E+00	5.54E-05	1.83E-02	2.19E+00	1.46E-03	2.11E-03	2.68E+00		889
Chippers/Stump Grinders	G4	25	R	P	NHH	P	Orange	1.69E+02	7.66E+00	1.12E+01	8.17E-04	3.63E-04	3.47E-02	1.29E-06	3.79E-04	5.09E-02	2.72E-05	4.68E-05	6.03E-02		20
Commercial Turf Equipment	G4	15	C	N	NHH	NP	Orange	1.25E+03	2.75E+03	1.46E+03	8.39E-02	5.90E-02	4.20E+00	2.04E-04	4.00E-03	7.15E+00	6.38E-03	4.77E-03	9.23E+00		3,057
Commercial Turf Equipment	G4	25	C	N	NHH	NP	Orange	6.18E+02	1.35E+03	1.28E+03	6.98E-02	5.20E-02	3.79E+00	1.54E-04	3.40E-03	6.09E+00	4.29E-03	3.97E-03	7.50E+00		2,483
Commercial Turf Equipment	G4	50	U	N	NHH	NP	Orange	2.49E+02	5.00E+02	8.22E+02	2.57E-02	3.74E-02	1.14E+00	7.35E-05	4.63E-04	6.05E+00	2.17E-03	1.47E-03	6.75E+00		2,235
Commercial Turf Equipment	G4	120	U	N	NHH	NP	Orange	1.65E+00	3.31E+00	8.08E+00	3.59E-05	2.11E-04	1.93E-03	7.23E-07	5.80E-06	7.48E-02	1.37E-05	2.05E-06	7.91E-02		26
Other Lawn & Garden Equipment	G4	5	C	N	NHH	NP	Orange	1.10E+03	2.07E+02	4.20E+01	3.71E-03	9.15E-04	1.05E-01	7.85E-06	5.97E-04	2.27E-01	2.07E-04	2.13E-04	2.96E-01		98
Other Lawn & Garden Equipment	G4	5	R	N	NHH	NP	Orange	3.37E+04	3.97E+02	9.78E+01	9.48E-03	2.15E-03	3.00E-01	1.51E-05	8.58E-04	4.37E-01	4.32E-04	5.44E-04	5.82E-01		193
Other Lawn & Garden Equipment	G4	15	C	N	NHH	NP	Orange	4.89E+02	9.19E+01	4.06E+01	1.61E-03	1.15E-03	1.17E-01	5.75E-06	8.01E-05	2.02E-01	1.61E-04	9.22E-05	2.54E-01		84
Other Lawn & Garden Equipment	G4	15	R	N	NHH	NP	Orange	1.50E+04	1.77E+02	8.19E+01	4.29E-03	2.54E-03	2.46E-01	1.11E-05	1.34E-04	3.88E-01	3.31E-04	2.46E-04	4.96E-01		164
Other Lawn & Garden Equipment	G4	25	C	N	NHH	NP	Orange	1.03E+01	1.94E+00	1.88E+00	7.34E-05	5.04E-05	5.59E-03	2.30E-07	3.60E-06	9.06E-03	5.00E-06	4.21E-06	1.07E-02		4
Other Lawn & Garden Equipment	G4	25	R	N	NHH	NP	Orange	3.19E+02	3.75E+00	3.78E+00	1.93E-04	1.03E-04	1.16E-02	4.44E-07	6.04E-06	1.75E-02	9.93E-06	1.11E-05	2.08E-02		7
Other Lawn & Garden Equipment	G4	50	U	N	NHH	NP	Orange	7.49E-01	1.25E-01	2.69E-01	6.18E-06	1.23E-05	2.02E-04	2.74E-08	1.73E-07	2.26E-03	6.11E-07	3.54E-07	2.45E-03		1
Other Lawn & Garden Equipment	G4	120	U	N	NHH	NP	Orange	1.80E+00	3.00E-01	1.67E+00	2.62E-05	1.16E-04	5.36E-04	1.46E-07	1.17E-06	1.52E-02	3.01E-06	1.50E-06	1.61E-02		5
Leaf Blowers/Vacuums	D	15	U	N	NHH	P	Orange	1.20E+00	3.94E-01	5.40E-02	6.24E-07	4.39E-06	3.61E-06	9.21E-09	2.03E-07	5.92E-04	0.00E+00	5.63E-08	5.93E-04		0
Leaf Blowers/Vacuums	D	120	U	N	NHH	P	Orange	1.05E+00	3.44E-01	7.65E-01	1.05E-05	7.92E-05	4.99E-05	9.82E-08	5.51E-06	8.37E-03	0.00E+00	9.47E-07	8.39E-03		3
Leaf Blowers/Vacuums	D	250	U	N	NHH	P	Orange	2.99E-01	9.84E-02	4.47E-01	2.65E-06	3.80E-05	9.97E-06	5.55E-08	1.01E-06	4.93E-03	0.00E+00	2.39E-07	4.94E-03		2
Lawn & Garden Tractors	D	15	U	N	NHH	NP	Orange	2.89E+03	4.31E+03	1.83E+03	2.14E-02	1.50E-01	1.22E-01	3.11E-04	7.42E-03	2.00E+01	0.00E+00	1.93E-03	2.00E+01		6,634
Lawn & Garden Tractors	D	25	U	N	NHH	NP	Orange	2.26E+03	3.37E+03	2.19E+03	2.93E-02	1.87E-01	9.93E-02	3.05E-04	8.69E-03	2.41E+01	0.00E+00	2.65E-03	2.41E+01		7,988
Chippers/Stump Grinders	D	25	U	P	NHH	P	Orange	1.35E+00	1.72E+00	1.57E+00	2.09E-05	1.32E-04	7.11E-05	2.19E-07	5.29E-06	1.73E-02	0.00E+00	1.88E-06	1.73E-02		6
Chippers/Stump Grinders	D	120	U	P	NHH	P	Orange	3.71E+01	4.73E+01	1.64E+02	2.75E-03	1.84E-02	1.16E-02	2.11E-05	1.50E-03	1.80E+00	0.00E+00	2.49E-04	1.80E+00		596
Chippers/Stump Grinders	D	175	U	P	NHH	P	Orange	2.55E+00	3.24E+00	1.95E+01	2.21E-04	1.94E-03	1.14E-03	2.40E-06	9.94E-05	2.13E-01	0.00E+00	1.99E-05	2.14E-01		71
Chippers/Stump Grinders	D	250	U	N	NHH	P	Orange	5.99E-01	7.63E-01	7.68E+00	5.79E-05	7.10E-04	1.88E-04	9.54E-07	2.16E-05	8.48E-02	0.00E+00	5.23E-06	8.49E-02		28
Chippers/Stump Grinders	D	500	U	N	NHH	P	Orange	5.54E+00	7.06E+00	7.89E+01	5.38E-04	6.58E-03	2.06E-03	8.55E-06	2.07E-04	8.71E-01	0.00E+00	4.85E-05	8.72E-01		289
Chippers/Stump Grinders	D	750	U	N	NHH	P	Orange	6.29E+00	8.01E+00	2.16E+02	1.51E-03	1.85E-02	5.63E-03	2.39E-05	5.75E-04	2.38E+00	0.00E+00	1.36E-04	2.38E+00		789
Chippers/Stump Grinders	D	1000	U	N	NHH	P	Orange	1.20E+01	1.52E+01	5.85E+02	5.35E-03	6.72E-02	1.94E-02	6.48E-05	1.93E-03	6.45E+00	0.00E+00	4.83E-04	6.46E+00		2,138
Commercial Turf Equipment	D	15	U	N	NHH	NP	Orange	7.28E+01	2.13E+02	9.37E+01	1.06E-03	7.49E-03	6.27E-03	1.60E-05	2.99E-04	1.03E+00	0.00E+00	9.61E-05	1.03E+00		341
Commercial Turf Equipment	D	25	U	N	NHH	NP	Orange	1.37E+03	4.00E+03	2.64E+03	3.49E-02	2.21E-01	1.19E-01	3.67E-04	8.43E-03	2.89E+01	0.00E+00	3.15E-03	2.90E+01		9,608
Other Lawn & Garden Equipment	D	15	U	N	NHH	NP	Orange	1.05E+00	1.24E+00	6.93E-01	7.92E-06	5.57E-05	4.64E-05	1.18E-07	2.34E-06	7.59E-03	0.00E+00	7.14E-07	7.61E-03		3
Other Lawn & Garden Equipment	D	25	U	N	NHH	NP	Orange	1.50E-01	1.78E-01	1.32E-01	1.75E-06	1.11E-05	5.95E-06	1.83E-08	4.43E-07	1.45E-03	0.00E+00	1.58E-07	1.45E-03		0
								1,904,483	190,496	36,165	5.797	1.501	71.075	0.006	0.209	226.583	0.151	0.356	280.832		92,990
								Population	Activity	Consumption	lbs/day					Tons/Day					MTons/Year
								212,738	21,279	4,040	1,295	335	15,879	1	47	25	0	0	31		**10,387**

As a percent of 2010 Total Population — Orange County 3,010,332 — Anaheim 336,265 — Percent 11%

SOURCE: U.S. Census Bureau, 2010.

Light Commercial

										Tons/Day										MTons/Year
Equipment	**Fuel**	**MaxHP**	**C/R**	**Pre**	**Hand**	**Port**	**County**	**Population**	**Activity**	**Consumption**	**ROG Exhaust**	**NOX Exhaust**	**CO Exhaust**	**SO2 Exhaust**	**PM Exhaust**	**CO2 Exhaust**	**N2O Exhaust**	**CH4 Exhaust**	**CO2e**	**CO2e**
Generator Sets	G2	2	C	N	NHH	P	Orange	2.26E+02	8.32E+01	5.22E+00	1.36E-03	2.02E-04	1.17E-02	1.10E-06	1.07E-04	2.68E-02	6.09E-05	8.44E-05	4.74E-02	16
Generator Sets	G2	2	R	N	NHH	P	Orange	1.78E+02	4.40E+01	2.98E+00	9.24E-04	1.05E-04	7.06E-03	5.83E-07	6.04E-05	1.42E-02	3.18E-05	5.75E-05	2.52E-02	8
Generator Sets	G2	15	C	N	NHH	P	Orange	2.28E+00	8.39E-01	4.77E-01	3.08E-05	1.85E-05	1.31E-03	1.00E-07	1.22E-06	2.43E-03	2.02E-06	1.92E-06	3.10E-03	1
Generator Sets	G2	15	R	N	NHH	P	Orange	1.74E+00	4.30E-01	2.65E-01	4.27E-05	8.91E-06	7.32E-04	5.13E-08	1.63E-06	1.25E-03	9.88E-07	2.66E-06	1.61E-03	1
Pumps	G2	2	C	N	NHH	P	Orange	8.99E+02	6.35E+02	3.40E+01	5.06E-03	1.55E-03	6.42E-02	8.54E-06	7.28E-04	2.07E-01	4.69E-04	3.15E-04	3.59E-01	119
Pumps	G2	2	R	N	NHH	P	Orange	7.06E+02	3.36E+02	2.05E+01	4.77E-03	8.31E-04	4.44E-02	4.51E-06	4.22E-04	1.10E-01	2.49E-04	2.97E-04	1.93E-01	64
Pumps	G2	15	C	P	NHH	P	Orange	2.42E+02	1.71E+02	8.72E+01	5.75E-03	4.19E-03	2.37E-01	1.84E-05	3.75E-03	4.48E-01	4.38E-04	3.57E-04	5.91E-01	196
Pumps	G2	15	R	P	NHH	P	Orange	1.90E+02	9.05E+01	4.74E+01	4.70E-03	2.13E-03	1.29E-01	9.74E-06	1.98E-03	2.36E-01	2.25E-04	2.92E-04	3.12E-01	103
Pumps	G2	25	C	P	NHH	P	Orange	2.93E+00	2.07E+00	2.29E+00	1.51E-04	1.00E-04	6.39E-03	4.74E-07	9.65E-05	1.15E-02	7.62E-06	9.38E-06	1.41E-02	5
Pumps	G2	25	R	P	NHH	P	Orange	2.28E+00	1.08E+00	1.21E+00	8.15E-05	5.10E-05	3.39E-03	2.48E-07	5.05E-05	6.02E-03	3.92E-06	5.06E-06	7.34E-03	2
Generator Sets	G4	5	C	N	NHH	P	Orange	2.97E+03	1.09E+03	2.75E+02	5.13E-02	1.12E-02	6.68E-01	4.86E-05	4.85E-03	1.41E+00	1.69E-03	2.94E-03	1.99E+00	660
Generator Sets	G4	5	R	N	NHH	P	Orange	2.33E+03	5.77E+02	1.54E+02	3.02E-02	5.89E-03	3.97E-01	2.57E-05	2.53E-03	7.43E-01	8.90E-04	1.73E-03	1.06E+00	349
Generator Sets	G4	15	C	N	NHH	P	Orange	8.16E+03	3.00E+03	1.80E+03	1.31E-01	7.84E-02	5.23E+00	2.48E-04	4.58E-03	8.69E+00	7.70E-03	7.52E-03	1.12E+01	3,720
Generator Sets	G4	15	R	N	NHH	P	Orange	6.41E+03	1.59E+03	1.01E+03	9.53E-02	3.93E-02	3.02E+00	1.31E-04	2.40E-03	4.59E+00	3.95E-03	5.46E-03	5.93E+00	1,965
Generator Sets	G4	25	C	N	NHH	P	Orange	4.38E+03	1.61E+03	2.09E+03	1.47E-01	8.49E-02	6.21E+00	2.50E-04	5.20E-03	9.86E+00	6.02E-03	8.41E-03	1.19E+01	3,940
Generator Sets	G4	25	R	N	NHH	P	Orange	3.44E+03	8.52E+02	1.15E+03	1.01E-01	4.11E-02	3.48E+00	1.32E-04	2.72E-03	5.21E+00	3.03E-03	5.77E-03	6.27E+00	2,076
Generator Sets	G4	50	U	N	NHH	P	Orange	1.46E+03	4.59E+02	1.05E+03	2.65E-02	5.01E-02	8.67E-01	1.05E-04	6.61E-04	8.62E+00	2.39E-03	1.52E-03	9.40E+00	3,112
Generator Sets	G4	120	U	N	NHH	P	Orange	2.82E+02	8.87E+01	4.74E+02	8.37E-03	3.46E-02	1.70E-01	4.13E-05	3.31E-04	4.27E+00	8.97E-04	4.80E-04	4.56E+00	1,510
Generator Sets	G4	175	U	N	NHH	P	Orange	2.66E+01	8.38E+00	7.53E+01	7.86E-04	6.20E-03	2.14E-02	6.86E-06	5.50E-05	6.91E-01	1.19E-04	4.51E-05	7.28E-01	241
Pumps	G4	5	C	P	NHH	P	Orange	1.05E+03	7.44E+02	1.25E+02	2.10E-02	8.29E-03	2.53E-01	2.52E-05	5.92E-04	7.29E-01	1.22E-03	1.20E-03	1.13E+00	375
Pumps	G4	5	R	P	NHH	P	Orange	8.28E+02	3.93E+02	7.47E+01	1.45E-02	4.05E-03	1.79E-01	1.33E-05	7.71E-04	3.85E-01	6.17E-04	8.33E-04	5.94E-01	197
Pumps	G4	15	C	P	NHH	P	Orange	1.14E+03	8.06E+02	4.34E+02	3.42E-02	2.36E-02	1.24E+00	6.01E-05	1.77E-02	2.11E+00	2.22E-03	1.96E-03	2.84E+00	939
Pumps	G4	15	R	P	NHH	P	Orange	8.97E+02	4.26E+02	2.34E+02	2.01E-02	1.20E-02	6.80E-01	3.17E-05	9.21E-03	1.11E+00	1.14E-03	1.15E-03	1.49E+00	494
Pumps	G4	25	C	P	NHH	P	Orange	2.92E+02	2.07E+02	2.41E+02	1.86E-02	1.19E-02	7.07E-01	2.91E-05	9.62E-03	1.15E+00	8.15E-04	1.07E-03	1.42E+00	471
Pumps	G4	25	R	P	NHH	P	Orange	2.30E+02	1.09E+02	1.29E+02	1.03E-02	6.05E-03	3.79E-01	1.54E-05	5.08E-03	6.06E-01	4.21E-04	5.90E-04	7.49E-01	248
Pumps	G4	50	U	P	NHH	P	Orange	1.17E+02	7.05E+01	1.59E+02	4.19E-03	6.89E-03	1.36E-01	1.58E-05	9.97E-05	1.30E+00	3.38E-04	2.40E-04	1.41E+00	468
Pumps	G4	120	U	P	NHH	P	Orange	1.48E+02	8.94E+01	5.43E+02	9.92E-03	3.39E-02	1.93E-01	4.73E-05	3.79E-04	4.90E+00	8.19E-04	5.69E-04	5.16E+00	1,709
Pumps	G4	175	U	P	NHH	P	Orange	4.45E+00	2.69E+00	2.43E+01	2.50E-04	1.75E-03	7.16E-03	2.21E-06	1.77E-05	2.22E-01	3.29E-05	1.43E-05	2.33E-01	77
Air Compressors	G4	5	C	P	NHH	P	Orange	3.80E+02	5.89E+02	1.29E+02	2.06E-02	9.13E-03	2.44E-01	2.69E-05	2.54E-04	7.80E-01	1.15E-03	1.18E-03	1.16E+00	385
Air Compressors	G4	5	R	P	NHH	P	Orange	2.99E+02	3.11E+02	6.79E+01	1.09E-02	4.82E-03	1.28E-01	1.42E-05	1.34E-04	4.12E-01	6.09E-04	6.24E-04	6.14E-01	203
Air Compressors	G4	15	C	P	NHH	P	Orange	1.93E+02	2.98E+02	1.13E+02	8.85E-03	6.46E-03	3.23E-01	1.58E-05	4.64E-03	5.53E-01	6.98E-04	5.06E-04	7.80E-01	258
Air Compressors	G4	15	R	P	NHH	P	Orange	1.51E+02	1.58E+02	5.98E+01	4.56E-03	3.33E-03	1.70E-01	8.33E-06	2.45E-03	2.92E-01	3.64E-04	2.61E-04	4.11E-01	136
Air Compressors	G4	25	C	P	NHH	P	Orange	2.60E+01	4.02E+01	3.82E+01	3.06E-03	1.95E-03	1.12E-01	4.59E-06	1.52E-03	1.81E-01	1.45E-04	1.75E-04	2.30E-01	76
Air Compressors	G4	25	R	P	NHH	P	Orange	2.04E+01	2.13E+01	2.02E+01	1.59E-03	1.01E-03	5.91E-02	2.43E-06	8.03E-04	9.58E-02	7.58E-05	9.09E-05	1.21E-01	40
Air Compressors	G4	50	U	P	NHH	P	Orange	4.43E+01	5.87E+01	1.28E+02	5.05E-03	6.69E-03	1.43E-01	1.21E-05	7.61E-05	9.94E-01	3.13E-04	2.89E-04	1.10E+00	363
Air Compressors	G4	120	U	P	NHH	P	Orange	1.44E+02	1.90E+02	7.29E+02	2.13E-02	5.75E-02	3.71E-01	6.16E-05	4.94E-04	6.37E+00	1.62E-03	1.22E-03	6.90E+00	2,284
Air Compressors	G4	175	U	P	NHH	P	Orange	9.67E+00	1.28E+01	8.77E+01	1.25E-03	8.34E-03	2.79E-02	7.93E-06	6.36E-05	7.98E-01	1.64E-04	7.17E-05	8.50E-01	282
Welders	G4	15	C	P	NHH	P	Orange	7.44E+02	4.24E+02	2.40E+02	2.20E-02	1.19E-02	7.04E-01	3.21E-05	9.19E-03	1.12E+00	1.14E-03	1.26E-03	1.50E+00	498
Welders	G4	25	C	P	NHH	P	Orange	2.69E+03	1.53E+03	1.34E+03	1.11E-01	6.30E-02	3.96E+00	1.59E-04	5.25E-02	6.28E+00	5.04E-03	6.36E-03	7.98E+00	2,642
Welders	G4	50	U	P	NHH	P	Orange	2.32E+02	1.32E+02	3.22E+02	1.01E-02	1.65E-02	2.89E-01	3.18E-05	2.00E-04	2.61E+00	7.32E-04	5.78E-04	2.85E+00	944
Welders	G4	120	U	P	NHH	P	Orange	2.36E+02	1.35E+02	4.59E+02	1.04E-02	3.56E-02	1.84E-01	3.96E-05	3.18E-04	4.10E+00	1.05E-03	5.94E-04	4.44E+00	1,470
Welders	G4	175	U	P	NHH	P	Orange	1.63E+01	9.28E+00	5.58E+01	6.94E-04	5.05E-03	1.63E-02	5.07E-06	4.07E-05	5.11E-01	1.07E-04	3.98E-05	5.45E-01	180
Pressure Washers	G4	5	C	N	NHH	P	Orange	7.98E+02	2.93E+02	1.03E+02	1.60E-02	4.60E-03	2.20E-01	2.04E-05	2.02E-03	5.90E-01	5.69E-04	9.17E-04	7.86E-01	260
Pressure Washers	G4	5	R	N	NHH	P	Orange	6.27E+02	1.55E+02	6.30E+01	1.20E-02	2.45E-03	1.60E-01	1.08E-05	1.06E-03	3.12E-01	3.02E-04	6.86E-04	4.20E-01	139
Pressure Washers	G4	15	C	N	NHH	P	Orange	7.12E+02	2.62E+02	1.53E+02	1.11E-02	6.65E-03	4.44E-01	2.10E-05	3.89E-04	7.37E-01	6.62E-04	6.37E-04	9.56E-01	316
Pressure Washers	G4	15	R	N	NHH	P	Orange	5.59E+02	1.38E+02	8.53E+01	8.08E-03	3.34E-03	2.56E-01	1.11E-05	2.04E-04	3.90E-01	3.40E-04	4.63E-04	5.05E-01	167
Pressure Washers	G4	25	C	N	NHH	P	Orange	1.34E+02	4.91E+01	7.52E+01	5.03E-03	3.06E-03	2.23E-01	9.02E-06	1.86E-04	3.56E-01	2.01E-04	2.88E-04	4.24E-01	140
Pressure Washers	G4	25	R	N	NHH	P	Orange	1.05E+02	2.60E+01	4.11E+01	3.45E-03	1.49E-03	1.24E-01	4.77E-06	9.76E-05	1.88E-01	1.01E-04	1.98E-04	2.24E-01	74
Pressure Washers	G4	50	U	P	NHH	P	Orange	1.30E+01	4.10E+00	1.05E+01	2.50E-04	4.49E-04	8.05E-03	1.06E-06	6.69E-06	8.73E-02	2.08E-05	1.44E-05	9.41E-02	31
Generator Sets	C4	120	U	N	NHH	P	Orange	2.10E+01	6.60E+00	4.14E+01	3.36E-05	2.21E-03	8.70E-03	0.00E+00	2.46E-05	2.77E-01	0.00E+00	2.82E-04	2.83E-01	94
Generator Sets	C4	175	U	N	NHH	P	Orange	1.74E+01	5.47E+00	5.98E+01	3.87E-05	3.20E-03	1.04E-02	0.00E+00	3.59E-05	4.04E-01	0.00E+00	3.24E-04	4.11E-01	136
Gas Compressors	C4	50	U	P	NHH	P	Orange	3.26E+00	7.59E+01	2.59E+02	1.48E-04	5.36E-03	2.62E-02	0.00E+00	1.37E-04	1.78E+00	0.00E+00	1.24E-03	1.81E+00	599
Gas Compressors	C4	120	U	P	NHH	P	Orange	6.74E+00	1.57E+02	1.52E+03	8.05E-04	3.17E-02	4.18E-01	0.00E+00	7.76E-04	1.00E+01	0.00E+00	6.75E-03	1.02E+01	3,363
Gas Compressors	C4	175	U	P	NHH	P	Orange	1.09E+00	2.53E+01	3.90E+02	2.25E-04	8.49E-03	8.51E-02	0.00E+00	2.08E-04	2.61E+00	0.00E+00	1.88E-03	2.65E+00	876
Gas Compressors	C4	250	U	N	NHH	P	Orange	8.69E-01	2.02E+01	4.04E+02	1.73E-04	8.22E-03	9.80E-02	0.00E+00	2.39E-04	2.69E+00	0.00E+00	1.45E-03	2.72E+00	900
Gas Compressors	C4	500	U	N	NHH	P	Orange	7.61E-01	1.77E+01	5.69E+02	2.43E-04	1.16E-02	1.38E-01	0.00E+00	3.36E-04	3.78E+00	0.00E+00	2.04E-03	3.83E+00	1,267
Generator Sets	D	15	U	N	NHH	P	Orange	5.53E+02	5.11E+02	2.39E+02	3.95E-03	2.68E-02	1.77E-02	4.06E-05	1.55E-03	2.61E+00	0.00E+00	3.56E-04	2.61E+00	865
Generator Sets	D	25	U	N	NHH	P	Orange	4.04E+02	3.74E+02	3.01E+02	5.10E-03	3.03E-02	1.75E-02	4.18E-05	1.77E-03	3.29E+00	0.00E+00	4.60E-04	3.30E+00	1,093
Generator Sets	D	50	U	N	NHH	P	Orange	4.94E+02	4.57E+02	6.46E+02	2.13E-02	6.73E-02	6.15E-02	9.03E-05	5.71E-03	6.98E+00	0.00E+00	1.92E-03	7.02E+00	2,326
Generator Sets	D	120	U	N	NHH	P	Orange	7.50E+02	6.94E+02	2.47E+03	4.09E-02	2.77E-01	1.71E-01	3.17E-04	2.18E-02	2.70E+01	0.00E+00	3.69E-03	2.71E+01	8,970
Generator Sets	D	175	U	N	NHH	P	Orange	4.43E+01	4.10E+01	2.65E+02	2.92E-03	2.65E-02	1.52E-02	3.27E-05	1.30E-03	2.91E+00	0.00E+00	2.64E-04	2.91E+00	965
Generator Sets	D	250	U	N	NHH	P	Orange	2.48E+01	2.29E+01	2.20E+02	1.54E-03	2.04E-02	5.09E-03	2.74E-05	5.70E-04	2.43E+00	0.00E+00	1.39E-04	2.44E+00	806
Generator Sets	D	500	U	N	NHH	P	Orange	5.51E+01	5.09E+01	7.77E+02	4.84E-03	6.47E-02	1.91E-02	8.41E-05	1.88E-03	8.57E+00	0.00E+00	4.37E-04	8.58E+00	2,842
Generator Sets	D	750	U	N	NHH	P	Orange	3.42E+01	3.17E+01	7.79E+02	5.03E-03	6.69E-02	1.91E-02	8.65E-05	1.92E-03	8.60E+00	0.00E+00	4.54E-04	8.61E+00	2,850
Generator Sets	D	9999	U	N	NHH	P	Orange	8.91E+00	8.24E+00	3.92E+02	3.49E-03	4.43E-02	1.23E-02	4.34E-05	1.25E-03	4.32E+00	0.00E+00	3.15E-04	4.32E+00	1,431
Pumps	D	15	U	P	NHH	P	Orange	4.15E+02	4.58E+02	1.56E+02	2.98E-03	1.78E-02	1.15E-02	2.64E-05	1.21E-03	1.70E+00	0.00E+00	2.69E-04	1.70E+00	564
Pumps	D	25	U	P	NHH	P	Orange	1.24E+02	1.37E+02	1.22E+02	2.58E-03	1.22E-02	7.07E-03	1.69E-05	7.86E-04	1.33E+00	0.00E+00	2.33E-04	1.34E+00	442
Pumps	D	50	U	P	NHH	P	Orange	2.16E+02	2.38E+02	3.78E+02	1.34E-02	3.98E-02	3.79E-02	5.28E-05	3.50E-03	4.09E+00	0.00E+00	1.21E-03	4.11E+00	1,362
Pumps	D	120	U	P	NHH	P	Orange	4.24E+02	4.67E+02	1.67E+03	2.86E-02	1.90E-01	1.17E-01	2.13E-04	1.54E-02	1.82E+01	0.00E+00	2.58E-03	1.82E+01	6,043
Pumps	D	175	U	P	NHH	P	Orange	4.59E+01	5.06E+01	3.23E+02	3.70E-03	3.28E-02	1.87E-02	3.98E-05	1.65E-03	3.54E+00	0.00E+00	3.34E-04	3.55E+00	1,174
Pumps	D	250	U	N	NHH	P	Orange	3.30E+01	3.64E+01	3.32E+02	2.42E-03	3.11E-02	7.81E-03	4.12E-05	8.92E-04	3.66E+00	0.00E+00	2.18E-04	3.67E+00	1,215
Pumps	D	500	U	N	NHH	P	Orange	6.52E-01	7.19E-01	1.12E+01	7.32E-05	9.47E-04	2.84E-04	1.22E-06	2.82E-05	1.24E-01	0.00E+00	6.60E-06	1.24E-01	41
Pumps	D	750	U	N	NHH	P	Orange	1.09E-01	1.20E-01	3.09E+00	2.08E-05	2.69E-04	7.82E-05	3.43E-07	7.91E-06	3.42E-02	0.00E+00	1.88E-06	3.42E-02	11
Pumps	D	9999	U	N	NHH	P	Orange	2.39E+00	2.64E+00	1.62E+02	1.48E-03	1.85E-02	5.21E-03	1.79E-05	5.26E-04	1.78E+00	0.00E+00	1.33E-04	1.79E+00	592
Air Compressors	D	15	U	P	NHH	P	Orange	5.65E+00	1.26E+01	4.17E+00	7.99E-05	4.77E-04	3.09E-04	7.07E-07	3.24E-05	4.55E-02	0.00E+00	7.21E-06	4.56E-02	15
Air Compressors	D	25	U	P	NHH	P	Orange	1.12E+01	2.50E+01	1.65E+01	3.49E-04	1.66E-03	9.57E-04	2.29E-06	1.06E-04	1.80E-01	0.00E+00	3.15E-05	1.81E-01	60
Air Compressors	D	50	U	P	NHH	P	Orange	1.02E+02	2.27E+02	2.36E+02	1.11E-02	2.60E-02	2.95E-02	3.26E-05	2.66E-03	2.52E+00	0.00E+00	1.00E-03	2.54E+00	842
Air Compressors	D	120	U	P	NHH	P	Orange	6.77E+02	1.51E+03	3.25E+03	6.59E-02	3.97E-01	2.47E-01	4.16E-04	3.65E-02	3.54E+01	0.00E+00	5.95E-03	3.56E+01	11,772
Air Compressors	D	175	U	P	NHH	P	Orange	2.56E+01	5.72E+01	2.31E+02	3.17E-03	2.52E-02	1.44E-02	2.84E-05	1.43E-03	2.53E+00	0.00E+00	2.86E-04	2.53E+00	839
Air Compressors	D	250	U	N	NHH	P	Orange	3.61E+01	8.04E+01	4.78E+02	4.20E-03	4.82E-02	1.21E-02	5.93E-05	1.49E-03	5.27E+00	0.00E+00	3.79E-04	5.28E+00	1,749
Air Compressors	D	500	U	N	NHH	P	Orange	4.70E+01	1.05E+02	1.10E+03	8.78E-03	9.81E-02	2.95E-02	1.19E-04	3.19E-03	1.21E+01	0.00E+00	7.92E-04	1.22E+01	4,027
Air Compressors	D	750	U	N	NHH	P	Orange	1.76E+01	3.93E+01	6.37E+02	5.16E-03	5.86E-02	1.71E-02	7.06E-05	1.88E-03	7.02E+00	0.00E+00	4.65E-04	7.03E+00	2,329
Air Compressors	D	1000	U	N	NHH	P	Orange	4.35E-01	9.69E-01	2.14E+01	2.15E-04	2.59E-03	7.36E-04	2.37E-06	7.55E-05	2.35E-01	0.00E+00	1.94E-05	2.36E-01	78
Welders	D	15	U	P	NHH	P	Orange	1.88E+02	3.30E+02	9.38E+01	1.80E-03	1.07E-02	6.96E-03	1.59E-05	7.29E-04	1.02E+00	0.00E+00	1.62E-04	1.03E+00	340
Welders	D	25	U	P	NHH	P	Orange	1.65E+02	2.91E+02	1.50E+02	3.17E-03	1.51E-02	8.71E-03	2.08E-05	9.68E-04	1.64E+00	0.00E+00	2.86E-04	1.64E+00	544
Welders	D	50	U	P	NHH	P	Orange	5.08E+02	8.94E+02	1.08E+03	4.65E-02	1.17E-01	1.26E-01	1.50E-04	1.14E-02	1.16E+01	0.00E+00	4.20E-03	1.17E+01	3,869
Welders	D	120	U	P	NHH	P	Orange	3.95E+02	6.95E+02	1.26E+03	2.40E-02	1.50E-01	9.28E-02	1.61E-04	1.32E-02	1.37E+01	0.00E+00	2.17E-03	1.38E+01	4,553
Welders	D	175	U	P	NHH	P	Orange	1.96E+00	3.44E+00	1.54E+01	1.99E-04	1.64E-03	9.38E-04	1.90E-06	8.96E-05	1.69E-01	0.00E+00	1.79E-05	1.69E-01	56
Welders	D	250	U	N	NHH	P	Orange	4.35E-01	7.65E-01	4.12E+00	3.40E-05	4.06E-04	1.02E-04	5.12E-07	1.23E-05	4.55E-02	0.00E+00	3.07E-06	4.55E-02	15
Welders	D	500	U	N	NHH	P	Orange	1.09E+00	1.91E+00	1.45E+01	1.08E-04	1.27E-03	3.82E-04	1.57E-06	4.02E-05	1.60E-01	0.00E+00	9.73E-06	1.60E-01	53
Pressure Washers	D	15	U	N	NHH	P	Orange	2.56E+01	1.02E+01	2.28E+00	3.76E-05	2.56E-04	1.69E-04	3.87E-07	1.47E-05	2.49E-02	0.00E+00	3.40E-06	2.49E-02	8
Pressure Washers	D	25	U	N	NHH	P	Orange	5.98E+00	2.37E+00	7.74E-01	1.31E-05	7.79E-05	4.50E-05	1.07E-07	4.56E-06	8.47E-03	0.00E+00	1.18E-06	8.49E-03	3
Pressure Washers	D	50	U	P	NHH	P	Orange	1.18E+01	4.70E+00	3.09E+00	7.99E-05	3.13E-04	2.49E-04	4.34E-07	2.37E-05	3.36E-02	0.00E+00	7.21E-06	3.37E-02	11
Pressure Washers	D	120	U	P	NHH	P	Orange	4.89E+00	1.94E+00	2.13E+00	3.15E-05	2.28E-04	1.41E-04	2.74E-07	1.64E-05	2.33E-02	0.00E+00	2.84E-06	2.34E-02	8
								50,665	26,503	35,636	1.355	2.716	34.438	0.004	0.288	301.972	0.051	0.102	319.990	105,956
								Population	**Activity**	**Consumption**	**lbs/day**					Tons/Day				MTons/Year
								8,971	4,693	6,310	480	962	12,196	1	102	53	0	0	57	**18,761**

As a percent of 2010 Total Employment — Orange County 1,410,179 — Anaheim 249,698 — Percent 17.7%

SOURCE: U.S. Census Bureau. 2010. Longitudinal Employer-Household Dynamics. http://lehd.ces.census.gov/ for the County.

QWI Quick Facts	Orange (Q1)	Orange (Avg:Selected + 3 Prior qtrs)	California (Q1)	California (Avg:Selected + 3 Prior qtrs)
Total_Employment	1,410,179	1,410,220	14,228,431	14,291,645
Net_Job_Flows	14,818	14,518	120,216	155,781
Job_Creation	67,092	67,454	672,248	754,897
New_Hires	214,183	219,542	1,795,434	2,066,051
Separations	228,615	239,028	2,049,129	2,391,186
Turnover	7.60%	8.00%	7.70%	8.10%
Avg_Monthly_Earnings	$4,903.00	$4,696.00	$4,839.00	$4,636.00
Avg_New_Hire_Earnings	$2,730.00	$2,912.00	$2,667.00	$2,825.00

Building Permits
2012 Building Permits
Monthly New Privately-Owned Residential Building Permits
Orange County California (059)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	2271	2271	667148849	2245	2245	660927555
Two Family	123	246	39509452	123	246	39509452
Three and Four Family	39	131	29167951	35	119	27988623
Five or More Family	167	3434	407745166	167	3434	407745166
Total	2600	6082	1143571418	2570	6044	1136170796

Source: U.S. Census Bureau

Building Permits
2011 Building Permits
Monthly New Privately-Owned Residential Building Permits
Orange County California (059)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	1822	1822	490068932	1777	1777	464195339
Two Family	31	62	15805574	28	56	13688336
Three and Four Family	27	87	16487065	24	78	15602569
Five or More Family	155	2381	297879210	155	2381	297879210
Total	2035	4352	820240781	1984	4292	791365454

Source: U.S. Census Bureau

Building Permits
2010 Building Permits
Monthly New Privately-Owned Residential Building Permits
Orange County California (059)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	1624	1624	494627842	1534	1534	448877260
Two Family	30	60	15081616	24	48	10735644
Three and Four Family	75	264	43272685	71	252	42343888
Five or More Family	72	1186	138600050	72	1186	138600050
Total	1801	3134	691582193	1701	3020	640556842

Source: U.S. Census Bureau

Building Permits
2009 Building Permits
Monthly New Privately-Owned Residential Building Permits
Orange County California (059)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	1341	1341	421287968	1313	1313	403809540
Two Family	24	48	12509695	22	44	11478983
Three and Four Family	26	86	12174003	25	83	11879171
Five or More Family	44	668	82855591	44	668	82855591
Total	1435	2143	528827257	1404	2108	510023285

Source: U.S. Census Bureau

Building Permits
2008 Building Permits
Monthly New Privately-Owned Residential Building Permits
Orange County California (059)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	1330	1330	465860485	1296	1296	457831068
Two Family	41	82	17752173	40	80	17610205
Three and Four Family	13	49	7587218	11	43	6850594
Five or More Family	66	1774	187883579	60	1729	182915059
Total	1450	3235	679083455	1407	3148	665206926

Source: U.S. Census Bureau

Map View: 2010 Census Interactive Population Map

2010 Census Interactive Population Search

CA - Orange County

Population

Total Population	3,010,232

Housing Status
(in housing units unless noted)

Total	1,048,907
Occupied	992,781
Owner-occupied	588,313
Population in owner-occupied (number of individuals)	1,755,924
Renter-occupied	404,468
Population in renter-occupied (number of individuals)	1,215,072
Households with individuals under 18	375,387
Vacant	56,126
Vacant: for rent	25,254
Vacant: for sale	8,434

Population by Sex/Age

Male	1,488,780
Female	1,521,452
Under 18	736,659
18 & over	2,273,573
20 - 24	213,601
25 - 34	413,528
35 - 49	669,639
50 - 64	535,443
65 & over	349,677

Population by Ethnicity

Hispanic or Latino	1,012,973
Non Hispanic or Latino	1,997,259

Population by Race

White	1,830,758
African American	50,744
Asian	537,804
American Indian and Alaska Native	18,132

Native Hawaiian and Pacific Islander	9,354
Other	435,641
Identified by two or more	127,799

CA - California

Population

Total Population	37,253,956

Housing Status
(in housing units unless noted)

Total	13,680,081
Occupied	12,577,498
Owner-occupied	7,035,371
Population in owner-occupied (number of individuals)	20,742,929
Renter-occupied	5,542,127
Population in renter-occupied (number of individuals)	15,691,211
Households with individuals under 18	4,713,016
Vacant	1,102,583
Vacant: for rent	374,610
Vacant: for sale	154,775

Population by Sex/Age

Male	18,517,830
Female	18,736,126
Under 18	9,295,040
18 & over	27,958,916
20 - 24	2,765,949
25 - 34	5,317,877
35 - 49	7,872,529
50 - 64	6,599,045
65 & over	4,246,514

Population by Ethnicity

Hispanic or Latino	14,013,719
Non Hispanic or Latino	23,240,237

Population by Race

White	21,453,934
African American	2,299,072
Asian	4,861,007
American Indian and Alaska Native	362,801

Native Hawaiian and Pacific Islander	144,386
Other	6,317,372
Identified by two or more	1,815,384

QWI Quick Facts	Anaheim City WIB (Q1)	Anaheim City WIB (Avg:Selected + 3 Prior qtrs)	California (Q1)	California (Avg:Selected + 3 Prior qtrs)
Total_Employment	161,520	162,724	14,228,431	14,291,645
Net_Job_Flows	1,051	1,477	120,216	155,781
Job_Creation	6,535	6,903	672,248	754,897
New_Hires	17,518	19,379	1,795,434	2,066,051
Separations	19,372	21,549	2,049,129	2,391,186
Turnover	7.30%	7.40%	7.70%	8.10%
Avg_Monthly_Earnings	$3,956.00	$3,846.50	$4,839.00	$4,636.00
Avg_New_Hire_Earnings	$2,343.00	$2,478.50	$2,667.00	$2,825.00

Building Permits
2012 Building Permits
Monthly New Privately-Owned Residential Building Permits
Anaheim California (Orange County - 011000)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	125	125	30261209	125	125	30261209
Two Family	0	0	0	0	0	0
Three and Four Family	0	0	0	0	0	0
Five or More Family	3	45	7264490	3	45	7264490
Total	128	170	37525699	128	170	37525699

Source: U.S. Census Bureau

Building Permits
2011 Building Permits
Monthly New Privately-Owned Residential Building Permits
Anaheim California (Orange County - 011000)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	41	41	7769432	41	41	7769432
Two Family	0	0	0	0	0	0
Three and Four Family	0	0	0	0	0	0
Five or More Family	7	106	14145062	7	106	14145062
Total	48	147	21914494	48	147	21914494

Source: U.S. Census Bureau

Building Permits
2010 Building Permits
Monthly New Privately-Owned Residential Building Permits
Anaheim California (Orange County - 011000)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	59	59	12416668	59	59	12416668
Two Family	0	0	0	0	0	0
Three and Four Family	2	8	1100000	2	8	1100000
Five or More Family	2	20	2625424	2	20	2625424
Total	63	87	16142092	63	87	16142092

Source: U.S. Census Bureau

Building Permits
2009 Building Permits
Monthly New Privately-Owned Residential Building Permits
Anaheim California (Orange County - 011000)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	32	32	5510228	32	32	5510228
Two Family	0	0	0	0	0	0
Three and Four Family	2	8	1142400	2	8	1142400
Five or More Family	22	267	31224798	22	267	31224798
Total	56	307	37877426	56	307	37877426

Source: U.S. Census Bureau

Building Permits
2008 Building Permits
Monthly New Privately-Owned Residential Building Permits
Anaheim California (Orange County - 011000)

	Estimates with Imputation			Reported Only		
Item	Buildings	Units	Construction cost	Buildings	Units	Construction cost
Single Family	27	27	9299753	27	27	9299753
Two Family	3	6	840000	3	6	840000
Three and Four Family	1	4	571200	1	4	571200
Five or More Family	15	469	64587507	15	469	64587507
Total	46	506	75298460	46	506	75298460

Source: U.S. Census Bureau

Map View: 2010 Census Interactive Population Map

2010 Census Interactive Population Search

CA - Anaheim city

Population

Total Population	336,265

Housing Status
(in housing units unless noted)

Total	104,237
Occupied	98,294
Owner-occupied	47,677
Population in owner-occupied (number of individuals)	160,843
Renter-occupied	50,617
Population in renter-occupied (number of individuals)	171,865
Households with individuals under 18	44,045
Vacant	5,943
Vacant: for rent	3,915
Vacant: for sale	819

Population by Sex/Age

Male	167,249
Female	169,016
Under 18	91,917
18 & over	244,348
20 - 24	25,944
25 - 34	52,023
35 - 49	72,683
50 - 64	51,914
65 & over	31,222

Population by Ethnicity

Hispanic or Latino	177,467
Non Hispanic or Latino	158,798

Population by Race

White	177,237
African American	9,347
Asian	49,857
American Indian and Alaska Native	2,648

Native Hawaiian and Pacific Islander	1,607
Other	80,705
Identified by two or more	14,864

CA - California

Population

Total Population	37,253,956

Housing Status
(in housing units unless noted)

Total	13,680,081
Occupied	12,577,498
Owner-occupied	7,035,371
Population in owner-occupied (number of individuals)	20,742,929
Renter-occupied	5,542,127
Population in renter-occupied (number of individuals)	15,691,211
Households with individuals under 18	4,713,016
Vacant	1,102,583
Vacant: for rent	374,610
Vacant: for sale	154,775

Population by Sex/Age

Male	18,517,830
Female	18,736,126
Under 18	9,295,040
18 & over	27,958,916
20 - 24	2,765,949
25 - 34	5,317,877
35 - 49	7,872,529
50 - 64	6,599,045
65 & over	4,246,514

Population by Ethnicity

Hispanic or Latino	14,013,719
Non Hispanic or Latino	23,240,237

Population by Race

White	21,453,934
African American	2,299,072
Asian	4,861,007
American Indian and Alaska Native	362,801

Native Hawaiian and Pacific Islander	144,386
Other	6,317,372
Identified by two or more	1,815,384

Version 12

Waste Reduction Model (WARM) -- Inputs

Use this worksheet to describe the baseline and alternative MSW management scenarios that you want to compare. The blue shaded areas indicate where you need to enter information.

1. Describe the baseline generation and management for the MSW materials listed below. If the material is not generated in your community or you do not want to analyze it, leave it blank or enter 0. Make sure that the total quantity generated equals the total quantity managed.

Material	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Tons Generated
Aluminum Cans		445		NA	444.8
Aluminum Ingot		784		NA	783.6
Steel Cans		2,391		NA	2391.0
Copper Wire		7,455		NA	7454.9
Glass		5,262		NA	5261.7
HDPE		1,467		NA	1467.1
LDPE	NA	15,784		NA	15783.7
PET		1,856		NA	1856.4
LLDPE	NA	4,514		NA	4513.6
PP	NA	-		NA	0.0
PS	NA	-		NA	0.0
PVC	NA	-		NA	0.0
PLA	NA	-			0.0
Corrugated Containers		1,516		NA	1515.8
Magazines/Third-class Mail		2,632		NA	2632.2
Newspaper		4,649		NA	4649.0
Office Paper		6,800		NA	6800.2
Phonebooks		225		NA	224.6
Textbooks		-		NA	0.0
Dimensional Lumber		53,612		NA	53611.9
Medium-density Fiberboard		-		NA	0.0
Food Scraps	NA	57,263			57262.9
Yard Trimmings	NA	146,602			146602.2
Grass	NA	14,067			14067.5
Leaves	NA	-			0.0
Branches	NA	2,286			2285.9
Mixed Paper (general)		49,475		NA	49475.4
Mixed Paper (primarily residential)		-		NA	0.0
Mixed Paper (primarily from offices)		-		NA	0.0
Mixed Metals		42,755		NA	42755.2
Mixed Plastics		10,273		NA	10272.5
Mixed Recyclables		-		NA	0.0
Mixed Organics	NA	45,279			45279.2
Mixed MSW	NA	18,752		NA	18751.8
Carpet		11,953		NA	11953.3
Personal Computers		2,011		NA	2011.3
Clay Bricks	NA	11,710	NA	NA	11710.0
Concrete [1]		4,495	NA	NA	4494.7
Fly Ash [2]		551	NA	NA	550.9
Tires [3]		3,571		NA	3571.3
Asphalt Concrete		29,489	NA	NA	29489.1
Asphalt Shingles		10,433		NA	10432.7
Drywall		26,202	NA	NA	26202.4
Fiberglass Insulation	NA	8,246	NA	NA	8246.3
Vinyl Flooring	NA	-		NA	0.0
Wood Flooring	NA	-		NA	0.0

2. Describe the alternative management scenario for the MSW materials generated in the baseline. Any decrease in generation should be entered in the Source Reduction column. Any increase in generation should be entered in the Source Reduction column as a negative value. (Make sure that the total quantity generated equals the total quantity managed.)

Material	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted
Aluminum Cans			445		NA
Aluminum Ingot			784		NA
Steel Cans			2,391		NA
Copper Wire			7,455		NA
Glass			5,262		NA
HDPE			1,467		NA
LDPE		NA	15,784		NA
PET			1,856		NA
LLDPE		NA	4,514		NA
PP		NA	-		NA
PS		NA	-		NA
PVC		NA	-		NA
PLA		NA	-		
Corrugated Containers			1,516		NA
Magazines/Third-class Mail			2,632		NA
Newspaper			4,649		NA
Office Paper			6,800		NA
Phonebooks			225		NA
Textbooks			-		NA
Dimensional Lumber			53,612		NA
Medium-density Fiberboard			-		NA
Food Scraps		NA	57,263		
Yard Trimmings		NA	146,602		
Grass		NA	14,067		
Leaves		NA	-		
Branches		NA	2,286		
Mixed Paper (general)	NA		49,475		NA
Mixed Paper (primarily residential)	NA		-		NA
Mixed Paper (primarily from offices)	NA		-		NA
Mixed Metals	NA		42,755		NA
Mixed Plastics	NA		10,273		NA
Mixed Recyclables	NA		-		NA
Mixed Organics	NA	NA	45,279		
Mixed MSW	NA	NA	18,752		NA
Carpet			11,953		NA
Personal Computers			2,011		NA
Clay Bricks		NA	11,710	NA	NA
Concrete [1]	NA		4,495	NA	NA
Fly Ash [2]	NA		551	NA	NA
Tires [3]			3,571		NA
Asphalt Concrete			29,489	NA	NA
Asphalt Shingles			10,433		NA
Drywall			26,202	NA	NA
Fiberglass Insulation		NA	8,246	NA	NA
Vinyl Flooring		NA	-		NA
Wood Flooring		NA	-		NA

Please enter data in short tons (1 short ton = 2,000 lbs.)

Please refer to the User's Guide if you need assistance completing this table.

[1] Recycled concrete used as aggregate in the production of new concrete

[2] Recycled fly ash is utilized to displace portland cement in concrete production.

[3] Recycling tires is defined in this analysis as using tires for crumb rubber applications and tire-derived aggregate uses in civil engineering applications

GHG Emissions Analysis -- Summary Report

Version 12

GHG Emissions Waste Management Analysis for TPC/DC&E
Prepared by: Anaheim
Project Period for this Analysis: 01/00/00 to 01/00/00

Note: If you wish to save these results, rename this file (e.g., WARM-MN1) and save it. Then the "Analysis Inputs" sheet of the "WARM" file will be blank when you are ready to make another model run.

GHG Emissions from Baseline Waste Management ($MTCO_2E$): 320,598

Commodity	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$
Aluminum Cans	-	444.8	-	NA	17
Aluminum Ingot	-	783.6	-	NA	30
Steel Cans	-	2,391.0	-	NA	93
Copper Wire	-	7,454.9	-	NA	289
Glass	-	5,261.7	-	NA	204
HDPE	-	1,467.1	-	NA	57
LDPE	NA	15,783.7	-	NA	613
PET	-	1,856.4	-	NA	72
LLDPE	NA	4,513.6	-	NA	175
Corrugated Containers	-	1,515.8	-	NA	2,253
Magazines/third-class mail	-	2,632.2	-	NA	363
Newspaper	-	4,649.0	-	NA	(2,239)
Office Paper	-	6,800.2	-	NA	25,252
Phonebooks	-	224.6	-	NA	(108)
Dimensional Lumber	-	53,611.9	-	NA	3,968
Food Scraps	NA	57,262.9	-	-	81,681
Yard Trimmings	NA	146,602.2	-	-	29,554
Grass	NA	14,067.5	-	-	7,243
Branches	NA	2,285.9	-	-	169
Mixed Paper (general)	-	49,475.4	-	NA	66,875
Mixed Metals	-	42,755.2	-	NA	1,660
Mixed Plastics	-	10,272.5	-	NA	399
Mixed Organics	NA	45,279.2	-	-	37,411
Mixed MSW	NA	18,751.8	-	NA	58,048
Carpet	-	11,953.3	-	NA	464
Personal Computers	-	2,011.3	-	NA	78
Clay Bricks	NA	11,710.0	NA	NA	455
Concrete	-	4,494.7	NA	NA	174
Fly Ash	-	550.9	NA	NA	21
Tires	-	3,571.3	-	NA	139
Asphalt Concrete	-	29,489.1	NA	NA	1,145
Asphalt Shingles	-	10,432.7	-	NA	405
Drywall	-	26,202.4	NA	NA	3,317
Fiberglass Insulation	NA	8,246.3	NA	NA	320
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0

GHG Emissions from Alternative Waste Management Scenario ($MTCO_2E$): 320,598

Commodity	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$	Change (Alt - Base) $MTCO_2E$
Aluminum Cans	-	-	444.8	-	NA	17	0
Aluminum Ingot	-	-	783.6	-	NA	30	0
Steel Cans	-	-	2,391.0	-	NA	93	0
Copper Wire	-	-	7,454.9	-	NA	289	0
Glass	-	-	5,261.7	-	NA	204	0
HDPE	-	-	1,467.1	-	NA	57	0
LDPE	-	NA	15,783.7	-	NA	613	0
PET	-	-	1,856.4	-	NA	72	0
LLDPE	-	NA	4,513.6	-	NA	175	0
Corrugated Containers	-	-	1,515.8	-	NA	2,253	0
Magazines/third-class mail	-	-	2,632.2	-	NA	363	0
Newspaper	-	-	4,649.0	-	NA	(2,239)	0
Office Paper	-	-	6,800.2	-	NA	25,252	0
Phonebooks	-	-	224.6	-	NA	(108)	0
Dimensional Lumber	-	-	53,611.9	-	NA	3,968	0
Food Scraps	-	NA	57,262.9	-	-	81,681	0
Yard Trimmings	-	NA	146,602.2	-	-	29,554	0
Grass	-	NA	14,067.5	-	-	7,243	0
Branches	-	NA	2,285.9	-	-	169	0
Mixed Paper (general)	NA	-	49,475.4	-	NA	66,875	0
Mixed Metals	NA	-	42,755.2	-	NA	1,660	0
Mixed Plastics	NA	-	10,272.5	-	NA	399	0
Mixed Organics	NA	NA	45,279.2	-	-	37,411	0
Mixed MSW	NA	NA	18,751.8	-	NA	58,048	0
Carpet	-	-	11,953.3	-	NA	464	0
Personal Computers	-	-	2,011.3	-	NA	78	0
Clay Bricks	-	NA	11,710.0	NA	NA	455	0
Concrete	NA	-	4,494.7	NA	NA	174	0
Fly Ash	NA	-	550.9	NA	NA	21	0
Tires	-	-	3,571.3	-	NA	139	0
Asphalt Concrete	-	-	29,489.1	NA	NA	1,145	0
Asphalt Shingles	-	-	10,432.7	-	NA	405	0
Drywall	-	-	26,202.4	NA	NA	3,317	0
Fiberglass Insulation	-	NA	8,246.3	NA	NA	320	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0

Total Change in GHG Emissions ($MTCO_2E$): -

Note: a negative value (i.e., a value in parentheses) indicates an emission reduction; a positive value indicates an emission increase.

This is equivalent to…

Removing annual emissions from	-	Passenger Vehicles
Conserving	-	Gallons of Gasoline
Conserving	-	Cylinders of Propane Used for Home Barbeques
Conserving	-	Railway Cars of Coal
	0.00000%	Annual CO_2 emissions from the U.S. transportation sector
	0.00000%	Annual CO_2 emissions from the U.S. electricity sector

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).

b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

c) The GHG emissions results estimated in WARM indicate the full life-cycle benefits waste management alternatives. Due to the timing of the GHG emissions from the waste management pathways, (e.g., avoided landfilling and increased recycling), the actual GHG implications may accrue over the long-term. Therefore, one should not interpret the GHG emissions implications as occurring all in one year, but rather through time.

CalRecycle. 2008 Waste Characterization Study

Material Classes in California's Overall Disposed Waste Stream (Detailed)

	Categories in WARM	Tons	Percent	Percent by Category
Paper				17.3%
Uncoated Corrugated Cardboard	Mixed Paper (general)	1,905,897	4.8%	
Paper Bags	Mixed Paper (general)	155,848	0.4%	
Newspaper	Newspaper	499,960	1.3%	
White Ledger Paper	Office Paper	259,151	0.7%	
Other Office Paper	Office Paper	472,147	1.2%	
Maganizes and Catalogs	Magazines/Third-class Mail	283,069	0.7%	
Phone Books and Directories	Phonebooks	24,149	0.1%	
Other Miscellaneous Paper	Mixed Paper (general)	1,202,354	3.0%	
Remainder/Composite Paper	Mixed Paper (general)	2,056,546	5.2%	
Glass				1.4%
Clear Glass Bottles and Containers	Glass	196,093	0.5%	
Green Glass Bottles and Containers	Glass	79,491	0.2%	
Brown Glass Bottles and Containers	Glass	108,953	0.3%	
Other Colored Glass Bottles and Containers	Glass	40,570	0.1%	
Flat Glas	Glass	33,899	0.1%	
Remainder/Composite Glass	Glass	106,838	0.3%	
Metal				4.6%
Tin/Steel Cans	Steel Cans	236,405	0.6%	
Major Appliances	Steel Cans	17,120	0.0%	
Used Oil Filters	Steel Cans	3,610	0.0%	
Other Ferrous	Copper Wire	801,704	2.0%	
Aluminum Cans	Aluminum Cans	47,829	0.1%	
Other Non-Ferrous	Aluminum Ingot	84,268	0.2%	
Remainder/Composite Metal	Mixed Metals	618,747	1.6%	
Electronics				0.5%
Brown Goods	Personal Computers	76,725	0.2%	
Computer-Related Electronnics	Personal Computers	32,932	0.1%	
Other Small Consumer Electronics	Personal Computers	34,588	0.1%	
Video Display Devices	Personal Computers	72,053	0.2%	
Plastic				9.6%
PETE Containers	PET	199,644	0.5%	
HDPE Containers	HDPE	157,779	0.4%	
Miscellaneous Plastic Containers	Corrugated Containers	163,008	0.4%	
Plastic Trash Bags	LLDPE	361,997	0.9%	
Plastic Grocery and Other Merchandise Bags	LLDPE	123,405	0.3%	
Non-Bag Commercial and Industrial Packaging Film	LDPE	194,863	0.5%	
Film Products	LDPE	113,566	0.3%	
Other Film	LDPE	554,002	1.4%	
Durable Plastic Items	LDPE	834,970	2.1%	
Remainder/Composite Plastic	Mixed Plastics	1,104,719	2.8%	
Other Organic				32.4%
Food	Food Scraps	6,158,120	15.5%	
Leaves and Grass	Grass (assume leaves too)	1,512,832	3.8%	
Prunings and Trimmings	Yard Trimmings	1,058,854	2.7%	
Branches and Stumps	Branches	245,830	0.6%	
Manures	Mixed Organics	20,373	0.1%	
Textiles	Fiberglass Insulation	886,814	2.2%	
Carpet	Carpet	1,285,473	3.2%	
Remainder/Composite Organic	Mixed Organics	1,719,743	4.3%	

Inerts and Other				29.1%
Concrete	Concrete	483,367	1.2%	
Asphalt Paving	Asphalt Concrete	129,834	0.3%	
Asphalt Roofing	Asphalt Shingles	1,121,945	2.8%	
Lumber	Dimensional Lumber	5,765,482	14.5%	
Gypsum Board	Drywall	642,511	1.6%	
Rock, Soil and Fines	Clay Bricks	1,259,308	3.2%	
Remainder/Composite Inerts and Other	Drywall	2,175,322	5.5%	
Household Hazardous Wastes				0.3%
Paint	Mixed MSW	48,025	0.1%	
Vehicle and Equipment Fuels	Mixed MSW	6,424	0.0%	
Used Oil	Mixed MSW	3,348	0.0%	
Batteries	Mixed MSW	19,082	0.0%	
Remainder/Composite Household Hazardous Wast	Mixed MSW	43,873	0.1%	
Special Waste				3.9%
Ash	Fly Ash	40,736	0.1%	
Treated Medical Waste	Mixed MSW	0	0.0%	
Bulky Itmes	Mixed MSW	1,393,091	3.5%	
Tires	Tires	60,180	0.2%	
Remainder/Composite Special Waste	Mixed MSW	52,463	0.1%	
Mixed Residue				0.8%
Mixed Residue	Mixed MSW	330,891	0.8%	
TOTAL		**39,722,820**	**100.0%**	

CalRecycle. Statewide Alternative Daily Cover (ADC) by Material Type

http://www.calrecycle.ca.gov/LGCentral/Reports/ReportViewer.aspx?ReportName=ReportEdrsAnnualQuarterADC

Total of ADC by Material Type

Year	Ash	Auto Shred	C&D	Compost	Contaminated Sediment	Green Material	Mixed	Other	Sludge	Tires	Total
2006	2,255	683,064	383,619	0	77	2,656,850	28,145	126,052	298,998	40,931	4,219,992
2007	1,566	632,495	358,784	3,379	40,960	2,307,255	12,588	172,311	326,680	66,042	3,922,060
2008	5,282	622,055	746,300	679	63,232	2,195,876	17,894	256,033	235,743	49,638	4,192,731

Percent of ADC by Material Type

	Ash	Auto Shred	C&D	Compost	Contaminated Sediment	Green Material	Mixed	Other	Sludge	Tires	Total
2006	0.05%	16.19%	9.09%	0.00%	0.00%	62.96%	0.67%	2.99%	7.09%	0.97%	100.00%
2007	0.04%	16.13%	9.15%	0.09%	1.04%	58.83%	0.32%	4.39%	8.33%	1.68%	100.00%
2008	0.13%	14.84%	17.80%	0.02%	1.51%	52.37%	0.43%	6.11%	5.62%	1.18%	100.00%
Average	0.07%	15.72%	12.01%	0.03%	0.85%	58.05%	0.47%	4.50%	7.01%	1.28%	100.00%

WARM OUTPUTs

CalRecycle Disposal By Facility - City of Anaheim (Disposal Reporting System)

	Interstate Tons + Transform Tons	ADC+AIC	**TOTAL**
2011	358,148	239,015	597,163
2010	373,358	218,357	591,715
2009	376,613	248,924	625,537
Average 2011-2009	369,373	235,432	604,805

http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d595%26ReportYear%3d2009%26ReportName%3dReportEDRSJurisDisposalByFacility

Average Baseline 2012		**TONS MSW**		**TONS ADC**	**TOTAL**		**MTons CO2e**
		369,373		235,432	604,805		320,598
	MSW	**TONS MSW**	**ADC**	**TONS ADC**		**TOTAL**	**MTons CO2e With 75% Landfill Recovery**
Inputs For WARM	%	369,373	%	235,432	604,805	%	80,149
Aluminum Cans	0.1%	445		0	445	0.1%	
Aluminum Ingot	0.2%	784		0	784	0.1%	
Steel Cans	0.6%	2,391		0	2,391	0.4%	
Copper Wire	2.0%	7,455		0	7,455	1.2%	
Glass	1.4%	5,262		0	5,262	0.9%	
HDPE	0.4%	1,467		0	1,467	0.2%	
LDPE	4.3%	15,784		0	15,784	2.6%	
PET	0.5%	1,856		0	1,856	0.3%	
LLDPE	1.2%	4,514		0	4,514	0.7%	
PP	0.0%	0		0	0	0.0%	
PS	0.0%	0		0	0	0.0%	
PVC	0.0%	0		0	0	0.0%	
PLA	0.0%	0		0	0	0.0%	
Corrugated Containers	0.4%	1,516		0	1,516	0.3%	
Magazines/Third-class Mail	0.7%	2,632		0	2,632	0.4%	
Newspaper	1.3%	4,649		0	4,649	0.8%	
Office Paper	1.8%	6,800		0	6,800	1.1%	
Phonebooks	0.1%	225		0	225	0.0%	
Textbooks	0.0%	0		0	0	0.0%	
Dimensional Lumber	14.5%	53,612		0	53,612	8.9%	
Medium-density Fiberboard	0.0%	0		0	0	0.0%	
Food Scraps	15.5%	57,263		0	57,263	9.5%	
Yard Trimmings	2.7%	9,846	58.1%	136,756	146,602	24.2%	
Grass	3.8%	14,067		0	14,067	2.3%	
Leaves	0.0%	0		0	0	0.0%	
Branches	0.6%	2,286		0	2,286	0.4%	
Mixed Paper (general)	13.4%	49,475		0	49,475	8.2%	
Mixed Paper (primarily residential)	0.0%	0		0	0	0.0%	
Mixed Paper (primarily from offices)	0.0%	0		0	0	0.0%	
Mixed Metals	1.6%	5,754	15.7%	37,002	42,755	7.1%	
Mixed Plastics	2.8%	10,273		0	10,273	1.7%	
Mixed Recyclables	0.0%	0		0	0	0.0%	
Mixed Organics	4.4%	16,181	12.4%	29,098	45,279	7.5%	
Mixed MSW	4.8%	17,642	0.5%	1,110	18,752	3.1%	
Carpet	3.2%	11,953		0	11,953	2.0%	
Personal Computers	0.5%	2,011		0	2,011	0.3%	
Clay Bricks	3.2%	11,710		0	11,710	1.9%	
Concrete	1.2%	4,495		0	4,495	0.7%	
Fly Ash	0.1%	379	0.1%	172	551	0.1%	
Tires	0.2%	560	1.3%	3,012	3,571	0.6%	
Asphalt Concrete	0.3%	1,207	12.0%	28,282	29,489	4.9%	
Asphalt Shingles	2.8%	10,433		0	10,433	1.7%	
Drywall	7.1%	26,202		0	26,202	4.3%	
Fiberglass Insulation	2.2%	8,246		0	8,246	1.4%	
Vinyl Flooring	0.0%	0		0	0	0.0%	
Wood Flooring	0.0%	0		0	0	0.0%	
	100%	369,373	100.0%	235,432	604,805	100.0%	

Dry landfill conditions

Assumes 75 percent of fugitive GHG emissions are captured within the landfill's Landfill Gas Capture System with a landfill gas capture efficiency of 75%. The Landfill gas capture efficiency is based on the California Air Resources Board's (CARB) Local Government Operations Protocol (LGOP), Version 1.1. Because the landfill gas captured is not under the jurisdiction of the City of Anaheim, the landfill gas emissions from the capture system are not included in the City's inventory. Only fugitive sources of GHG emissions from landfill are included.

Jurisdiction Disposal By Facility

With Reported Alternative Daily Cover (ADC) and Alternative Intermediate Cover (AIC)

Disposal during 2011 for Anaheim

Destination Facility	SWISNo	Qtr	Instate Ton	Transform Ton	Export Ton	Total ADC	Total AIC
Antelope Valley Public Landfill I and II	19-AA-5624		7				
Azusa Land Reclamation Co. Landfill	19-AA-0013		684				
California Street Landfill	36-AA-0017		11				
Chiquita Canyon Sanitary Landfill	19-AA-0052		567			78,848	
Commerce Refuse-To-Energy Facility	19-AA-0506			28			
El Sobrante Landfill	33-AA-0217		994				
Frank R. Bowerman Sanitary LF	30-AB-0360		25,847			584	
Lancaster Landfill and Recycling Center	19-AA-0050		36			10	
Mid-Valley Sanitary Landfill	36-AA-0055		1			1	
Olinda Alpha Sanitary Landfill	30-AB-0035		328,400			76,698	
Otay Landfill	37-AA-0010		582				
Prima Deshecha Sanitary Landfill	30-AB-0019		266			668	
Puente Hills Landfill	19-AA-0053		56				
San Timoteo Sanitary Landfill	36-AA-0087						
Simi Valley Landfill & Recycling Center	56-AA-0007		698			82,014	
Southeast Resource Recovery Facility	19-AK-0083			166			
Yearly Totals:			358,148.1.	193.24.	..	238,821.7.	..

Notes:
1. Disposal tonnage is subject to change due to revisions. Report is based upon information provided by County disposal reports.
2. AIC information was not collected prior to 2006.
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Jurisdiction Disposal By Facility

With Reported Alternative Daily Cover (ADC) and Alternative Intermediate Cover (AIC)

Disposal during 2010 for Anaheim

Destination Facility	SWISNo	Qtr	Instate Ton	Transform Ton	Export Ton	Total ADC	Total AIC
Azusa Land Reclamation Co. Landfill	19-AA-0013		5,728			4,416	
Bakersfield Metropolitan (Bena) SLF	15-AA-0273		1				
California Street Landfill	36-AA-0017		45				
Chiquita Canyon Sanitary Landfill	19-AA-0052		276			69,058	
Commerce Refuse-To-Energy Facility	19-AA-0506			12			
El Sobrante Landfill	33-AA-0217		131				
Frank R. Bowerman Sanitary LF	30-AB-0360		27,602			460	
Lancaster Landfill and Recycling Center	19-AA-0050		23			11	
Mid-Valley Sanitary Landfill	36-AA-0055		1			1	
Olinda Alpha Sanitary Landfill	30-AB-0035		335,894			80,792	
Prima Deshecha Sanitary Landfill	30-AB-0019		2,597			483	
Puente Hills Landfill	19-AA-0053		47				
Simi Valley Landfill & Recycling Center	56-AA-0007		1,001			63,111	
Southeast Resource Recovery Facility	19-AK-0083			12			
Sunshine Canyon City/County Landfill	19-AA-2000		11				
Yearly Totals:			373,358.3.	23.89.	..	218,332.75.	..

Notes:
1. Disposal tonnage is subject to change due to revisions. Report is based upon information provided by County disposal reports.
2. AIC information was not collected prior to 2006.
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Jurisdiction Disposal By Facility

With Reported Alternative Daily Cover (ADC) and Alternative Intermediate Cover (AIC)

Disposal during 2009 for Anaheim

Destination Facility	SWISNo	Qtr	Instate Ton	Transform Ton	Export Ton	Total ADC	Total AIC
Azusa Land Reclamation Co. Landfill	19-AA-0013		593			19	
Badlands Sanitary Landfill	33-AA-0006		5				
Bakersfield Metropolitan (Bena) SLF	15-AA-0273		2				
Chiquita Canyon Sanitary Landfill	19-AA-0052		68			92,645	
Commerce Refuse-To-Energy Facility	19-AA-0506			7			
El Sobrante Landfill	33-AA-0217		60				
Frank R. Bowerman Sanitary LF	30-AB-0360		26,502			1,136	
Kettleman Hills - B18 Nonhaz Codisposal	16-AA-0023		2				
Lancaster Landfill and Recycling Center	19-AA-0050		5			4	
Mid-Valley Sanitary Landfill	36-AA-0055		4			5	
Olinda Alpha Sanitary Landfill	30-AB-0035		346,114			91,767	
Prima Deshecha Sanitary Landfill	30-AB-0019		175			1,039	
Puente Hills Landfill	19-AA-0053		28			1	
Simi Valley Landfill & Recycling Center	56-AA-0007		42			62,301	
Sunshine Canyon City/County Landfill	19-AA-2000		13				
Yearly Totals:			373,613.07.	7.46.	..	248,916.49.	..

Notes:
1. Disposal tonnage is subject to change due to revisions. Report is based upon information provided by County disposal reports.
2. AIC information was not collected prior to 2006.
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EPA Reported

Source: U.S. Environmental Protection Agency. Facility Level information on Greenhouse Gases Tool (Flight). 2011 Greenhouse Gas Emissions from Large Facilities. Anaheim. http://ghgdata.epa.gov/ghgp/main.do#/facility

				Metric Tons/Year			
Year	**Facility**	**Location**	**City**	**CO_2**	**N_2O**	**CH_4**	**CO2e**
2011	Anaheim Combustion Turbine	1144 North Kraemer Boulevard	Anaheim	14,653	0.027	0.27	14,667
2011	Canyon Power Plant	3071 E. Miraloma Avenue	Anaheim	21,293	0.039	0.39	21,313
				35,946	0.066	0.660	35,980

Facility Name: Canyon Power Plant
Facility Identifier:
Facility Reporting Year: 2011
Facility Location:
Address: 3071 E. Miraloma Avenue
City: Anaheim, CA
State: CA
Postal Code: 92806

Facility Site Details:
CO2 Equivalent (excluding biogenic, mtons, Subparts C-HH): 21313.3
CO2 Equivalent (mtons, Subparts NN-PP):
Biogenic CO2 (mtons, Subparts C-HH): 0
Cogeneration Unit Emissions Indicator: N
GHG Report Start Date: 2011-01-01
GHG Report End Date: 2011-12-31
Description of Changes to Calculation Methodology:
Description of Best Available Monitoring Methods Used:
Part 75 Biogenic Emissions Indication:
Primary NAICS Code: 221112
Second Primary NAICS Code:

Parent Company Details:
Parent Company Name: SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY
Address: 225 South Lake Street Suite 1250, Pasadena, CA 91101
Percent Ownership Interest: 100

Subpart D: Electricity Generation

Gas Information Details

Gas Name	Other Gas Name	Gas Quantity	Own Result?
Biogenic Carbon dioxide		0 (Metric Tons)	
Methane		0.39 (Metric Tons)	
Nitrous Oxide		0.039 (Metric Tons)	
Carbon Dioxide		21293 (Metric Tons)	

Unit Details:

Unit Name : 3
Unit Type : Electricity Generator
Part 75 Methodology : Appendix G, Equation G-4
Methodology Start Date: 2011-06-12
Methodology End Date: 2011-12-31
Acid Rain Program Indicator: Y

Emission Details:
Annual CO2 Emissions Including Biomass (metric tons): 7114.9
Annual CO2 Emissions Including Biomass (short tons): 7842.8
Annual CO2 Emissions from Biomass (metric tons): 0.0

Appendix G Equation G4:
Operating Hours Fuel Flow Rate: 0
Operating Hours HHV Substitution: 0

Electricity Fuel Details:

Fuel type : Natural Gas (Weighted U.S. Average)
CH4 Emissions CO2 Equivalent (metric tons): 2.8
N2O Emissions CO2 Equivalent (metric tons): 4.1

Unit Name : 1
Unit Type : Electricity Generator
Part 75 Methodology : Appendix G, Equation G-4
Methodology Start Date: 2011-08-12
Methodology End Date: 2011-12-31
Acid Rain Program Indicator: Y

Emission Details:
Annual CO2 Emissions Including Biomass (metric tons): 3335.5
Annual CO2 Emissions Including Biomass (short tons): 3676.7
Annual CO2 Emissions from Biomass (metric tons): 0.0

Appendix G Equation G4:
Operating Hours Fuel Flow Rate: 0
Operating Hours HHV Substitution: 0

Electricity Fuel Details:
Fuel type : Natural Gas (Weighted U.S. Average)
CH4 Emissions CO2 Equivalent (metric tons): 1.3
N2O Emissions CO2 Equivalent (metric tons): 1.9

Unit Name : 2
Unit Type : Electricity Generator
Part 75 Methodology : Appendix G, Equation G-4
Methodology Start Date: 2011-08-10
Methodology End Date: 2011-12-31
Acid Rain Program Indicator: Y

Emission Details:
Annual CO2 Emissions Including Biomass (metric tons): 3781.7
Annual CO2 Emissions Including Biomass (short tons): 4168.6
Annual CO2 Emissions from Biomass (metric tons): 0.0

Appendix G Equation G4:
Operating Hours Fuel Flow Rate: 0
Operating Hours HHV Substitution: 0

Electricity Fuel Details:
Fuel type : Natural Gas (Weighted U.S. Average)
CH4 Emissions CO2 Equivalent (metric tons): 1.5
N2O Emissions CO2 Equivalent (metric tons): 2.2

Unit Name : 4
Unit Type : Electricity Generator
Part 75 Methodology : Appendix G, Equation G-4
Methodology Start Date: 2011-06-11
Methodology End Date: 2011-12-31
Acid Rain Program Indicator: Y

Emission Details:
Annual CO2 Emissions Including Biomass (metric tons): 7060.9
Annual CO2 Emissions Including Biomass (short tons): 7783.2
Annual CO2 Emissions from Biomass (metric tons): 0.0

Appendix G Equation G4:
Operating Hours Fuel Flow Rate: 0
Operating Hours HHV Substitution: 0

Electricity Fuel Details:

Fuel type : Natural Gas (Weighted U.S. Average)
CH4 Emissions CO2 Equivalent (metric tons): 2.8
N2O Emissions CO2 Equivalent (metric tons): 4.1

Facility Name: Anaheim Combustion Turbine
Facility Identifier:
Facility Reporting Year: 2011
Facility Location:
Address: 1144 NORTH KRAEMER BLVD
City: ANAHEIM
State: CA
Postal Code: 92805

Facility Site Details:
CO2 Equivalent (excluding biogenic, mtons, Subparts C-HH): 14666.5
CO2 Equivalent (mtons, Subparts NN-PP):
Biogenic CO2 (mtons, Subparts C-HH): 0
Cogeneration Unit Emissions Indicator: N
GHG Report Start Date: 2011-01-01
GHG Report End Date: 2011-12-31
Description of Changes to Calculation Methodology:
Description of Best Available Monitoring Methods Used:
Part 75 Biogenic Emissions Indication:
Primary NAICS Code: 221112
Second Primary NAICS Code:

Parent Company Details:
Parent Company Name: The City of Anaheim
Address: 201S. Anaheim Blvd., Anaheim, CA 92805
Percent Ownership Interest: 100

Subpart D: Electricity Generation

Gas Information Details

Gas Name	Other Gas Name	Gas Quantity	Own Result?
Biogenic Carbon dioxide		0 (Metric Tons)	
Methane		0.27 (Metric Tons)	
Nitrous Oxide		0.027 (Metric Tons)	
Carbon Dioxide		14652.5 (Metric Tons)	

Unit Details:

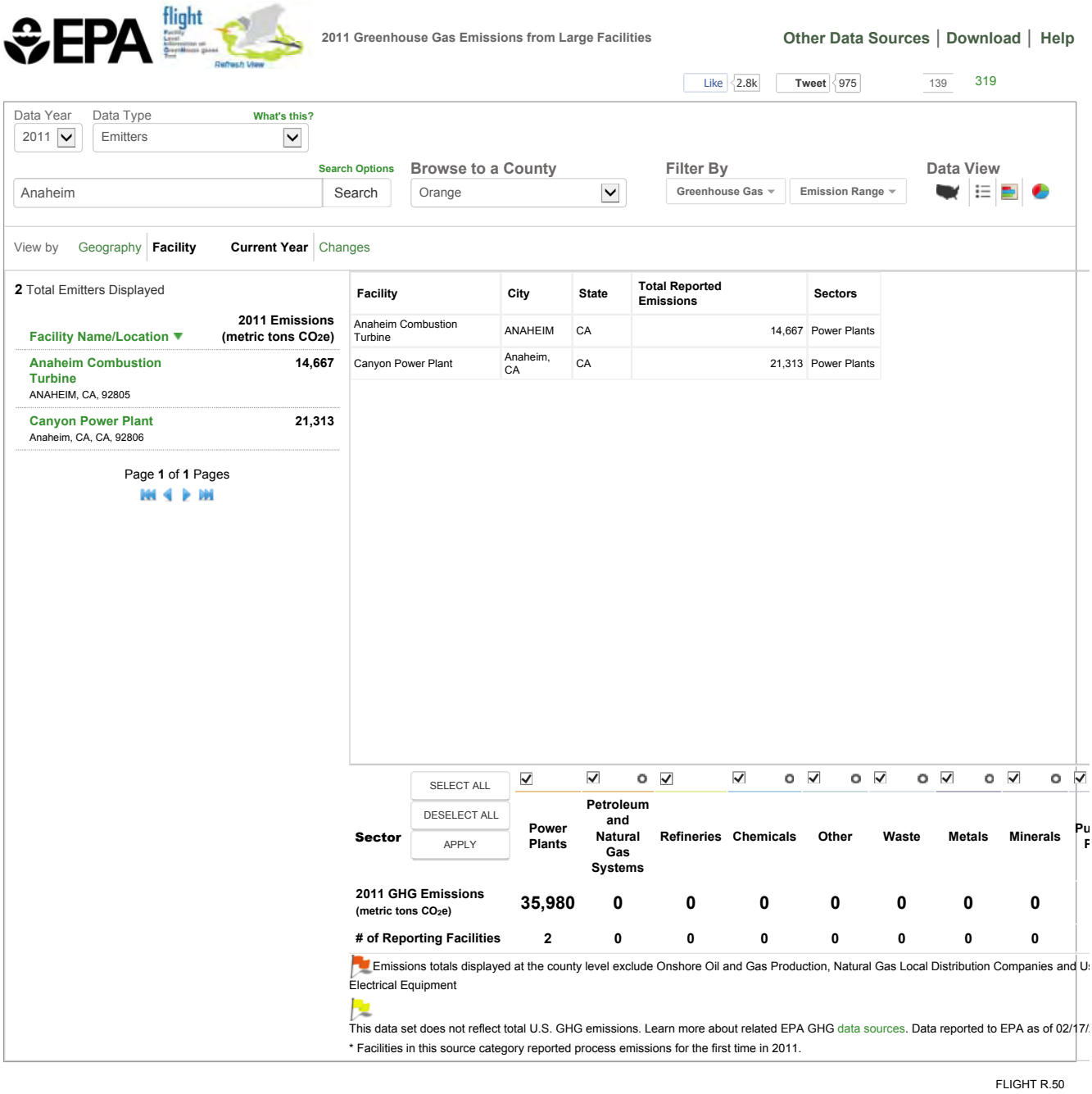
Unit Name : 1
Unit Type : Electricity Generator
Part 75 Methodology : Appendix G, Equation G-4
Methodology Start Date: 2011-01-01
Methodology End Date: 2011-12-31
Acid Rain Program Indicator: Y

Emission Details:
Annual CO2 Emissions Including Biomass (metric tons): 14652.5
Annual CO2 Emissions Including Biomass (short tons): 16151.5
Annual CO2 Emissions from Biomass (metric tons): 0.0

Appendix G Equation G4:
Operating Hours Fuel Flow Rate: 0
Operating Hours HHV Substitution: 0

Electricity Fuel Details:

Fuel type : Natural Gas (Weighted U.S. Average)
CH4 Emissions CO2 Equivalent (metric tons): 5.7
N2O Emissions CO2 Equivalent (metric tons): 8.4



2011 Greenhouse Gas Emissions from Large Facilities

Other Data Sources | Download | Help

Like 2.8k Tweet 975 139 319

Data Year: 2011 | Data Type: Emitters | What's this?

Search Options | Anaheim | Search | Browse to a County: Orange | Filter By: Greenhouse Gas, Emission Range | Data View

View by: Geography | Facility | Current Year | Changes

2 Total Emitters Displayed

Facility Name/Location	2011 Emissions (metric tons CO2e)
Anaheim Combustion Turbine ANAHEIM, CA, 92805	14,667
Canyon Power Plant Anaheim, CA, CA, 92806	21,313

Page 1 of 1 Pages

Facility	City	State	Total Reported Emissions	Sectors
Anaheim Combustion Turbine	ANAHEIM	CA	14,667	Power Plants
Canyon Power Plant	Anaheim, CA	CA	21,313	Power Plants

SELECT ALL | DESELECT ALL | APPLY

Sector	Power Plants	Petroleum and Natural Gas Systems	Refineries	Chemicals	Other	Waste	Metals	Minerals	Pu P
2011 GHG Emissions (metric tons CO2e)	35,980	0	0	0	0	0	0	0	
# of Reporting Facilities	2	0	0	0	0	0	0	0	

Emissions totals displayed at the county level exclude Onshore Oil and Gas Production, Natural Gas Local Distribution Companies and U Electrical Equipment

This data set does not reflect total U.S. GHG emissions. Learn more about related EPA GHG data sources. Data reported to EPA as of 02/17/

* Facilities in this source category reported process emissions for the first time in 2011.

FLIGHT R.50

ANAHEIM, CALIFORNIA

Period of Record General Climate Summary - Temperature

Station:(040192) ANAHEIM													
From Year=1989 To Year=2012													
	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Day
January	70.0	47.5	58.7	95	31/2003	30	30/2002	64.8	2003	55.4	2001	0.1	0.
February	70.0	48.2	59.1	94	12/2006	30	15/1990	63.2	1995	55.3	2001	0.6	0.
March	72.4	50.4	61.4	97	19/1997	37	18/2002	66.9	2004	55.8	1999	1.0	0.
April	74.7	52.8	63.7	106	26/2004	38	02/1999	67.6	2008	59.1	1999	1.5	0.
May	77.1	57.3	67.2	106	03/2004	45	01/1999	71.8	2004	62.6	1995	2.0	0.
June	80.1	60.5	70.3	104	27/1990	50	17/1995	76.1	2006	66.6	1999	2.2	0.
July	85.2	64.2	74.7	107	22/2006	54	24/1999	82.6	2006	71.3	1991	7.1	0.
August	87.1	64.5	75.8	104	27/2009	53	23/2002	79.5	2012	71.4	2002	9.7	0.
September	86.5	62.7	74.6	109	27/2010	51	13/1991	79.2	2012	71.1	1999	10.1	0.
October	81.2	57.7	69.4	107	10/1991	44	29/2009	74.7	2008	63.2	2002	5.3	0.
November	75.4	51.8	63.6	102	03/2010	33	19/1994	68.5	2008	57.9	1994	1.4	0.
December	69.7	46.9	58.3	91	12/2010	32	23/1998	61.6	2005	55.0	2002	0.0	0.
Annual	77.4	55.4	66.4	109	20100927	30	19900215	67.7	2004	64.2	2002	41.1	0.
Winter	69.9	47.6	58.7	95	20030131	30	19900215	61.2	2006	56.7	2001	0.8	0.
Spring	74.7	53.5	64.1	106	20040426	37	20020318	68.6	2004	59.4	1999	4.6	0.
Summer	84.1	63.0	73.6	107	20060722	50	19950617	78.6	2006	70.7	1999	19.0	0.
Fall	81.0	57.4	69.2	109	20100927	33	19941119	73.3	2008	66.2	2000	16.8	0.

Table updated on Oct 31, 2012

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Western Regional Climate Center, wrcc@dri.edu

ANAHEIM, CALIFORNIA (040192)

Period of Record Monthly Climate Summary

Period of Record : 8/ 1/1989 to 3/31/2013

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	70.0	70.0	72.4	74.7	77.1	80.1	85.2	87.1	86.5	81.2	75.4	69.7	77.4
Average Min. Temperature (F)	47.5	48.2	50.4	52.8	57.3	60.5	64.2	64.5	62.7	57.7	51.8	46.9	55.4
Average Total Precipitation (in.)	3.34	3.47	1.86	0.83	0.53	0.15	0.07	0.01	0.10	0.72	0.99	2.02	14.09
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 99.8% Min. Temp.: 99.7% Precipitation: 100% Snowfall: 100% Snow Depth: 100%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

RESOLUTION 2006-187

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ANAHEIM AUTHORIZING AND DIRECTING THE GENERAL MANAGER OF THE ANAHEIM PUBLIC UTILITIES DEPARTMENT TO ESTABLISH THE GREEN CONNECTION THAT ACCOMMODATES THE PRINCIPLES OF ENVIRONMENTAL SOUNDNESS AND SUSTAINABILITY.

WHEREAS, the decisions of a city to avoid the depletion or degradation of natural resources (sustainability) must also allow the economy and the community as a whole to continue to thrive; and

WHEREAS, the U.S. Green Building Council finds that "green design" in the construction and remodeling of buildings can result in significant cost savings over the life of the buildings; and

WHEREAS, the City of Anaheim (Anaheim) finds City projects should incorporate the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED ™) as necessary and appropriate to achieve the benefits of green building; and

WHEREAS, California state law requires electric utilities procurement plans to first meet its resource needs through all available energy and demand reduction resources that are cost effective, reliable and feasible; and

WHEREAS, investments in energy and water efficiency measures provide returns on those investments and deliver economic and environmental benefits to Anaheim consumers; and

WHEREAS, the Energy Policy Act requires ninety percent (90%) of utilities' new light and medium fleet vehicles be Alternative Fuel Vehicles; and

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Anaheim as follows:

1. The Anaheim Public Utilities will increase purchases of eligible renewable energy resources. The Anaheim Public Utilities will take into consideration market conditions and renewable project availability, as well as utilize similar rate protections as provided to the investor-owned utilities. The Anaheim Public Utilities will strive to achieve its target of increasing its purchases of eligible renewable energy resources to ten percent (10%) by 2010 and twenty percent (20%) by 2015.

2. The Anaheim Public Utilities will register its power plant and fleet emissions and develop a plan to reduce those emissions in conjunction with Cal EPA mandates.

3. All future City-owned projects over 10,000 square feet in building area that enter the design and construction phase shall meet U.S. Green Building Council's LEED™ registration and certification, provided that the project is cost-effective over the life of the building.

4. Developers and builders in Anaheim shall be encouraged to receive LEED™ registration and certification.

5. The Anaheim Public Utilities shall first acquire all cost effective, reliable and feasible energy efficiency and demand reduction resources before procuring other energy resources.

6. An overall citywide goal of twenty percent (20%) reduction in energy use and a fifteen percent (15%) reduction in water use are to be achieved by 2015, taking into consideration savings achieved since public benefit programs and water best management practices were implemented.

7. The Anaheim Public Utilities shall accelerate the average rate of fleet vehicle replacement to six (6) Alternative Fuel Vehicles per year so that ninety percent (90%) of the Utilities' light and medium vehicles are Alternative Fuel Vehicles by 2020, provided the appropriate technology is both available as well as appropriately meets business requirements.

8. The City of Anaheim shall replace ten percent (10%) of its light, non-emergency vehicles with preferred low emission technologies as the vehicles are scheduled for normal replacement.

9. The Anaheim Public Utilities shall provide community leadership as well as education in the principles of environmental soundness and sustainability to increase community awareness, responsibility and participation.

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THE FOREGOING RESOLUTION is approved and adopted by the City Council of the City of Anaheim this 08 day of August, 2006, by the following roll-call vote:

AYES: Mayor Pringle, Council Members Chavez, Hernandez, Galloway, Sidhu

NOES: None

ABSENT: None

ABSTAIN: None

CITY OF ANAHEIM

By _____
MAYOR OF THE CITY OF ANAHEIM

ATTEST:

_____
CITY CLERK OF THE CITY OF ANAHEIM

62651.3