Appendix EN-1

Energy Modeling

Energy Calculations Summary

Operational Fuel Use Summary

Vehicle Class	Diesel (Gallons)	Gasoline Gallons	Natural Gas (DEG)	Electricity (MWh)
Passenger	9,762	1,438,669	-	8,124.34
Truck	375,932	383,353	8,805	
Bus	11,869	14,367	25,163	
Total	**397,563**	**1,836,388**	**33,968**	**8,124**

1. Fleet mix calculated from CalEEMod default values.
2. Gallons per mile calculated from EMFAC 2017.
3. Annual VMT obtained from EMFAC Sacramento County output file.

Energy Calculations Summary

Construction Fuel Usage Summary

	Diesel	Gasoline	Diesel	Diesel
Construction Phase	Off-road Equipment (gallons)	On-road (gallons)	On-road (gallons)	Total
1	130,279	264,156	260,575	**390,854**
2	97,478	119,643	103,755	**201,233**
3	95,607	243,151	232,638	**328,245**
4	127,880	216,179	202,437	**330,317**
TOTAL	**451,243**	**843,129**	**799,405**	**1,250,649**

Total Gasoline	**843,129**	**gallons**
Total Diesel	**1,250,649**	**gallons**

Phase 1 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	32	3,794
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	32	1,838
Grading	Excavators	2	8.00	158	0.38	82	3,939
Grading	Graders	1	8.00	187	0.41	82	2,515
Grading	Rubber Tired Dozers	1	8.00	247	0.40	82	3,241
Grading	Scrapers	2	8.00	367	0.48	82	11,556
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	82	2,354
Building Construction	Cranes	1	7.00	231	0.29	815	19,109
Building Construction	Forklifts	3	8.00	89	0.20	815	17,408
Building Construction	Generator Sets	1	8.00	84	0.74	815	20,264
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	815	30,713
Building Construction	Welders	1	8.00	46	0.45	815	6,748
Paving	Pavers	2	8.00	130	0.42	58	2,533
Paving	Paving Equipment	2	8.00	132	0.36	58	2,205
Paving	Rollers	2	8.00	80	0.38	58	1,411
Architectural Coating	Air Compressors	1	6.00	78	0.48	58	651
						TOTAL	130,279

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Hauling Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	32	576	0	0	15.00	8.50	20.00	8640	0	-	236	0
Architectural Coating	155	0	0	58	8,990	0	0	15.00	8.50	20.00	134,850.00	0.00	-	3,680	0
Building Construction	777	241	0	815	633,255	196,415	0	15.00	8.50	20.00	9,498,825.00	1,669,527.50	-	259,213	260,575
Grading	20	0	0	82	1,640	0	0	15.00	8.50	20.00	24,600.00	0.00	-	671	0
Paving	15	0	0	58	870	0	0	15.00	8.50	20.00	13,050.00	0.00	-	356	0
													TOTAL	264,156	260,575

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Phase 2 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	24	2,845
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	24	1,378
Grading	Excavators	2	8.00	158	0.38	61	2,930
Grading	Rubber Tired Dozers	1	8.00	247	0.40	61	2,411
Grading	Scrapers	2	8.00	367	0.48	61	8,597
Grading	Grader	1	8.00	187	0.41	61	1,871
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	61	1,751
Building Construction	Cranes	1	7.00	231	0.29	611	14,326
Building Construction	Forklifts	3	8.00	89	0.20	611	13,051
Building Construction	Generator Sets	1	8.00	84	0.74	611	15,192
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	611	23,025
Building Construction	Welders	1	8.00	46	0.45	611	5,059
Paving	Pavers	2	8.00	130	0.42	43	1,878
Paving	Paving Equipment	2	8.00	132	0.36	43	1,635
Paving	Rollers	2	8.00	80	0.38	43	1,046
Architectural Coating	Air Compressors	1	6.00	78	0.48	43	483
						TOTAL	97,478

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	24	432	0	0	15.00	8.50	20.00	6480	0	-	177	0
Architectural Coating	94	0	0	43	4,042	0	0	15.00	8.50	20.00	60,630.00	0.00	-	1,655	0
Building Construction	468	128	0	611	285,948	78,208	0	15.00	8.50	20.00	4,289,220.00	664,768.00	-	117,048	103,755
Grading	20	0	0	61	1,220	0	0	15.00	8.50	20.00	18,300.00	0.00	-	499	0
Paving	15	0	0	43	645	0	0	15.00	8.50	20.00	9,675.00	0.00	-	264	0
													TOTAL	119,643	103,755

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Phase 3 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	24	2,845
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	24	1,378
Grading	Excavators	2	8.00	158	0.38	61	2,930
Grading	Rubber Tired Dozers	1	8.00	247	0.40	61	2,411
Grading	Scrapers	2	8.00	367	0.48	61	8,597
Grading	Grader	1					
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	61	1,751
Building Construction	Cranes	1	7.00	231	0.29	611	14,326
Building Construction	Forklifts	3	8.00	89	0.20	611	13,051
Building Construction	Generator Sets	1	8.00	84	0.74	611	15,192
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	611	23,025
Building Construction	Welders	1	8.00	46	0.45	611	5,059
Paving	Pavers	2	8.00	130	0.42	43	1,878
Paving	Paving Equipment	2	8.00	132	0.36	43	1,635
Paving	Rollers	2	8.00	80	0.38	43	1,046
Architectural Coating	Air Compressors	1	6.00	78	0.48	43	483
						TOTAL	95,607

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	24	432	0	0	15.00	8.50	20.00	6480	0	-	177	0
Architectural Coating	191	0	0	43	8,213	0	0	15.00	8.50	20.00	123,195.00	0.00	-	3,362	0
Building Construction	955	287	0	611	583,505	175,357	0	15.00	8.50	20.00	8,752,575.00	1,490,534.50	-	238,849	232,638
Grading	20	0	0	61	1,220	0	0	15.00	8.50	20.00	18,300.00	0.00	-	499	0
Paving	15	0	0	43	645	0	0	15.00	8.50	20.00	9,675.00	0.00	-	264	0
													TOTAL	243,151	232,638

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

Phase 4 Construction Offroad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Number of days	Diesel Fuel Usage
Site Preparation	Rubber Tired Dozers	3	8	247	0.4	32	3,794
Site Preparation	Tractors/Loaders/Backhoes	4	8	97	0.37	32	1,838
Grading	Excavators	2	8.00	158	0.38	82	3,939
Grading	Rubber Tired Dozers	1	8.00	247	0.40	82	3,241
Grading	Scrapers	2	8.00	367	0.48	82	11,556
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37	82	2,354
Building Construction	Cranes	1	7.00	231	0.29	816	19,132
Building Construction	Forklifts	3	8.00	89	0.20	816	17,430
Building Construction	Generator Sets	1	8.00	84	0.74	816	20,289
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37	816	30,751
Building Construction	Welders	1	8.00	46	0.45	816	6,756
Paving	Pavers	2	8.00	130	0.42	58	2,533
Paving	Paving Equipment	2	8.00	132	0.36	58	2,205
Paving	Rollers	2	8.00	80	0.38	58	1,411
Architectural Coating	Air Compressors	1	6.00	78	0.48	58	651
						TOTAL	127,880

Notes: Equipment assumptions are consistent with CalEEMod. Fuel usage average of 0.05 gallons of diesel fuel per horsepower-hour is from the SCAQMD CEQA Air Quality Handbook, Table A9-3E.

Trips and VMT

Phase Name	Daily Worker Trip	Daily Vendor Trip	Daily Haul Trip	Days per Year	Total Worker Trips	Total Vendor Trips	Total Haul Trips	Worker Trip Length (miles)	Vendor Trip Length (miles)	Haul Trip Length (miles)	Total Worker Trip Length (miles)	Total Vendor Trip Length (miles)	Total Haul Trip Length (miles)	Total gallons of gasoline	Total gallons of diesel
Site Preparation	18	0	0	32	576	0	0	15.00	8.50	20.00	8640	0	-	236	0
Architectural Coating	126	0	0	82	10,332	0	0	15.00	8.50	20.00	154,980.00	0.00	-	4,229	0
Building Construction	631	187	0	816	514,896	152,592	0	15.00	8.50	20.00	7,723,440.00	1,297,032.00	-	210,765	202,437
Grading	25	0	0	58	1,450	0	0	15.00	8.50	20.00	21,750.00	0.00	-	594	0
Paving	15	0	0	58	870	0	0	15.00	8.50	20.00	13,050.00	0.00	-	356	0
													TOTAL	216,179	202,437

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor and haul trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2032
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed miles/hr	Fuel	Population vehicles	VMT miles/day	Trips trips/day	Fuel gas 1,000 gallons/day	Diesel gas 1,000 gallons/day	Miles per gallon	Gasoline miles per gallon	Diesel miles per gallon
SACRAMENTO	2032	LDA	Aggregated	Aggregated	GAS	737,726	23,897,710	3,437,418	600.9	0.00	39.77	36.64	6.41
SACRAMENTO	2032	LDT1	Aggregated	Aggregated	GAS	75,467	2,318,606	344,992	68.7	0.00	33.76		
SACRAMENTO	2032	LDT2	Aggregated	Aggregated	GAS	241,326	7,516,759	1,110,295	225.8	0.00	33.29		
SACRAMENTO	2032	T7 tractor construction	Aggregated	Aggregated	DSL	387	27,785	1,748	0.00	4.34	6.41		

Notes: Consistent with CalEEMod, worker vehicles assumed to be gasoline and 50% LDA, 25% LDT1, and 25% LDT2. Vendor trips are assumed to be 100% diesel Heavy-Duty Trucks (T7).

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2032
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumptio	Fuel (gal/day)	mi/kWh	CO2_RUNEX (tons	CO2 (lb/day)	% of vehicle class	VMT by project vehicle class	Gallons of fuel (kWh)	Gallons of fuel (MWh)
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	ELEC	35718.83	1348420.436	173007.9785	0	0	0.30	0	0	3.06%	2,153,278.3	7,177,594	7,177.59
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	ELEC	1917.862	73359.56697	9324.784804	0	0	0.32	0	0	0.17%	117,147.1	366,085	366.08
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	ELEC	7437.202	196353.698	36142.5029	0	0	0.54	0	0	0.45%	313,555.1	580,658	580.66

Assumptions

EMFAC Vehicle Type	kWh/100 Miles	kWh/Mile	Vehicle Type	Source
LDA	30	0.30	2017 Nissan Leaf	United States Environmental Protection Agency and U.S. Department of Energy (2016-11-16). "Model Year 2017 Fuel Economy Guide - Electric vehicles & Plug-in Hybrid Electric Vehicles" (PDF). fueleconomy.gov. Retrieved 2016-11-19. pp. 32–36.
LDT 1	32	0.32	Kia Soul EV	United States Environmental Protection Agency and U.S. Department of Energy (2016-11-16). "Model Year 2017 Fuel Economy Guide - Electric vehicles & Plug-in Hybrid Electric Vehicles" (PDF). fueleconomy.gov. Retrieved 2016-11-19. pp. 32–36.
LDT 2	54	0.54	BYD e6	United States Environmental Protection Agency and U.S. Department of Energy (2016-11-16). "Model Year 2017 Fuel Economy Guide - Electric vehicles & Plug-in Hybrid Electric Vehicles" (PDF). fueleconomy.gov. Retrieved 2016-11-19. pp. 32–36.

Note: Vehicles chosen based on typical vehicle size for each EMFAC vehicle category.

Mather South Project Regional VMT by Speed Bin

Freeways & Rural

Speed Bin	Existing	Existing Plus Mather South (Revised Base)	Existing Plus Mather South Delta	Existing Plus Mather South % Increase	Existing Plus Mather South (Revised Base with Sunrise Connection)	Existing Plus Mather South (Staff Alternative)	Existing Plus Mather South (Staff Alternative with Sunrise Connection)	Existing Plus FOUR PROJECTS*	MTP Cumulative No Project	MTP Cumulative Plus FOUR PROJECTS (Assumes JT Alt 2)	CEQA Cumulative None of FOUR PROJECTS	CEQA Cumulative Plus THREE PROJECTS* (No Mather South)	CEQA Cumulative Plus FOUR PROJECTS*
0.00-7.50	10,038	11,020	941	0	10,699	10,496	10,055	11,514			19,028	21,982	22,147
7.51-12.50	52,327	51,393	-3,684	0	51,583	51,830	52,273	45,425			55,958	54,711	53,589
12.51-17.50	167,444	168,084	967	0	169,969	168,994	170,221	193,518			223,520	214,547	212,937
17.51-22.50	568,432	552,774	7,268	0	566,562	566,602	566,806	564,472			676,264	678,881	682,861
22.51-27.50	261,687	281,863	8,000	0	266,171	268,361	267,194	280,601			245,850	264,995	260,531
27.51-32.50	470,849	475,210	15,566	0	460,712	457,652	453,463	507,519			566,810	599,609	590,721
32.51-37.50	1,521,364	1,566,961	3,760	0	1,548,005	1,542,782	1,546,197	1,615,509			1,938,384	1,896,426	1,952,166
37.51-42.50	2,110,664	2,108,420	148,119	0	2,119,524	2,160,928	2,100,802	2,020,899			2,687,952	2,875,408	2,768,043
42.51-47.60	3,961,476	3,980,240	-60,893	0	3,989,036	3,948,557	3,991,986	4,108,209			5,840,572	5,697,035	5,777,176
47.61-52.50	4,861,506	4,847,504	49,891	0	4,817,411	4,852,724	4,813,370	5,049,525			6,937,205	6,921,215	6,845,622
52.51-57.50	10,868,220	10,913,963	33,548	0	10,913,089	10,890,925	10,944,469	10,554,821			14,866,823	14,865,852	14,943,757
57.51-62.50	7,205,970	7,173,315	-75,451	0	7,189,339	7,199,927	7,201,113	7,196,895			5,604,638	5,585,588	5,556,199
62.51-67.50	574,405	575,440	897	0	575,043	574,047	574,466	631,034			925,291	922,977	931,303
67.51-72.50	1,116,557	1,116,493	1,145	0	1,116,091	1,115,783	1,116,392	1,084,823			1,116,224	1,114,226	1,113,571
Total	**33,750,937**	**33,822,680**	**130,074**	0	**33,793,234**	**33,809,608**	**33,808,808**	**33,864,766**			**41,704,517**	**41,713,452**	**41,710,625**

*** Three/Four Projects assumes Jackson Township Alternative 2**

Urban Streets

Speed Bin	Existing	Existing Plus Mather South (Revised Base)	Existing Plus Mather South Delta	Existing Plus Mather South % Increase	Existing Plus Mather South (Revised Base with Sunrise Connection)	Existing Plus Mather South (Staff Alternative)	Existing Plus Mather South (Staff Alternative with Sunrise Connection)	Existing Plus FOUR PROJECTS*	MTP Cumulative No Project	MTP Cumulative Plus FOUR PROJECTS (Assumes JT Alt 2)	CEQA Cumulative None of FOUR PROJECTS	CEQA Cumulative Plus THREE PROJECTS* (No Mather South)	CEQA Cumulative Plus FOUR PROJECTS*
0.00-7.50	71,455	71,501	4,056	0	69,856	69,823	70,575	82,546			92,173	88,979	91,735
7.51-12.50	130,957	137,010	-2,336	0	133,965	132,634	132,129	154,323			222,526	256,182	251,645
12.51-17.50	429,173	435,260	12,703	0	440,819	443,039	446,188	501,651			764,565	825,185	823,412
17.51-22.50	5,345,473	5,367,235	18,905	0	5,358,805	5,355,641	5,354,759	5,453,859			7,823,184	7,960,282	8,013,171
22.51-27.50	2,308,931	2,344,785	49,475	0	2,338,805	2,343,898	2,342,376	2,485,452			3,671,974	3,938,296	3,946,393
27.51-32.50	3,343,319	3,375,170	23,919	0	3,369,811	3,374,523	3,367,506	3,621,868			5,699,252	6,095,820	6,114,149
32.51-37.50	5,567,940	5,598,526	34,670	0	5,613,500	5,616,736	5,623,318	6,076,951			9,325,098	9,634,637	9,780,907
37.51-42.50	4,680,913	4,737,333	95,246	0	4,739,549	4,732,716	4,733,902	4,899,611			6,865,502	7,206,850	7,152,671
42.51-47.60	1,357,251	1,359,790	-22,673	0	1,349,133	1,348,453	1,354,317	1,471,816			2,144,637	2,268,794	2,261,340
47.61-52.50	559,498	566,749	6,286	0	562,389	562,192	561,075	568,782			1,283,438	1,272,712	1,279,792
52.51-57.50	163,980	157,843	-4,106	0	164,076	163,825	164,538	165,838			659,199	633,719	630,355
57.51-62.50	3,858	3,999	53	0	3,871	4,183	3,981	4,203			6,935	7,109	6,618
62.51-67.50	789	758	-29	0	735	739	730	827			1,743	1,727	1,766
67.51-72.50	-	0	0	#DIV/0!	0	0	0	-			-	-	-
Total	**23,963,537**	**24,155,958**	**216,167**	0	**24,145,315**	**24,148,403**	**24,155,397**	**25,487,727**			**38,560,228**	**40,190,291**	**40,353,952**

*** Three/Four Projects assumes Jackson Township Alternative 2**

Project Total	Existing Plus Mather South (Revised Base)					Cumulative Plus THREE PROJECTS (No Mather South)					Cumulative Plus FOUR Projects				
Speed Bin	Annual VMT	CO2 (g/mi)	Project CO2 (MT)	N2O (g/mi)	Project N2O (MTCO2e)	Annual VMT	CO2 (g/mi)	Project CO2 (MT)	N2O (g/mi)	Project N2O (MTCO2e)	Annual VMT	CO2 (g/mi)	Project CO2 (MT)	N2O (g/mi)	Project N2O (MTCO2e)
0.00-7.50	17,578	2150.7869	37.80679022	0.283633	0.1246434	(1,163,141)	2150.7869	-2501.667458	0.283633	-0.329905	(157,003)	2150.7869	-337.679565	0.28363296	-0.04453117
7.51-12.50	2,208,397	1141.7008	2521.328135	0.1143517	6.3133453	12,282,956	1141.7008	14023.46072	0.1143517	1.4045764	10,625,939	1141.700807	12131.6427	0.11435166	1.21509372
12.51-17.50	2,222,541	669.19132	1487.305298	0.0454764	2.5268321	22,117,549	669.19132	14800.87191	0.0454764	1.00582759	21,468,491	669.1913225	14366.5281	0.04547645	0.97631075
17.51-22.50	7,927,465	479.67767	3802.627979	0.0316861	6.2797644	50,043,223	479.67767	24004.61676	0.0316861	1.58567538	69,351,633	479.677675	33266.43	0.03168612	2.1974839
22.51-27.50	13,106,656	294.53868	3860.417042	0.0092349	3.0259593	97,226,711	294.53868	28637.02741	0.0092349	0.89787686	100,177,850	294.5386822	29506.2519	0.00923488	0.92513027
27.51-32.50	11,630,185	275.05551	3198.946359	0.0105796	3.0760773	144,779,910	275.05551	39822.51152	0.0105796	1.53171837	151,460,954	275.0555064	41660.1694	0.01057963	1.60240137
32.51-37.50	11,209,297	235.37337	2638.370066	0.007096	1.9885161	112,940,105	235.37337	26583.09322	0.007096	0.80141766	166,384,385	235.3733699	39162.4533	0.00709595	1.18065574
37.51-42.50	20,591,122	221.38562	4558.578168	0.0058224	2.9972481	124,779,578	221.38562	27624.4041	0.0058224	0.7265177	104,896,812	221.3856183	23222.6455	0.00582241	0.61075211
42.51-47.60	945,496	238.16218	225.1813362	0.0084325	0.1993235	45,173,928	238.16218	10758.72124	0.0084325	0.3809313	42,533,162	238.16218	10129.7907	0.00843255	0.35866291
47.61-52.50	2,632,446	259.81675	683.9535436	0.0104473	0.6875456	(3,931,202)	259.81675	-1021.392209	0.0104473	-0.0410703	(1,422,409)	259.816751	-369.565815	0.01044725	-0.01486027
52.51-57.50	(2,193,999)	258.38782	-566.902649	0.0098773	-0.5417688	(9,301,419)	258.38782	-2403.373448	0.0098773	-0.0918728	(10,451,360)	258.3878231	-2700.50406	0.00987728	-0.10323104
57.51-62.50	18,652	294.96981	5.501891922	0.0156165	0.0072821	44,289	294.96981	13.0637881	0.0156165	0.00069163	(164,132)	294.9698093	-48.4140585	0.0156165	-0.00256317
62.51-67.50	(10,214)	526.96231	-5.38257216	0.0611382	-0.0156122	(8,223)	526.96231	-4.333253196	0.0611382	-0.0005027	14,320	526.9623056	7.54610022	0.06113823	0.0008755
67.51-72.50	(64)	353.01898	-0.02250143	0.0265774	-4.235E-05	(1,998)	353.01898	-0.705314281	0.0265774	-5.31E-05	(2,653)	353.0189847	-0.93659467	0.0265774	-7.0513E-05
Total	70,305,557		22,448		26.669114	594,982,267		180,336		7.87182904	654,715,988		199996.358		8.90211012

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2032
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gal/d	Fuel (gal/day)	mi/gal	CO2_RUNEX (	CO2 (lb/day)	% of vehicle class	VMT by project ve	Gallons of fuel
SACRAMENTO	2032	All Other Buses	Bus	Aggregated	Aggregated	DSL	453.9492209	21332.3252	3813.173455	2.113880413	2113.880413	10.09154778	23.4226892	46,845	0.0%	34,065.4	3,376
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	DSL	8457.614024	285730.2579	40007.16829	4.53647831	4536.47831	62.98503782	50.90130225	101,803	0.6%	456,279.6	7,244
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	DSL	55.29205809	836.4965203	195.5085472	0.034457077	34.45707717	24.27647929	0.386623716	773	0.0%	1,335.8	55
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	DSL	2145.692308	72079.87365	10170.67983	1.542463088	1542.463088	46.73037184	17.30712118	34,614	0.2%	115,103.6	2,463
SACRAMENTO	2032	LHD1	Truck	Aggregated	Aggregated	DSL	13629.02579	436851.8272	171435.9991	20.95773214	20957.73214	20.84442268	233.3301288	466,660	1.0%	697,604.1	33,467
SACRAMENTO	2032	LHD2	Truck	Aggregated	Aggregated	DSL	5231.963985	165986.0698	65811.52512	8.939727725	8939.727725	18.56723995	99.18807858	198,376	0.4%	265,061.4	14,276
SACRAMENTO	2032	MDV	Truck	Aggregated	Aggregated	DSL	4835.632367	156787.3884	22733.8967	4.404090233	4404.090233	35.60040327	49.41584921	98,832	0.4%	250,372.1	7,033
SACRAMENTO	2032	MH	Other	Aggregated	Aggregated	DSL	1120.342274	9158.285925	112.0342274	0.831742452	831.7424524	11.01096367	9.332519869	18,665	0.0%	14,624.8	1,328
SACRAMENTO	2032	Motor Coach	Bus	Aggregated	Aggregated	DSL	136.461021	15942.71938	1992.330906	2.138378839	2138.378839	7.455516807	22.57395619	45,148	0.0%	25,458.8	3,415
SACRAMENTO	2032	PTO	Truck	Aggregated	Aggregated	DSL	0	33535.95019	0	5.523553972	5523.553972	6.071444283	61.97672975	123,953	0.1%	53,553.2	8,821
SACRAMENTO	2032	SBUS	Bus	Aggregated	Aggregated	DSL	896.5859276	28029.63445	10346.4773	3.180317731	3180.317731	8.813469854	32.24088647	64,482	0.1%	44,760.2	5,079
SACRAMENTO	2032	T6 Ag	Truck	Aggregated	Aggregated	DSL	12.16536103	46.78401642	53.52758852	0.005661235	5.661234525	8.263924805	0.054754148	110	0.0%	74.7	9
SACRAMENTO	2032	T6 CAIRP heavy	Truck	Aggregated	Aggregated	DSL	142.0029175	24801.48269	2073.242595	1.738403451	1738.403451	14.2668163	19.42574587	38,851	0.1%	39,605.2	2,776
SACRAMENTO	2032	T6 CAIRP small	Truck	Aggregated	Aggregated	DSL	81.07013833	3677.271029	1183.62402	0.287985152	287.9851523	12.76896048	3.185746385	6,371	0.0%	5,872.2	460
SACRAMENTO	2032	T6 instate construction	Truck	Aggregated	Aggregated	DSL	305.1282151	18901.57699	1379.472797	2.081845483	2081.845483	9.079241058	23.16475871	46,330	0.0%	30,183.7	3,324
SACRAMENTO	2032	T6 instate construction	Truck	Aggregated	Aggregated	DSL	2807.276568	138668.2553	12691.58822	14.04017067	14040.17067	9.876536298	155.8499424	311,700	0.3%	221,437.9	22,421
SACRAMENTO	2032	T6 instate heavy	Truck	Aggregated	Aggregated	DSL	2071.447054	213871.2102	23904.21181	17.77320648	17773.20648	12.03334977	198.1406168	396,281	0.5%	341,528.7	28,382
SACRAMENTO	2032	T6 instate small	Truck	Aggregated	Aggregated	DSL	6207.995344	274504.6963	71639.40556	23.87566482	23875.66482	11.49725875	264.1549185	528,310	0.6%	438,353.6	38,127
SACRAMENTO	2032	T6 OOS heavy	Truck	Aggregated	Aggregated	DSL	78.61702708	13791.15596	1147.808595	0.965850641	965.8506408	14.27876669	10.79308422	21,586	0.0%	22,023.0	1,542
SACRAMENTO	2032	T6 OOS small	Truck	Aggregated	Aggregated	DSL	43.11716909	1940.560516	629.5106687	0.152229223	152.2292225	12.74762154	1.683782047	3,368	0.0%	3,098.9	243
SACRAMENTO	2032	T6 Public	Truck	Aggregated	Aggregated	DSL	4723.329114	73683.86684	14327.43163	8.421215366	8421.215366	8.749790099	79.21726564	158,435	0.2%	117,665.0	13,448
SACRAMENTO	2032	T6 utility	Truck	Aggregated	Aggregated	DSL	189.7028133	3159.647752	2181.582353	0.284442463	284.4424626	11.10821402	2.898042095	5,796	0.0%	5,045.6	454
SACRAMENTO	2032	T7 Ag	Truck	Aggregated	Aggregated	DSL	13.85156556	39.53864539	60.94688845	0.009124371	9.124370644	4.333301104	0.070929384	142	0.0%	63.1	15
SACRAMENTO	2032	T7 CAIRP	Truck	Aggregated	Aggregated	DSL	846.9838787	174865.012	12365.96463	19.40691674	19406.91674	9.010447887	197.5773344	395,155	0.4%	279,240.1	30,991
SACRAMENTO	2032	T7 CAIRP construction	Truck	Aggregated	Aggregated	DSL	73.59225171	13577.16694	332.7077087	1.841831925	1841.831925	7.371555874	20.40294788	40,806	0.0%	21,681.2	2,941
SACRAMENTO	2032	T7 NNOOS	Truck	Aggregated	Aggregated	DSL	1209.959396	213184.0885	17665.40717	23.76666954	23766.66954	8.96987641	232.2294854	464,459	0.5%	340,431.4	37,953
SACRAMENTO	2032	T7 NOOS	Truck	Aggregated	Aggregated	DSL	337.4504247	68710.70518	4926.776201	7.827274155	7827.274155	8.778369559	77.82272645	155,645	0.2%	109,723.4	12,499
SACRAMENTO	2032	T7 other port	Truck	Aggregated	Aggregated	DSL	12.3867845	2109.620953	94.13956217	0.269186132	269.1861322	7.837034306	2.974040655	5,948	0.0%	3,368.8	430
SACRAMENTO	2032	T7 POAK	Truck	Aggregated	Aggregated	DSL	56.15151346	8402.317817	426.7515023	1.102878703	1102.878703	7.618533022	12.03701424	24,074	0.0%	13,417.6	1,761
SACRAMENTO	2032	T7 Public	Truck	Aggregated	Aggregated	DSL	5518.971383	111757.3846	16740.87985	17.38756237	17387.56237	6.427432565	178.1972854	356,395	0.3%	178,464.2	27,766
SACRAMENTO	2032	T7 Single	Truck	Aggregated	Aggregated	DSL	2130.552336	168893.7484	24586.27857	21.62865118	21628.65118	7.808797093	231.5312229	463,062	0.4%	269,704.6	34,539
SACRAMENTO	2032	T7 single construction	Truck	Aggregated	Aggregated	DSL	464.7836979	33682.45394	2101.269028	5.267539471	5267.539471	6.394342961	57.26529417	114,531	0.1%	53,787.2	8,412
SACRAMENTO	2032	T7 SWCV	Truck	Aggregated	Aggregated	DSL	528.4934483	21549.92879	2061.124448	7.214906689	7214.906689	2.986861746	78.91980053	157,840	0.0%	34,412.9	11,521
SACRAMENTO	2032	T7 tractor	Truck	Aggregated	Aggregated	DSL	1118.228495	131142.1914	14201.50189	14.25062161	14250.62161	9.202559368	154.7483233	309,497	0.3%	209,419.6	22,757
SACRAMENTO	2032	T7 tractor construction	Truck	Aggregated	Aggregated	DSL	386.7455323	27785.05907	1748.461515	4.336612033	4336.612033	6.407088957	47.14300046	94,286	0.1%	44,369.7	6,925
SACRAMENTO	2032	T7 utility	Truck	Aggregated	Aggregated	DSL	26.46806254	536.2728814	304.3827193	0.076454871	76.45487084	7.014240892	0.81534111	1,631	0.0%	856.4	122
SACRAMENTO	2032	UBUS	Bus	Aggregated	Aggregated	DSL	0	0	0	0	0	0	0	0	0.0%	-	-
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	ELEC	35718.83286	1348420.436	173007.9785	0	0	0	0	0	3.1%	2,153,278.3	-
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	ELEC	1917.862168	73359.56697	9324.784804	0	0	0	0	0	0.2%	117,147.1	-
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	ELEC	7437.201531	196353.698	36142.5029	0	0	0	0	0	0.4%	313,555.1	-
SACRAMENTO	2032	MDV	Truck	Aggregated	Aggregated	ELEC	5037.36909	134973.2147	24601.7899	0	0	0	0	0	0.3%	215,537.3	-
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	GAS	737726.0778	23897709.73	3437417.767	600.9385134	600938.5134	39.76731262	5527.162364	11,054,325	54.3%	38,161,999.4	959,632
SACRAMENTO	2032	MCY	Passenger	Aggregated	Aggregated	GAS	33669.86377	204696.5825	67339.72754	5.478481973	5478.481973	37.36374117	47.44156844	94,883	0.5%	326,877.8	8,749
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	GAS	75467.34852	2318605.984	344992.4013	68.68244069	68682.44069	33.75835163	630.8589101	1,261,718	5.3%	3,702,557.3	109,678
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	GAS	241326.3944	7516759.065	1110295.169	225.8202452	225820.2452	33.2864711	2072.910872	4,145,822	17.1%	12,003,432.9	360,610
SACRAMENTO	2032	LHD1	Truck	Aggregated	Aggregated	GAS	14158.41073	443791.6625	210939.2239	46.79149513	46791.49513	9.484451421	437.5091858	875,018	1.0%	708,686.2	74,721
SACRAMENTO	2032	LHD2	Truck	Aggregated	Aggregated	GAS	2097.472659	66406.17035	31249.21739	7.990135388	7990.135388	8.311019416	74.72787788	149,456	0.2%	106,043.3	12,759
SACRAMENTO	2032	MDV	Truck	Aggregated	Aggregated	GAS	155747.9941	4626377.395	707702.5876	170.2784366	170278.4366	27.1694848	1560.676999	3,121,354	10.5%	7,387,813.0	271,916
SACRAMENTO	2032	MH	Other	Aggregated	Aggregated	GAS	2319.081808	20910.74299	232.0009441	3.766815973	3766.815973	5.55130464	35.6805985	71,361	0.0%	33,392.1	6,015
SACRAMENTO	2032	T6TS	Truck	Aggregated	Aggregated	GAS	1813.205951	82076.05626	36278.62467	14.8797283	14879.7283	5.515964714	138.6432079	277,286	0.2%	131,066.4	23,761
SACRAMENTO	2032	T7IS	Truck	Aggregated	Aggregated	GAS	4.811565511	643.0145432	96.26980274	0.122276535	122.2765348	5.258691246	1.154323038	2,309	0.0%	1,026.8	195
SACRAMENTO	2032	UBUS	Bus	Aggregated	Aggregated	GAS	297.827238	22485.71663	1191.308952	4.817381253	4817.381253	4.667622397	45.52914444	91,058	0.1%	35,907.2	7,693
SACRAMENTO	2032	OBUS	Bus	Aggregated	Aggregated	GAS	471.5508353	17889.80902	9434.789112	3.274219884	3274.219884	5.463838611	30.58185729	61,164	0.0%	28,568.0	5,229
SACRAMENTO	2032	SBUS	Bus	Aggregated	Aggregated	GAS	212.8298637	9476.977989	851.3194548	0.905030166	905.0301655	10.47144985	7.99296991	15,986	0.0%	15,133.7	1,445
SACRAMENTO	2032	T7 SWCV	Truck	Aggregated	Aggregated	NG	373.0312111	15205.45077	1454.821723	5.5	5513.550348	2.75783294	46.26234053	92,525	0.0%	24,281.4	8,805
SACRAMENTO	2032	UBUS	Bus	Aggregated	Aggregated	NG	637.2658638	60871.97424	2549.063455	15.8	15757.743	3.862988135	136.3306428	272,661	0.1%	97,205.8	25,163
Total								44026566.07							100%		

Gasoline Sum	1,842,403
Diesel Sum	396,373

Project VMT (mi/yr) 70,305,557 From CalEEMod output

	Gas (gal)	Diesel (gal)	Natural Gas (DEG	Electricity (kWh)
Passenger	1,438,669	9,762		8,124
Truck	383,353	375,932	8,805	
Bus	14,367	11,869	25,163	
Total	1,836,388	397,563	33,968	8,124

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: SACRAMENTO
Calendar Year: 2032
Season: Annual
Vehicle Classification: EMFAC2011 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	Column1	MdlYr	Speed	Fuel	Population	VMT (mi/day)	Trips	Fuel_Consumption (1000 gal/day)	Fuel (gal/day)	mi/gal	CO2_RUNEX (t	CO2 (lb/day)	% of vehicle class	VMT by project vehicle	Gallons of fuel
SACRAMENTO	2032	All Other Buses	Bus	Aggregated	Aggregated	DSL	453.9492209	21332.3252	3813.173455	2.113880413	2113.880413	10.09154778	23.4226892	46,845	0.0%	34,065.4	3,376
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	DSL	8457.614024	285730.2579	40007.16829	4.53647831	4536.47831	62.98503782	50.90130225	101,803	0.6%	456,279.6	7,244
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	DSL	55.29205809	836.4965203	195.5085472	0.034457077	34.45707717	24.27647929	0.386623716	773	0.0%	1,335.8	55
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	DSL	2145.692308	72079.87365	10170.67983	1.542463088	1542.463088	46.73037184	17.30712118	34,614	0.2%	115,103.6	2,463
SACRAMENTO	2032	LHD1	Truck	Aggregated	Aggregated	DSL	13629.02579	436851.8272	171435.9991	20.95773214	20957.73214	20.84442268	233.3301288	466,660	1.0%	697,604.1	33,467
SACRAMENTO	2032	LHD2	Truck	Aggregated	Aggregated	DSL	5231.963985	165986.0698	65811.52512	8.939727725	8939.727725	18.56723995	99.18807858	198,376	0.4%	265,061.4	14,276
SACRAMENTO	2032	MDV	Truck	Aggregated	Aggregated	DSL	4835.632367	156787.3884	22733.8967	4.404090233	4404.090233	35.60040327	49.41584921	98,832	0.4%	250,372.1	7,033
SACRAMENTO	2032	MH	Other	Aggregated	Aggregated	DSL	1120.342274	9158.285925	112.0342274	0.831742452	831.7424524	11.01096367	9.332519869	18,665	0.0%	14,624.8	1,328
SACRAMENTO	2032	Motor Coach	Bus	Aggregated	Aggregated	DSL	136.461021	15942.71938	1992.330906	2.138378839	2138.378839	7.455516807	22.57395619	45,148	0.0%	25,458.8	3,415
SACRAMENTO	2032	PTO	Truck	Aggregated	Aggregated	DSL	0	33535.95019	0	5.523553972	5523.553972	6.071444283	61.97672975	123,953	0.1%	53,553.2	8,821
SACRAMENTO	2032	SBUS	Bus	Aggregated	Aggregated	DSL	896.5859276	28029.63445	10346.4773	3.180317731	3180.317731	8.813469854	32.24088647	64,482	0.1%	44,760.2	5,079
SACRAMENTO	2032	T6 Ag	Truck	Aggregated	Aggregated	DSL	12.16536103	46.78401642	53.52758852	0.005661235	5.661234525	8.263924805	0.054754148	110	0.0%	74.7	9
SACRAMENTO	2032	T6 CAIRP heavy	Truck	Aggregated	Aggregated	DSL	142.0029175	24801.48269	2073.242595	1.738403451	1738.403451	14.2668163	19.42574587	38,851	0.1%	39,605.2	2,776
SACRAMENTO	2032	T6 CAIRP small	Truck	Aggregated	Aggregated	DSL	81.07013833	3677.271029	1183.62402	0.287985152	287.9851523	12.76896048	3.185746385	6,371	0.0%	5,872.2	460
SACRAMENTO	2032	T6 instate construction	Truck	Aggregated	Aggregated	DSL	305.1282151	18901.57699	1379.472797	2.081845483	2081.845483	9.079241058	23.16475871	46,330	0.0%	30,183.7	3,324
SACRAMENTO	2032	T6 instate construction	Truck	Aggregated	Aggregated	DSL	2807.276568	138668.2553	12691.58822	14.04017067	14040.17067	9.876536298	155.8499424	311,700	0.3%	221,437.9	22,421
SACRAMENTO	2032	T6 instate heavy	Truck	Aggregated	Aggregated	DSL	2071.447054	213871.2102	23904.21181	17.77320648	17773.20648	12.03334977	198.1406168	396,281	0.5%	341,528.7	28,382
SACRAMENTO	2032	T6 instate small	Truck	Aggregated	Aggregated	DSL	6207.995344	274504.6963	71639.40556	23.87566482	23875.66482	11.49725875	264.1549185	528,310	0.6%	438,353.6	38,127
SACRAMENTO	2032	T6 OOS heavy	Truck	Aggregated	Aggregated	DSL	78.61702708	13791.15596	1147.808595	0.965850641	965.8506408	14.27876669	10.79308422	21,586	0.0%	22,023.0	1,542
SACRAMENTO	2032	T6 OOS small	Truck	Aggregated	Aggregated	DSL	43.11716909	1940.560516	629.5106687	0.152229223	152.2292225	12.74762154	1.683782047	3,368	0.0%	3,098.9	243
SACRAMENTO	2032	T6 Public	Truck	Aggregated	Aggregated	DSL	4723.329114	73683.86684	14327.43163	8.421215366	8421.215366	8.749790099	79.21726564	158,435	0.2%	117,665.0	13,448
SACRAMENTO	2032	T6 utility	Truck	Aggregated	Aggregated	DSL	189.7028133	3159.647752	2181.582353	0.284442463	284.4424626	11.10821402	2.898042095	5,796	0.0%	5,045.6	454
SACRAMENTO	2032	T7 Ag	Truck	Aggregated	Aggregated	DSL	13.85156556	39.53864539	60.94688845	0.009124371	9.124370644	4.333301104	0.070929384	142	0.0%	63.1	15
SACRAMENTO	2032	T7 CAIRP	Truck	Aggregated	Aggregated	DSL	846.9838787	174865.012	12365.96463	19.40691674	19406.91674	9.010447887	197.5773344	395,155	0.4%	279,240.1	30,991
SACRAMENTO	2032	T7 CAIRP construction	Truck	Aggregated	Aggregated	DSL	73.59225171	13577.16694	332.7077087	1.841831925	1841.831925	7.371555874	20.40294788	40,806	0.0%	21,681.2	2,941
SACRAMENTO	2032	T7 NNOOS	Truck	Aggregated	Aggregated	DSL	1209.959396	213184.0885	17665.40717	23.76666954	23766.66954	8.96987641	232.2294854	464,459	0.5%	340,431.4	37,953
SACRAMENTO	2032	T7 NOOS	Truck	Aggregated	Aggregated	DSL	337.4504247	68710.70518	4926.776201	7.827274155	7827.274155	8.778369559	77.82272645	155,645	0.2%	109,723.4	12,499
SACRAMENTO	2032	T7 other port	Truck	Aggregated	Aggregated	DSL	12.3867845	2109.620953	94.13956217	0.269186132	269.1861322	7.837034306	2.974040655	5,948	0.0%	3,368.8	430
SACRAMENTO	2032	T7 POAK	Truck	Aggregated	Aggregated	DSL	56.15151346	8402.317817	426.7515023	1.102878703	1102.878703	7.618533022	12.03701424	24,074	0.0%	13,417.6	1,761
SACRAMENTO	2032	T7 Public	Truck	Aggregated	Aggregated	DSL	5518.971383	111757.3846	16740.87985	17.38756237	17387.56237	6.427432565	178.1972854	356,395	0.3%	178,464.2	27,766
SACRAMENTO	2032	T7 Single	Truck	Aggregated	Aggregated	DSL	2130.552336	168893.7484	24586.27857	21.62865118	21628.65118	7.808797093	231.5312229	463,062	0.4%	269,704.6	34,539
SACRAMENTO	2032	T7 single construction	Truck	Aggregated	Aggregated	DSL	464.7836979	33682.45394	2101.269028	5.267539471	5267.539471	6.394342961	57.26529417	114,531	0.1%	53,787.2	8,412
SACRAMENTO	2032	T7 SWCV	Truck	Aggregated	Aggregated	DSL	528.4934483	21549.92879	2061.124448	7.214906689	7214.906689	2.986861746	78.91980053	157,840	0.0%	34,412.9	11,521
SACRAMENTO	2032	T7 tractor	Truck	Aggregated	Aggregated	DSL	1118.228495	131142.1914	14201.50189	14.25062161	14250.62161	9.202559368	154.7483233	309,497	0.3%	209,419.6	22,757
SACRAMENTO	2032	T7 tractor construction	Truck	Aggregated	Aggregated	DSL	386.7455323	27785.05907	1748.461515	4.336612033	4336.612033	6.407088957	47.14300046	94,286	0.1%	44,369.7	6,925
SACRAMENTO	2032	T7 utility	Truck	Aggregated	Aggregated	DSL	26.46806254	536.2728814	304.3827193	0.076454871	76.45487084	7.014240892	0.81534111	1,631	0.0%	856.4	122
SACRAMENTO	2032	UBUS	Bus	Aggregated	Aggregated	DSL	0	0	0	0	0	0	0	0	0.0%	-	-
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	ELEC	35718.83286	1348420.436	173007.9785	0	0	0	0	0	3.1%	2,153,278.3	-
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	ELEC	1917.862168	73359.56697	9324.784804	0	0	0	0	0	0.2%	117,147.1	-
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	ELEC	7437.201531	196353.698	36142.5029	0	0	0	0	0	0.4%	313,555.1	-
SACRAMENTO	2032	MDV	Truck	Aggregated	Aggregated	ELEC	5037.36909	134973.2147	24601.7899	0	0	0	0	0	0.3%	215,537.3	-
SACRAMENTO	2032	LDA	Passenger	Aggregated	Aggregated	GAS	737726.0778	23897709.73	3437417.767	600.9385134	600938.5134	39.76731262	5527.162364	11,054,325	54.3%	38,161,999.4	959,632
SACRAMENTO	2032	MCY	Passenger	Aggregated	Aggregated	GAS	33669.86377	204696.5825	67339.72754	5.478481973	5478.481973	37.36374117	47.44156844	94,883	0.5%	326,877.8	8,749
SACRAMENTO	2032	LDT1	Passenger	Aggregated	Aggregated	GAS	75467.34852	2318605.984	344992.4013	68.68244069	68682.44069	33.75835163	630.8589101	1,261,718	5.3%	3,702,557.3	109,678
SACRAMENTO	2032	LDT2	Passenger	Aggregated	Aggregated	GAS	241326.3944	7516759.065	1110295.169	225.8202452	225820.2452	33.2864711	2072.910872	4,145,822	17.1%	12,003,432.9	360,610
SACRAMENTO	2032	LHD1	Truck	Aggregated	Aggregated	GAS	14158.41073	443791.6625	210939.2239	46.79149513	46791.49513	9.484451421	437.5091858	875,018	1.0%	708,686.2	74,721
SACRAMENTO	2032	LHD2	Truck	Aggregated	Aggregated	GAS	2097.472659	66406.17035	31249.21739	7.990135388	7990.135388	8.311019416	74.72787788	149,456	0.2%	106,043.3	12,759
SACRAMENTO	2032	MDV	Truck	Aggregated	Aggregated	GAS	155747.9941	4626377.395	707702.5876	170.2784366	170278.4366	27.1694848	1560.676999	3,121,354	10.5%	7,387,813.0	271,916
SACRAMENTO	2032	MH	Other	Aggregated	Aggregated	GAS	2319.081808	20910.74299	232.0009441	3.766815973	3766.815973	5.55130464	35.6805985	71,361	0.0%	33,392.1	6,015
SACRAMENTO	2032	T6TS	Truck	Aggregated	Aggregated	GAS	1813.205951	82076.05626	36278.62467	14.8797283	14879.7283	5.515964714	138.6432079	277,286	0.2%	131,066.4	23,761
SACRAMENTO	2032	T7IS	Truck	Aggregated	Aggregated	GAS	4.811565511	643.0145432	96.26980274	0.122276535	122.2765348	5.258691246	1.154323038	2,309	0.0%	1,026.8	195
SACRAMENTO	2032	UBUS	Bus	Aggregated	Aggregated	GAS	297.827238	22485.71663	1191.308952	4.817381253	4817.381253	4.667622397	45.52914444	91,058	0.1%	35,907.2	7,693
SACRAMENTO	2032	OBUS	Bus	Aggregated	Aggregated	GAS	471.5508353	17889.80902	9434.789112	3.274219884	3274.219884	5.463838611	30.58185729	61,164	0.0%	28,568.0	5,229
SACRAMENTO	2032	SBUS	Bus	Aggregated	Aggregated	GAS	212.8298637	9476.977989	851.3194548	0.905030166	905.0301655	10.47144985	7.99296991	15,986	0.0%	15,133.7	1,445
SACRAMENTO	2032	T7 SWCV	Truck	Aggregated	Aggregated	NG	373.0312111	15205.45077	1454.821723	5.5	5513.550348	2.75783294	46.26234053	92,525	0.0%	24,281.4	8,805
SACRAMENTO	2032	UBUS	Bus	Aggregated	Aggregated	NG	637.2658638	60871.97424	2549.063455	15.8	15757.743	3.862988135	136.3306428	272,661	0.1%	97,205.8	25,163
Total								44026566.07							100%		

Project VMT (mi/yr)	70,305,557	From CalEEMod output

	Gasoline Sum	1,842,403
	Diesel Sum	396,373

	Gas (gal)	Diesel (gal)	Natural Gas (DEG	Electricity (kWh)
Passenger	1,438,669	9,762		8,124
Truck	383,353	375,932	8,805	
Bus	14,367	11,869	25,163	
Total	1,836,388	397,563	33,968	8,124

NOP Land Use Categories			
Land Use	Amount	Unit	Acres
Open Space	210.5	acres	210.5
Parks & Recreation	43.05	acres	43.05
Environmental Education Campus			
Commercial - Office	275000	sq ft	22.9
Residential R-20 (20 du/ac)	200	du	5
Research & Development Campus			
Commercial - Office	325000	sq ft	21.35
Commercial			
Retail	185000	sq ft	21.06
Community Center	15000	sq ft	5.8
Public Facilities			
School			23.67
Utilities/Water Storage			3.5
Roadways			62.7
Residential			
RD-5	816	du	152.63
RD-6	471	du	70.8
RD-7	638	du	84.89
RD-8	406	du	50.28
RD-10	410	du	40.97
RD-20	581	du	29.08

CalEEMod			
Land Use	Amount	Unit	Acres
City Park[1]	44.03	acres	44.03
General Office Building[2]	415250	sq ft	30.1795
Regional Shopping Center[3]	185000	sq ft	21.06
Health Club[4]	15000	sq ft	5.8
Elementary School[5]	1500	students	22.19
Single Family Housing[6]	2291	du	353.23
Apartments Low Rise[7]	449	du	44.94
Apartments Mid Rise[8]	781	du	34.08
Research & Development[9]	149000	sq ft	11.722
Light General Industry[10]	35750	sq ft	2.3485

Notes:

[1] Only parks & recreation used an input as city park land use. Open space [illegible]

[2] 60% Commercial - office for Environmental

[3] Retail input as regional shopping center

[4] Community center anticipated to be used for

[5] School represents two elementary schools with

[6] RD-5, RD-6, RD-7, RD-8 considered single family

[7] RD-10 considered low rise apartments

[8] RD-20 from Environmental Education Campus and Residential combined and input as apartments mid

[9] 40% Commercial - office of Environmental Education

Percent Energy Use by Modeled Land Use Type

Land Use	CalEEMod Land Use	General Office Building[2]	% of CalEEMod Energy Use	Research & Development[9]	% of CalEEMod Energy Use	Light General Industry[10]	% of CalEEMod Energy Use	Apartments Mid Rise[8]	% of CalEEMod Energy Use	Total
Open Space	N/A									
Parks & Recreation	City Park[1]									
Environmental Education Campus										**22.9**
Commercial - Office (60%)	General Office Building	**13.74**	**46%**							
Commercial - Office (40%)	Research & Development[9]			**9.16**	**78%**					
Residential R-20 (20 du/ac)	Apartments Mid Rise[8]							**200**	**26%**	
Research & Development Campus										**21.35**
Commercial - Office (77%)	General Office Building	**16.4395**	**54%**							
Commercial - Office (23%)	Research & Development[9]			**2.562**	**22%**					
Commercial - Office (11%)	Light General Industry[10]					**2.3485**	**100%**			
Commercial										
Retail	Regional Shopping Center[3]									
Community Center	Health Club[4]									
Public Facilities										
School	Elementary School[5]									
Utilities/Water Storage	N/A									
Roadways	N/A									
Residential										
RD-5	Single Family Housing6									
RD-6										
RD-7										
RD-8										
RD-10	Apartments Low Rise[7]									
RD-20	Apartments Mid Rise[8]							**581**	**74%**	
Total		**30.1795**		**11.722**		**2.3485**		**781**		

Energy Use by Land Use

Land Use	CalEEMod Land Use	kBTU/Yr	MMBTU/Yr	kWh/Yr	MWH/Yr
Open Space	N/A				
Parks & Recreation	City Park[1]	1697980		887868	
Environmental Education Campus		**6,649,519**	**8,596**	**4,920,584**	**4,921**
Commercial - Office (60%)	General Office Building	1,771,429	1,771	2,448,242	2,448
Commercial - Office (40%)	Research & Development[9]	3,352,136	3,352	1,648,706	1,649
Residential R-20 (20 du/ac)	Apartments Mid Rise[8]	1,525,954	1,526	823,636	824
Research & Development Campus		**4,086,275**	**4,086**	**3,896,602**	**3,897**
Commercial - Office (77%)	General Office Building	2,119,461	2,119	2,929,248	2,929
Commercial - Office (23%)	Research & Development[9]	937,574	938	461,134	461
Commercial - Office (11%)	Light General Industry[10]	1,029,240	1,029	506,220	506
Commercial		**1,184,800**	**1,185**	**2,171,550**	**2,172**
Retail	Regional Shopping Center[3]	752,950	753	1,959,150	1,959
Community Center	Health Club[4]	431,850	432	212,400	212
Public Facilities		**1,364,410**	**1,364**	**841,468**	**841**
School	Elementary School[5]	1,364,410	1,364	841,468	841
Utilities/Water Storage	N/A		-		-
Roadways	N/A				
Residential		**38,706,116**	**38,706**	**22,809,144**	**22,809**
RD-5	Single Family Housing6	31,080,600	31,081	18,520,300	18,520
RD-6					
RD-7					
RD-8					
RD-10	Apartments Low Rise[7]	3,192,620	3,193	1,896,180	1,896
RD-20	Apartments Mid Rise[8]	4432896.095	4,433	2392663.636	2,393
Total		**51,991,120**	**51,991**	**34,639,348**	**34,639**

#VALUE!

Mather South - Operational Mitigated_Annual (Mather South Operational Mitigated)_P.29 - 31

	NaturalGas Use	Electricity Use
Land Use	kBTU/yr	kWh/yr
Apartments Low Rise	3,192,620	1,896,180
Apartments Mid Rise	5,958,850	3,216,300
City Park		
Elementary School	1,364,410	841,468
General Light Industrial	1,029,240	506,220
General Office Building	3,890,890	5,377,490
Health Club	431,850	212,400
Regional Shopping Center	752,950	1,959,150
Research & Development	4,289,710	2,199,840
Single Family Housing	31,080,600	18,520,300
Total	51,991,120	34,639,348
Source Pg:	P.76	P.77