

Appendix A

Air Quality and Greenhouse Gas
Emissions Calculations

Assumptions

Basic Information

Annual Biomass - South Tahoe	8000 green tons/yr	(x2 years)
Annual Biomass - Sugar Pine Point	500 green tons/yr	(x3 years)
Season Duration	13 weeks/yr	(June-August)
Work Days - South Tahoe	61 days/yr	
Daily Haul - South Tahoe	131.1 green tons/day	
Usable Biomass Fuel - South Tahoe	65.6 BDT/day	(50% moisture)
Work Days - Sugar Pine Point	4 days/yr	
Daily Haul - Sugar Pine Point	125.0 green tons/day	
Usable Biomass Fuel - Sugar Pine Point	62.5 BDT/day	(50% moisture)

Haul Trips to Loyalton Biomass Facility - South Tahoe

Chip Van Capacity	25 tons/truck	
Daily Truck Trips	6 trips/day	
Haul Route	CA-89 & CA-49	
Distance to Facility	82 miles	(one way)
Daily Roundtrip Miles	984 miles/day	(round trip)

Haul Trips to Loyalton Biomass Facility - Sugar Pine Point

Chip Van Capacity	25 tons/truck	
Daily Truck Trips	5 trips/day	
Haul Route	CA-89 & CA-49	
Distance to Facility	56.5 miles	(one way)
Daily Roundtrip Miles	565 miles/day	(round trip)

Truck Loading Equipment

Chain Saw (25 hp)	
Chipper (100 hp)	
Excavator (175 hp)	
Loader (300 hp)	
Daily Use of Equipment	8 hrs/day

Other Information

Distance on unpaved road segments to reach piles	(fugitive PM emissions)	Assumption:	2 miles (1-way)
Crew size that will load piles onto trucks	(worker trip emissions)	Assumption:	6 workers

Biomass Hauling to Energy Facility Emissions

		South Lake Tahoe = 8000 tons/year (61 days/year)							Sugar Pine Point State Park = 500 tons/year (4 days/year)						
Air Basin	Source	ROG	NOx	PM10	PM2.5	CO2-eg	CO2-eg	Fuel use	ROG	NOx	PM10	PM2.5	CO2-eg	CO2-eg	Fuel use
		lb/day	lb/day	lb/day	lb/day	MT/day	MT/year	gal/day	lb/day	lb/day	lb/day	lb/day	MT/day	MT/year	gal/day
LTAB	Haul Truck Exhaust Truck Loading Equip Worker Trips (6) Haul Truck Fugitives TOTAL	--	--			--	--	--	--	--			--	--	--
MCAB	Haul Truck Fugitives TOTAL														
GBV	Haul Truck Fugitives TOTAL														
SVAB	Haul Truck Exhaust Biomass Plant TOTAL				--			--				--			--
OVERALL TOTAL (check)		23.2	188.0	40.5	3.8	105.6	6,439.6	321.8	22.4	177.3	35.2	3.2	100.4	401.7	287.7
		61 days							4 days						

Pile Burning Daily Emissions

		Emission Reduction (years 1 & 2)						CO2-eg
Air Basin	Source	ROG	NOx	PM10	PM2.5*	CO2-eg	CO2-eg	TOTAL
		lb/day	lb/day	lb/day	lb/day	MT/day	MT/year	2 years
LTAB	Pile Burning	758	268	1,118	--	110.1	7,155	14,309
Difference (hauling vs. pile burning)		-735	-81	-1,078	--	-5	-313	-627

Total GHGs			
MTCO2eq	max daily	annual	project
Haul Truck Exhaust	2.1	132.9	273
Truck Loading Equip	1.1	72.4	149
Worker Trips (6)	0.061	3.948	8.1
Biomass Plant	102	6,632	13,654
TOTAL	106	6,841	14,084

Daily Biomass 130.77 green tons/day
Usable Biomass 65.4 BDT/day (50% moisture)

Pile Burning Daily Emissions

		Emission Reduction (year 3) Sugar Pine Pt. Only						CO2-eg	CO2-eg
Air Basin	Source	ROG	NOx	PM10	PM2.5*	CO2-eg	CO2-eg	TOTAL	3-yr Total
		lb/day	lb/day	lb/day	lb/day	MT/day	MT/year	3rd year	3-yr Total
LTAB	Pile Burning							421	14,730
Difference (hauling vs. pile burning)								-19	-646

Daily Biomass 125.00 green tons/day
Usable Biomass 62.5 BDT/day (50% moisture)

Fire Average Emissions Factors (Flaming and Smoldering Average)

Prescribed Burn Vegetation	Pollutant Emission Factors (lb of emissions/ton of fuel consumed)									
	CO2	CO	CH4	ROG	PM2.5	NOx	NH3	N2O	SO2	CO2e
Pile and Burn (slash)	3,207	169	16.6	11.6	17.1	4.1	3.1	0.3	2.1	3,711

(incl. CO2, CH4, N2O)

Source: Urbanski, S. Wildland fire emissions, carbon, and climate: Emission factors. *Forest Ecology and Management*. 317: 51–60
(as presented in NWCG 2018, Table 4.1.1)

* It is assumed that the estimate for PM2.5 is approximately equivalent to PM10.

mass conversions:	value	units
	1,000	kg/MT
	1,000,000	g/MT
	2,000	lb/ton
	2,204.62	lb/MT

Biomass Plant & Haul Trip Emissions

8000 tons from South Tahoe over 61 days/year + 500 tons from Sugar Pine Point over 4 days/year

Basic Information

Annual Biomass	8000 green tons/yr	(x2 years) (South Tahoe)
Annual Biomass	500 green tons/yr	(x3 years) (Sugar Pine Point)
Season Duration	13 weeks/yr	(June-August)
Work Days	61 days/yr	(South Tahoe)
Daily Haul	131.1 green tons/day	(South Tahoe)
Work Days	4.0 days/yr	(Sugar Pine Point)
Daily Haul	125.0 green tons/day	(Sugar Pine Point)
Usable Biomass Fuel	65.6 BDT/day (South Tahoe)	(50% moisture)
Usable Biomass Fuel	62.5 BDT/day (Sugar Pine Pt.)	(50% moisture)

Haul Trips to Loyalton Biomass Facility

Chip Van Capacity	25 tons/truck	
(A) Daily Truck Trips	6 trips/day	
(B) Daily Truck Trips	5 trips/day	
(A) Distance to Facility	135 miles/trip	(one way)
(B) Distance to Facility	135 miles/trip	(one way)
(A) Daily Roundtrip Miles	1620 miles/day (61 days)	(round trip)
(B) Daily Roundtrip Miles	1350 miles/day (4 days)	(round trip)

Destination of chipped biomass (energy)

Trip distance (round-trip)	South Tahoe = 8000 tons/yr 366 trips = 61 days	Lincoln and Sutter Creek (270 miles round-trip)
in all air basins	270	miles/trip Prog Desc
portion in LTAB	28	miles/trip Lake Tahoe Air Basin
portion in MCAB	184	miles/trip Mountain Counties Air Basin
portion in SVAB	42	miles/trip Sacramento Valley Air Basin
portion in GBV	16	miles/trip Great Basin Valleys Air Basin
Total	270	miles/trip (check)

Destination of chipped biomass (energy)

Trip distance (round-trip)	Sugar Pine Park = 500 tons/yr 20 trips = 4 days	Lincoln and Sutter Creek (270 miles round-trip)
in all air basins	270	miles/trip Prog Desc
portion in LTAB	28	miles/trip Lake Tahoe Air Basin
portion in MCAB	184	miles/trip Mountain Counties Air Basin
portion in SVAB	42	miles/trip Sacramento Valley Air Basin
portion in GBV	16	miles/trip Great Basin Valleys Air Basin
Total	270	miles/trip (check)

Pollutant	Emissions		EF	
	tons/yr*	tons/BDT	lb/BDT	EF
TSP	4.77	8.75E-05	0.175	
NOx	65.42	1.20E-03	2.399	
VOC	4.58	8.40E-05	0.168	
CO	234.05	4.29E-03	8.582	
SO2	10.49	1.92E-04	0.385	
CO2-eq	--	1.56 MT/BDT	--	
Biomass Throughput:		54,542 (BDT/yr)*		

From Cabin Creek EIR - GHG per mass of biomass used for electricity production

*emissions and throughput based on plant operation from April-Dec 2018
Source: data provided by Northern Sierra Air Quality Management District

Pollutant	Biomass Plant Daily Emissions		Biomass Plant GHG Emissions	
	S. Tahoe	Sugar Pine	S. Tahoe	
TSP	11.5	10.9	Daily	MT CO2-eq/day
NOx			Yearly	MT CO2-eq/year
VOC			Sugar Pine	
CO			Daily	MT CO2-eq/day
SO2			Yearly	MT CO2-eq/year

South Lake Tahoe (61 days/year)

VMT associated with chipped biomass		Haul Truck Emissions (exhaust, loss, wear)		ROG	NOx	PM10	PM2.5	CO2	Fuel Use	
Daily VMT		Chipped biomass fuel (6 trips/day)		lb/day	lb/day	lb/day	lb/day	MT/day	gal/day	
South Tahoe = 8000 tons/yr	366 trips = 61 days		Daily CO2					2.065		
in all air basins	1,620	VMT/day	Daily CAPs							
portion in LTAB	168	VMT/day	Trip emissions in LTAB	28 miles	0.18	2.1	0.11	0.07	0.214	21.21
portion in MCAB	1,104	VMT/day	Trip emissions in MCAB	184 miles	1.19	13.6	0.70	0.48	1.408	139.35
portion in SVAB	252	VMT/day	Trip emissions in SVAB	42 miles	0.27	3.1	0.16	0.11	0.321	31.81
portion in GBV	96	VMT/day	Trip emissions in GVB	16 miles	0.10	1.2	0.06	0.04	0.122	12.12
Total	1,620	VMT/day (check)	Trip Total all air basins	270 miles	1.740	19.899	1.029	0.708	2.065	204.5
			Fugitives (unpaved road)	2 miles	--	--	27.65	2.77	--	--
			Total Hauling		1.7	19.9	28.7	3.5	2.065	204

1.64 18.72 28.62 3.43 1.94 192.36

Sugar Pine Point State Park (4 days/year)

VMT associated with chipped biomass		Haul Truck Emissions (exhaust, loss, wear)		ROG	NOx	PM10	PM2.5	CO2	Fuel Use	
Daily VMT		Chipped biomass fuel (5 trips/day)		lb/day	lb/day	lb/day	lb/day	MT/day	gal/day	
Sugar Pine Pt Park = 500 tons/yr	20 trips = 4 days		Daily CO2					1.721		
in all air basins	1,350	VMT/day	Daily CAPs							
portion in LTAB	140	VMT/day	Trip emissions in LTAB	28 miles	0.15	1.7	0.09	0.06	0.178	17.67
portion in MCAB	920	VMT/day	Trip emissions in MCAB	184 miles	0.99	11.3	0.58	0.40	1.173	116.12
portion in SVAB	210	VMT/day	Trip emissions in SVAB	42 miles	0.23	2.6	0.13	0.09	0.268	26.51
portion in GBV	80	VMT/day	Trip emissions in GVB	16 miles	0.09	1.0	0.05	0.03	0.102	10.10
Total	1,350	VMT/day (check)	Trip Total all air basins	270 miles	1.450	16.582	0.857	0.590	1.721	170.4
			Fugitives (unpaved road)	2 miles	--	--	0.00	0.00	--	--
			Total Hauling		1.45	16.6	0.86	0.59	1.72	170

1.36 15.60 0.81 0.56 1.62 160.30

Haul Truck Emission Rates (running exhaust, running loss, brake wear, tire wear)

T6 instate construction heavy	ROG	NOx	PM10	PM2.5	CO2	units	Fuel Use	units
	0.487	5.572	0.288	0.198	1,275	g/mile	0.12622	gal/mile

Source: wksh: 2020 On-Rd Veh Emiss Rates Source: wksh: Raw EMFAC(2020) Output Fuel Use

mass conversion rate	value	units	source
mass conversion rate	453.59	g/lb	wksh: Unit Conversions
	1,000,000	g/MT	wksh: Unit Conversions

Biomass Hauling to Energy Facility Emissions

		South Lake Tahoe = 8000 tons/year (61 days/year)							Sugar Pine Point State Park = 500 tons/year (4 days/year)						
Air Basin	Source	ROG	NOx	PM10	PM2.5	CO2-eg	CO2-eg	Fuel use	ROG	NOx	PM10	PM2.5	CO2-eg	CO2-eg	Fuel use
		lb/day	lb/day	lb/day	lb/day	MT/day	MT/year	gal/day	lb/day	lb/day	lb/day	lb/day	MT/day	MT/year	gal/day
LTAB	Haul Truck Exhaust	0.43	4.9	0.25	0.17	0.50	30.8	50.0	0.15	1.66	0.09	0.06	0.17	0.69	17.0
	Truck Loading Equip	10.3	10.7	0.36	0.32	1.1	67.9	110	10.3	10.7	0.36	0.32	1.1	4.5	110
	Worker Trips (6)	0.14	0.032	0.021	0.009	0.06	3.7	7.2	0.14	0.03	0.02	0.01	0.06	0.2	7.2
	Haul Truck Fugitives	--	--	27.65	2.77	--	--	--	--	--	23.0	2.30	--	--	--
	TOTAL	10.9	15.6	28.3	3.3	1.7	102.4	167	10.6	12.4	23.5	2.7	1.3	5.4	134
MCAB	Haul Truck Exhaust	0.63	7.22	0.37	0.26	0.75	45.7	74	0.53	6.02	0.31	0.21	0.62	2.5	62
	Biomass Plant	11.0	157	11.5	--	102.3	6,242	--	10.5	150	10.9	--	97.5	390	--
	TOTAL	11.6	165	11.8	0.26	103.1	6,288	74	11.0	156	11.2	0.21	98.2	393	62
OVERALL TOTAL		23	180	40	3.5	104.8	6,390	242	22	168	35	2.9	100	398	196
(check)		22.5	180.2	40.1	3.52	104.8	6,390	241.5	21.61	168.37	34.76	2.90	99.50	398.01	196.19

61 days

4 days

Pile Burning Daily Emissions

		South Lake Tahoe Only					
Air Basin	Source	ROG	NOx	PM10	PM2.5*	CO2-eg	CO2-eg
		lb/day	lb/day	lb/day	lb/day	MT/day	MT/year
LTAB	Pile Burning	761	269	1,121	--	110.4	6,734
Difference (hauling vs. pile burning)		-738	-89	-1,081	--	-6	-344

(61 days) 2 years 13,468

Total GHGs - South Lake Tahoe Only			
MTCO2eq	max daily	annual	project
Haul Truck Exhaust	1.3	76.5	153.1
Truck Loading Equip	1.1	67.9	135.8
Worker Trips (6)	0.061	3.705	7.4
Biomass Plant	102	6,242	12,484
TOTAL	105	6,390	12,780

Daily Biomass 131.15 green tons/day (*only 8000 tons/year considered)
 Usable Biomass 65.6 BDT/day (50% moisture)

Fire Average Emissions Factors (Flaming and Smoldering Average)

Prescribed Burn	Pollutant Emission Factors (lb of emissions/ton of fuel consumed)									
	CO2	CO	CH4	ROG	PM2.5	NOx	NH3	N2O	SO2	CO2e
Pile and Burn (slash)	3,207	169	16.6	11.6	17.1	4.1	3.1	0.3	2.1	3,711

(incl. CO2, CH4, N2O)

Source: Urbanski, S. Wildland fire emissions, carbon, and climate: Emission factors. *Forest Ecology and Management* . 317: 51–60
 (as presented in NWCG 2018, Table 4.1.1)

* It is assumed that the estimate for PM2.5 is approximately equivalent to PM10.

mass conversions:

value	units
1,000	kg/MT
1,000,000	g/MT
2,000	lb/ton
2,204.62	lb/MT

Biomass Plant & Haul Trip Emissions

8000 tons from South Tahoe over 61 days/year + 500 tons from Burton Creek over 4 days/year

Basic Information

Annual Biomass	8000 green tons/yr	(x2 years) (South Tahoe)
Annual Biomass	500 green tons/yr	(x2 years) (Burton Creek)
Season Duration	13 weeks/yr	(June-August)
Work Days	61 days/yr	(South Tahoe)
Daily Haul	131.1 green tons/day	(South Tahoe)
Work Days	4.0 days/yr	(Burton Creek)
Daily Haul	125.0 green tons/day	(Burton Creek)
Usable Biomass Fuel	65.6 BDT/day (South Tahoe)	(50% moisture)
Usable Biomass Fuel	62.5 BDT/day (Burton Creek)	(50% moisture)

Haul Trips to Loyalton Biomass Facility

Chip Van Capacity	25 tons/truck	
(A) Daily Truck Trips	6 trips/day	
(B) Daily Truck Trips	5 trips/day	
(A) Distance to Facility	82 miles/trip	(one way) South Lake Tahoe to Loyalton Biomass Plant
(B) Distance to Facility	62.5 miles/trip	(one way) Sugar Pine Point State Park to Loyalton Biomass Plant
(A) Daily Roundtrip Miles	984 miles/day (61 days)	(round trip) South Lake Tahoe to Loyalton Biomass Plant
(B) Daily Roundtrip Miles	625 miles/day (4 days)	(round trip) Sugar Pine Point State Park to Loyalton Biomass Plant

Destination of chipped biomass (energy)

South Tahoe = 8000 tons/yr	ARP Loyalton Biomass Facility, Loyalton, CA (82 miles 1-way)
Trip distance (1-way)	366 trips = 61 days
in all air basins	82 miles/trip Prog Desc
portion in LTAB	33 miles/trip Lake Tahoe Air Basin
portion in MCAB	49 miles/trip Mountain Counties Air Basin
Total	82 miles/trip (check)

Destination of chipped biomass (energy)

Burton Crk Park = 500 tons/yr	ARP Loyalton Biomass Facility, Loyalton, CA (67.5 miles 1-way)
Trip distance (1-way)	20 trips = 4 days
in all air basins	62.5 miles/trip Prog Desc
portion in LTAB	13.5 miles/trip Lake Tahoe Air Basin
portion in MCAB	49 miles/trip Mountain Counties Air Basin
Total	62.5 miles/trip (check)

Biomass Plant Emission Factors			
Pollutant	Emissions		
	tons/yr*	tons/BDT	lb/BDT
TSP	4.77	8.75E-05	0.175
NOx	65.42	1.20E-03	2.399
VOC	4.58	8.40E-05	0.168
CO	234.05	4.29E-03	8.582
SO2	10.49	1.92E-04	0.385
CO2-eq	--	1.56 MT/BDT	--
Biomass Throughput:	54,542 (BDT/yr)*		

From Cabin Creek EIR - GHG per mass of biomass used for electricity production

*emissions and throughput based on plant operation from April-Dec 2018
Source: data provided by Northern Sierra Air Quality Management District

Pollutant	Biomass Plant Daily Emissions		Biomass Plant GHG Emissions
	S. Tahoe lb/day	Burton Creek lb/day	S. Tahoe MT CO2-eq/day
TSP	11.5	10.9	MT CO2-eq/day
NOx	157	150	Yearly MT CO2-eq/year
VOC	11.0	10.5	Burton Creek
CO	563	536	Daily MT CO2-eq/day
SO2			Yearly MT CO2-eq/year

South Lake Tahoe (61 days/year)			
VMET associated with chipped biomass	South Tahoe = 8000 tons/yr	Haul Truck Emissions (exhaust, loss, wear)	ROG NOx PM10 PM2.5 CO2 Fuel use
Daily VMET	366 trips = 61 days	Chipped biomass fuel (6 trips/day)	lb/day lb/day lb/day lb/day MT/day gal/day
in all air basins	984	Daily CO2	
portion in LTAB	396	Daily CAPs	
portion in MCAB	588	Trip emissions in LTAB 33 miles	0.43 4.9 0.25 0.17 0.505 49.98
Total	984	Trip emissions in MCAB 49 miles	0.63 7.2 0.37 0.26 0.750 74.22
		Trip Total all air basins 82 miles	1.057 12.087 0.625 0.430 1.255 124.2
		Fugitives (unpaved road) 2 miles	-- -- 27.65 2.77 -- --
		Total Hauling	1.1 12.1 28.3 3.2 1.255 124
Sugar Pine Point State Park (4 days/year)			
VMET associated with chipped biomass	Burton Crk Park = 500 tons/yr	Haul Truck Emissions (exhaust, loss, wear)	ROG NOx PM10 PM2.5 CO2 Fuel use
Daily VMET	20 trips = 4 days	Chipped biomass fuel (5 trips/day)	lb/day lb/day lb/day lb/day MT/day gal/day
in all air basins	625	Daily CO2	
portion in LTAB	135	Daily CAPs	
portion in MCAB	490	Trip emissions in LTAB 13.5 miles	0.15 1.7 0.09 0.06 0.172 17.04
Total	625	Trip emissions in MCAB 49 miles	0.53 6.0 0.31 0.21 0.625 61.85
		Trip Total all air basins 62.5 miles	0.671 7.677 0.397 0.273 0.797 78.9
		Fugitives (unpaved road) 2 miles	-- -- 0.00 0.00 -- --
		Total Hauling	0.67 7.7 0.40 0.27 0.80 79

Haul Truck Emission Rates (running exhaust, running loss, brake wear, tire wear)

	ROG	NOx	PM10	PM2.5	CO2	units	Fuel Use	units
T6 instate construction heavy	0.487	5.572	0.288	0.198	1,275	g/mile	0.12622	gal/mile
	Source: wksht: 2020 On-Rd Veh Emiss Rates						Source: wksht: Raw EMFAC(2020) Output Fuel Use	

	value	units	source
mass conversion rate	453.59	g/lb	wksht: Unit Conversions
mass conversion rate	1,000,000	g/MT	wksht: Unit Conversions

Annual GHG Emissions from Biomass Power Plant

Key Note: There are typically multiple methodologies, called "tiers," for estimating GHG emissions for different sources. A Tier 1 approach relies on default emission factors and default values for other key input parameters such as the high heating value. The default values used in a Tier 1 methodology are conservative in that they result in a high estimate of GHG emissions. A Tier 2 approach uses project specific emission factors and/or input parameters (e.g., high heating value) that result in a more accurate, and lower estimate of GHG emissions. It is important to note that this analysis is conservative because a Tier 2 method is used to estimate GHG emissions from the gasification or combustion of biomass at the proposed plant and a Tier 1 approach is used to estimate the avoided level of GHG emissions that would be generated by open burning the biomass fuel in the forests.

Plant Specifications	<u>gasification</u>	<u>direct combustion</u>	units	source/notes
	<u>alternatives</u>	<u>alternative</u>		
maximum mass of biomass combusted	8,000	8,000	bdt/year	
Calculation Parameters	<u>value</u>	<u>units</u>	<u>source/notes</u>	
high heat value of biomass, minimum	8,300	btu/dry lb	wksht: 3-Operational Parameters	
mass conversion rate	2,000	lb/ton	wksht: Unit Conversions	
energy conversion rate	1,000,000	btu/MMbtu	wksht: 20-Unit Conversions	
Emission Factor	<u>value</u>	<u>units</u>	<u>source/notes</u>	
CO2 emission factor	93.80	kg/MMbtu	See Note 1	
CH4 emission factor	0.0032	kg/MMbtu	See Note 2	
N2O emission factor	0.00042	kg/MMbtu	See Note 2	
Global Warming Potential for Conversion to CO2e				
global warming potential of CH4	25	unitless	wksht: Unit Conversions	
global warming potential of N2O	298	unitless	wksht: Unit Conversions	
CO2-e Emission Factor	94.01	kg/MMbtu	composite calculation	
Conversion Rates	<u>value</u>	<u>units</u>	<u>source/notes</u>	
mass conversion rate	1.102	ton/MT	wksht: Unit Conversions	
mass conversion rate	1,000	kg/MT	wksht: 20-Unit Conversions	

GHG Emissions, maximum annual	<u>gasification</u>	<u>direct combustion</u>	units	source/notes
	<u>alternatives</u>	<u>alternative</u>		
Energy Content of Bone Dry Biomass	132,800	132,800	MMbtu/year	calculation; See Note 3
CO2-e emissions, maximum annual	12,484	12,484	MT/year	See Note 3 and Note 4
CO2-e emissions, maximum annual	13,761	13,761	ton/year	conversion calculation
CO2-eq Emission Factor:	1.56	1.56	MT/BDT	calculation

Sources

- California Air Resources Board. 2012. ARB's Regulation for the Mandatory Reporting of GHGs. Available: <http://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr_2010_clean.pdf>, which is hyperlinked to <http://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/2010_regulation.htm>. Accessed April 25, 2012. Last updated February 29, 2012.
- Code of Federal Regulations. Part 98-Mandatory Greenhouse Gas Reporting. Subparts A-C. Available: <<http://www.epa.gov/climatechange/emissions/downloads09/RuleParts98SubpartsA-C.pdf>>. Accessed April 25, 2012.
- Tornatore, Fred. Chief Technical Officer. TSS Consultants, Rancho Cordova, CA. May 3—e-mail to Austin Kerr of Ascent Environmental regarding the volume of natural gas that would be consumed by the biomass plant under the gasification and direct combustion alternatives.

Notes

- Table C-1 to Subpart C - Default CO2 Emission Factors and High Heating Values for Various Types of Fuel from 40 CFR 98 (page 789-790), which is Source 2, as required by ARB's Regulation for the Mandatory Reporting of GHGs (ARB 2012), which is Source 1
- Table C-2 to Subpart C - Default CH4 and N2O Emission Factors for Various Types of Fuel from 40 CFR 98 (page 790-791), which is Source 2, as required by ARB's Regulation for the Mandatory Reporting of GHGs (ARB 2012), which is Source 1
- Equations C-2a and C-8 from 40 CFR 98 (page 728), which is Source 2, as required by ARB's Regulation for the Mandatory Reporting of GHGs (ARB 2012), which is Source 1
- This methodology for estimating GHG emissions is considered a Tier 2 methodology, as defined on p. 47 of Source 1 (Definition number 358), because it uses the default emission factor and a measured high heat value for the biomass fuel.
- This calculation is conservative because it assumes that the maximum range of BDT would be consumed by the biomass plant and that all the biomass consumed by the plant would be forest-sourced biomass, which has a higher HHV Btu content than WUI-sourced biomass on an average annual basis.

Fugitive Dust Emissions from Haul Truck Travel on Unpaved Roads (2 miles one-way)

Haul Trips to/from treatment area

Emission Factor (EF) Calculation for Travel on Unpaved Roads

	<u>value</u>	<u>units</u>	<u>source</u>
Vehicle Type	T6 instate construction heavy	NA	EMFAC 2014
gross vehicle weight rating	26,000	lb	EMFAC 2014
mass conversion rate	2,000	lb/ton	wksht: Unit Conversions
vehicle total weight	13.00	tons/veh	conversion calculation

Emission Factor Calculation (Based on formula 1a in AP-42 Section 13.2.2., EPA 2006)

<u>Variables</u>	<u>PM10 EF Calc</u>	<u>PM2.5 EF Calc</u>	<u>Unit</u>	<u>Source</u>	
a	0.9	0.9	constant	Source 1, Table 13.2.2-2 Constants for Equations 1a and 1b AP-42 Section 13.2.2	
b	0.45	0.45	constant		
k	1.5	0.15	constant (lb/VMT)	CalEEMod2013.2, Mobile module, Road Dust tab Calc'ed above based on truck size anticipated for project	
s	4.30	4.30	surface material silt content (%)		
W	13.00	13.00	mean vehicle weight (tons)		
Emission Factor	1.152	0.1152	lb/VMT	calculation	**make sure % silt content is numerical (not x/100)

Maximum Daily VMT by Surface Type

	<u>value</u>	<u>units</u>	<u>source</u>
daily haul trips - South Tahoe	12	trips/day	6 round trips
daily haul trips - Burton Creek	10	trips/day	5 round trips
Avg. distance of truck trip on unpaved road	2.0	miles/trip	assumption

	<u>PM10</u>	<u>PM2.5</u>	<u>units</u>	<u>source</u>
Worker Trip Fugitive Dust Emiss.	2.304	0.230	lb/trip	calc using emission factor (2 miles/trip)
Round trip x 6 haul trips/day	27.65	2.77	lb/day	(6 vehicles)
Round trip x 5 haul trips/day	23.04	2.30	lb/day	(5 vehicles)

Sources

- 1 U.S. Environmental Protection Agency 2006 (November). Emission Factors & AP 42, Compilation of Air Pollutant Emission Factors-Section 13.2.2 Unpaved Roads. Available <https://www3.epa.gov/ttn/chief/ap42/ch13/index.html>. Accessed May 1, 2019

The following empirical expressions may be used to estimate the quantity in pounds (lb) of size-specific particulate emissions from an unpaved road, per vehicle mile traveled (VMT):

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k (s/12)^a (W/3)^b \quad (1a)$$

and, for vehicles traveling on publicly accessible roads, dominated by light duty vehicles, emissions may be estimated from the following:

$$E = \frac{k (s/12)^a (S/30)^d}{(M/0.5)^c} - C \quad (1b)$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)

s = surface material silt content (%)

W = mean vehicle weight (tons)

M = surface material moisture content (%)

S = mean vehicle speed (mph)

C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

Truck Loading Equipment

Representative Equipment List

Equipment Type	Comparable Equipment Type in OFFROAD2017 -ORION	Engine Size (hp)	source/notes
Chain Saw (25 hp)	OFF - Logging - Chainsaws	25	See Notes 1, 2
Loader (300 hp)	ConstMin - Rubber Tired Loaders	300	See Notes 1, 2
Chipper (100 hp)	OFF - ConstMin - Crushing/Proc. Equipment	100	See Notes 1, 2
Excavator (175 hp)	OFF - ConstMin - Excavators	175	See Notes 1, 2

Notes

- 1 The Comparable Equipment Type in OFFROAD2017 -ORION identifies how the equipment type is listed in CARB's web-based OFFROAD2017-ORION model.
- 2 It is assumed that all equipment would be operated for approximately 10.5 hours per day (8am-6:30pm).
- 3 Additional equipment and vehicles may include a fire engine present on site in the event that treatment activity ignites a fire. Emissions generated by this equipment are not included and expected to be nominal.

Sources

- 1 California Air Resources Board. 2017. OFFROAD2017-ORION. Available at <https://www.arb.ca.gov/orion/>. Accessed January 14, 2020.

Off-road Equipment Emission Rates

Equipment Type	Comparable Equipment Type in OFFROAD2017 -ORION	ROG <i>lb/day</i>	NOx <i>lb/day</i>	PM10 <i>lb/day</i>	PM2.5 <i>lb/day</i>	CO2 <i>MT/day</i>	Fuel Usage <i>gal/day</i>
Chain Saw (25 hp)	OFF - Logging - Chainsaws	8.56	0.18	0.029	0.022	0.025	6.59
Loader (300 hp)	ConstMin - Rubber Tired Loaders	0.37	4.32	0.14	0.13	0.32	31.44
Chipper (100 hp)	OFF - ConstMin - Crushing/Proc. Equipment	1.14	3.97	0.082	0.062	0.53	7.97
Excavator (175 hp)	OFF - ConstMin - Excavators	0.23	2.25	0.11	0.10	0.24	64.05

Source: wksht Off-road Equip Emiss Rts

Off-road Equipment Emissions

	ROG <i>lb/day</i>	NOx <i>lb/day</i>	PM10 <i>lb/day</i>	PM2.5 <i>lb/day</i>	CO2 <i>MT/day</i>	Fuel Usage <i>gal/day</i>	source
Daily Off-road Emissions by One Treatment Crew	10.3	10.7	0.4	0.3	1.1	110.1	summation

Equipment Daily Emissions for One Treatment Crew

units:	ROG <i>lb/crew/day</i>	NOx <i>lb/crew/day</i>	PM10 <i>lb/crew/day</i>	PM2.5 <i>lb/crew/day</i>	CO2 <i>MT/crew/day</i>	Fuel Usage <i>gal/crew/day</i>	source
	10	11	0.36	0.32	1.1	110	summation

Worker Trip Exhaust Emissions

Commute Trips by Workers on Mechanical Crew

	<u>value</u>	<u>units</u>	<u>source</u>
Number of workers on crew			
Number of crews	1	crews/day	Proj Desc
Workers per crew	6	workers/day	Proj Desc
Trip rate for crew workers	2	trips/day	assumption
Avg. worker commute trip length (1-way)	16.8	miles/trip	default worker trip length in construction module of CalEEMod V2013.2 (screenshot below)

Daily VMT by crew workers

Average daily	202	VMT/day	calculation
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Mix of passenger vehicles used in employee commutes

breakdown of passenger car VMT in Placer County

	<u>value</u>	<u>units</u>	<u>source</u>
light duty autos - gasoline	4,664,456	VMT/day	wksht: On-Rd Veh Emiss Rates
light duty autos - diesel	53,542	VMT/day	wksht: On-Rd Veh Emiss Rates
light duty trucks 1 - gasoline	626,084	VMT/day	wksht: On-Rd Veh Emiss Rates
light duty trucks 1 - diesel	202	VMT/day	wksht: On-Rd Veh Emiss Rates
light duty trucks 2 - gasoline	2,240,154	VMT/day	wksht: On-Rd Veh Emiss Rates
light duty trucks 2 - diesel	13,853	VMT/day	wksht: On-Rd Veh Emiss Rates
Total, all passenger vehicle types	7,598,292	VMT/day	summation

relative portion of passenger car VMT by veh type

	<u>value</u>	<u>units</u>	<u>source</u>
light duty autos - gasoline	61.4%	%	calculation
light duty autos - diesel	0.7%	%	calculation
light duty trucks 1 - gasoline	8.2%	%	calculation
light duty trucks 1 - diesel	0.00%	%	calculation
light duty trucks 2 - gasoline	29.5%	%	calculation
light duty trucks 2 - diesel	0.18%	%	calculation
Total, all passenger vehicle types	100.0%	%	summation

Emission Rates (running exhaust, running loss, brake wear, tire wear)

	<u>ROG</u>	<u>NOx</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>	<u>units</u>	<u>source</u>	<u>Fuel Use</u>	<u>units</u>	<u>source</u>
light duty autos - gasoline	0.259	0.053	0.046	0.019	276.131	g/mile	wksht: On-Rd Veh Emiss Rates	0.0330	gal/mile	wksht: Raw EMFAC(2020) Output Fuel Use
light duty autos - diesel	0.021	0.153	0.056	0.029	212.244	g/mile	wksht: On-Rd Veh Emiss Rates	0.0209	gal/mile	wksht: Raw EMFAC(2020) Output Fuel Use
light duty trucks 1 - gasoline	0.000	0.113	0.047	0.020	318.539	g/mile	wksht: On-Rd Veh Emiss Rates	0.0380	gal/mile	wksht: Raw EMFAC(2020) Output Fuel Use
light duty trucks 1 - diesel	0.903	1.366	0.190	0.157	427.424	g/mile	wksht: On-Rd Veh Emiss Rates	0.0420	gal/mile	wksht: Raw EMFAC(2020) Output Fuel Use
light duty trucks 2 - gasoline	0.532	0.096	0.046	0.019	351.121	g/mile	wksht: On-Rd Veh Emiss Rates	0.0419	gal/mile	wksht: Raw EMFAC(2020) Output Fuel Use
light duty trucks 2 - diesel	0.014	0.050	0.050	0.022	285.809	g/mile	wksht: On-Rd Veh Emiss Rates	0.0281	gal/mile	wksht: Raw EMFAC(2020) Output Fuel Use
Composite emiss rates - all pass vehicles	0.316	0.071	0.046	0.019	301.306	g/mile	Sumproduct calculation	Composite: 0.0359	gal/mile	Sumproduct calculation

Worker Commute Emissions (exhaust, loss, wear, fugitives)

	<u>ROG</u>	<u>NOx</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>		<u>Fuel Use</u>	<u>Gasoline</u>	<u>Diesel</u>
	lb/day	lb/day	lb/day	lb/day	MT/day	(1 crew)	gal/day		
Average daily (1 crew)	0.14	0.032	0.021	0.009	0.061	(1 crew)			
Daily emissions per crew	0.14	0.032	0.021	0.009	0.061	per crew	7.245	per crew	7.181 0.064

Source: calculations

	<u>value</u>	<u>units</u>	<u>source</u>
mass conversion rate	453.59	g/lb	wksht: Unit Conversions
mass conversion rate	1,000,000	g/MT	wksht: Unit Conversions

Construction

Construction Phase | Off-Road Equipment | Dust from Material Movement | Demolition | **Trips And VMT** | On-Road Fugitive Dust | Architectural Coatings

Import csv Default Undo

Phase Name	# Trips Worker (/day)	# Trips Vendor (/day)	Total # Trips Hauling	TripLength Worker (miles)	TripLength Vendor (miles)	TripLength Hauling (miles)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
Building Construction	1,074	294	0	16.8	6.6	20	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Architectural Coating	215	0	0	16.8	6.6	20	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Demolition	15	0	409	16.8	6.6	20	LDA,LD11,LD12	HHDT,MHDT	HHDT
Site Preparation	18	0	0	16.8	6.6	20	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Grading	20	0	0	16.8	6.6	20	LDA,LDT1,LDT2	HHDT,MHDT	HHDT
Paving	15	0	0	16.8	6.6	20	LDA,LDT1,LDT2	HHDT,MHDT	HHDT

EMFAC2017 (v1.0.2) Emissions Inventory

Region Type: County

Region: PLACER

Calendar Year: 2020

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	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT (miles/day)	Trips	Fuel Consumption (1000 gal/day)	Fuel Consumption (gal/day)	gal/mile	miles/gal
PLACER	2020	LDA	Aggregated	Aggregated	GAS	123597.499	4664456.208	581628.8	153.8271243	153,827.12	0.032979	30.323
PLACER	2020	LDA	Aggregated	Aggregated	DSL	1409.39561	53542.36084	6587.83	1.11641776	1,116.42	0.020851	47.959
PLACER	2020	LDT1	Aggregated	Aggregated	GAS	16642.3176	626084.2598	76034.21	23.81591686	23,815.92	0.038039	26.288
PLACER	2020	LDT1	Aggregated	Aggregated	DSL	15.4046148	202.4405379	51.68693	0.008500609	8.50	0.041991	23.815
PLACER	2020	LDT2	Aggregated	Aggregated	GAS	57708.4102	2240153.802	268117.3	93.91602595	93,916.03	0.041924	23.853
PLACER	2020	LDT2	Aggregated	Aggregated	DSL	288.593251	13853.17725	1424.965	0.388972695	388.97	0.028078	35.615
PLACER	2020	T6 instate construction heavy	Aggregated	Aggregated	DSL	149.235873	10146.27228	674.6896	1.280680667	1,280.68	0.126222	7.923

Running Exhaust Emission Rates for On-Road Vehicles

Source: These emission rates were provided by the California Air Resources Board's Mobile Source Emissions Inventory (EMFAC2014), which is available at <http://www.arb.ca.gov/emfac/2014/>.

It is assumed that emission rates for vehicles in the portion of Placer County that is also part of the Lake Tahoe Air Basin are also representative of emission rates in other mountainous areas of Placer County and Nevada County.

EMFAC2017 (v1.0.2) Emission Rates

Region Type: County

Region: PLACER

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

VehClass	Fuel	Population	VMT VMT/day	Trips trips/day	ROG_RUNEX g/mile	ROG_IDLEX g/veh/day	ROG_STREX g/trip
LDA	GAS	123,597	4,664,456	581,629	0.0126	0.0000	0.3086
LDA	DSL	1,409	53,542	6,588	0.0208	0.0000	0.0000
LDA	ELEC	1,855	71,850	9,266	0.0000	0.0000	0.0000
LDT1	GAS	16,642	626,084	76,034	0.0259	0.0000	0.4972
LDT1	DSL	15	202	52	0.1947	0.0000	0.0000
LDT1	ELEC	43	1,614	211	0.0000	0.0000	0.0000
LDT2	GAS	57,708	2,240,154	268,117	0.0174	0.0000	0.4342
LDT2	DSL	289	13,853	1,425	0.0143	0.0000	0.0000
LDT2	ELEC	248	8,435	1,261	0.0000	0.0000	0.0000
T6 instate construction heavy	DSL	149	10,146	675	0.4873	0.0794	0.0000

ROG_RUNLOSS	NOx_RUNEX	NOx_IDLEX	NOx_STREX	CO2_RUNEX	CO2_IDLEX	CO2_STREX	PM10_RUNEX	PM10_IDLEX
g/mile	g/mile	g/veh/day	g/trip	g/mile	g/veh/day	g/trip	g/mile	g/veh/day
0.2463	0.0529	0.0000	0.2298	276.13	0.00	58.59	0.0015	0.0000
0.0000	0.1531	0.0000	0.0000	212.24	0.00	0.00	0.0116	0.0000
0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.00	0.0000	0.0000
0.8775	0.1128	0.0000	0.3263	318.54	0.00	69.12	0.0021	0.0000
0.0000	1.3658	0.0000	0.0000	427.42	0.00	0.00	0.1453	0.0000
0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.00	0.0000	0.0000
0.5150	0.0956	0.0000	0.3747	351.12	0.00	76.84	0.0015	0.0000
0.0000	0.0503	0.0000	0.0000	285.81	0.00	0.00	0.0048	0.0000
0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.00	0.0000	0.0000
0.0000	5.5716	5.4760	1.7980	1274.99	667.79	0.00	0.1458	0.0144

PM10_STREX	PM10_PMTW	PM10_PMBW	PM2_5_RUNEX	PM2_5_IDLEX	PM2_5_STREX	PM2_5_PMTW	PM2_5_PMBW
g/trip	g/mile	g/mile	g/mile	g/veh/day	g/trip	g/mile	g/mile
0.0021	0.0080	0.0368	0.0014	0.0000	0.0019	0.0020	0.0158
0.0000	0.0080	0.0368	0.0111	0.0000	0.0000	0.0020	0.0158
0.0000	0.0080	0.0368	0.0000	0.0000	0.0000	0.0020	0.0158
0.0030	0.0080	0.0368	0.0019	0.0000	0.0027	0.0020	0.0158
0.0000	0.0080	0.0368	0.1390	0.0000	0.0000	0.0020	0.0158
0.0000	0.0080	0.0368	0.0000	0.0000	0.0000	0.0020	0.0158
0.0020	0.0080	0.0368	0.0014	0.0000	0.0019	0.0020	0.0158
0.0000	0.0080	0.0368	0.0046	0.0000	0.0000	0.0020	0.0158
0.0000	0.0080	0.0368	0.0000	0.0000	0.0000	0.0020	0.0158
0.0000	0.0120	0.1303	0.1395	0.0138	0.0000	0.0030	0.0559

Off-road Equipment Exhaust Emission Rates

Output from OFFROAD2017

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Model Year: Aggregate

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

VehClass	HP Bin	Fuel Type	ROG (tons/day)	NOx (tons/day)	PM10 (tons/day)	PM2.5 (tons/day)	CO2 (tons/day)	Annual Activity (hr/year)	Fuel Usage (gal/hr)
OFF - Logging - Chainsaws	25	Gasoline	1.183974572	0.02552499	0.004040885	0.003053113	7.712523258	807982.25	0.823508685
OFF - Logging - Fellers/Bunchers	175	Diesel	0.05307901	0.330474559	0.013646889	0.012555138	145.540412	785768.35	6.152927132
OFF - Logging - Fellers/Bunchers	300	Diesel	0.040395319	0.207844263	0.006442462	0.005927065	127.9385994	479398.3	8.812032709
OFF - Logging - Skidders	175	Diesel	0.038472065	0.231356875	0.009543865	0.008780356	101.3390411	528432.4	6.371732884
OFF - Logging - Skidders	300	Diesel	0.018403251	0.091388252	0.002838928	0.002611813	56.03461827	194413.6	9.51802343
ConstMin - Rubber Tired Loaders	300	Diesel	0.215713077	2.508087642	0.083264026	0.076602904	410.4821603	3388731.793	3.929978068
ConstMin - Excavators	175	Diesel	0.073428465	0.72197501	0.03509013	0.03228292	166.4622268	1871529.053	2.885706537
OFF - ConstMin - Crushing/Proc. Equipment	25	Gasoline	0.002738475	0.002244552	0.001550291	0.001171331	0.20548052	15727.85	0.996518914
OFF - ConstMin - Crushing/Proc. Equipment	100	Gasoline	0.001292353	0.004485861	9.23473E-05	6.97735E-05	1.324499833	6599.2	8.006637168
OFF - Agricultural - Agricultural Mowers	25	Gasoline	0.0406493	0.03304239	0.02270675	0.017156211	3.009625667	386743.05	0.599337467
ConstMin - Tractors/Loaders/Backhoes	175	Diesel	0.06678754	0.656892718	0.033096747	0.030449007	142.2627484	1698591.506	2.717285575
ConstMin - Crawler Tractors	300	Diesel	0.061739809	0.766138971	0.030743122	0.028283673	78.22487497	553582.907	4.58453447
ConstMin - Excavators	175	Diesel	0.073428465	0.72197501	0.03509013	0.03228292	166.4622268	1871529.053	2.885706537
Agricultural - Sprayers/Spray rigs	50	Diesel	0.020769762	0.064307446	0.00505936	0.004654611	0.964854499	242929.7419	0.92020828
ConstMin - Off-Highway Trucks	25	Diesel	0.000397361	0.000977343	0.000101019	0.000092937	0.106877717	6318.77412	0.548766227
Agricultural - Combine Harvesters	300	Diesel	0.089238701	0.989567915	0.036368474	0.033458996	17.64369847	752536.5261	5.432091062
ConstMin - Rubber Tired Dozers	300	Diesel	0.008868161	0.094461534	0.004600388	0.004232357	6.945496914	50470.09062	4.464802728

Chippers = OFF - ConstMin - Crushing/Proc. Equipment

Masticators = ConstMin - Excavators

Harvesters = harvesters

Dozers = dozers

Dozer Transports = on-road, 'T7 Utility' in EMFAC

Forwarders = on-road, 'T7 Tractor Construction' in EMFAC

Source: wksht raw OFFROAD2017 output

Note: These equipment may be used in one or more types of treatments under the CalVTP.

	<u>value</u>	<u>units</u>	<u>source</u>
time conversion rate	365	days/year	Earth
mass conversion rate	2,000	lb/ton	wksht: Unit Conversions
mass conversion rate	1.1023	ton/MT	wksht: Unit Conversions
daily equipment use	8	hr/day	assumption

Exhaust Emission Rates, hourly

	<i>units:</i>	HP Bin	ROG <i>lb/hr</i>	NOx <i>lb/hr</i>	PM10 <i>lb/hr</i>	PM2.5 <i>lb/hr</i>	CO2 <i>MT/hr</i>	Fuel Usage <i>gal/hr</i>
OFF - Logging - Chainsaws		25	1.07	0.02	0.004	0.003	0.003	0.824
OFF - Logging - Fellers/Bunchers		175	0.05	0.31	0.013	0.012	0.061	6.153
OFF - Logging - Fellers/Bunchers		300	0.06	0.32	0.010	0.009	0.088	8.812
OFF - Logging - Skidders		175	0.05	0.32	0.013	0.012	0.064	6.372
OFF - Logging - Skidders		300	0.07	0.34	0.011	0.010	0.095	9.518
ConstMin - Rubber Tired Loaders		300	0.05	0.54	0.018	0.017	0.040	3.930
ConstMin - Excavators		175	0.03	0.28	0.014	0.013	0.029	2.886
OFF - ConstMin - Crushing/Proc. Equipment		25	0.13	0.10	0.072	0.054	0.004	0.997
OFF - ConstMin - Crushing/Proc. Equipment		100	0.14	0.50	0.010	0.008	0.066	8.007
OFF - Agricultural - Agricultural Mowers		25	0.08	0.06	0.043	0.032	0.003	0.599
ConstMin - Tractors/Loaders/Backhoes		175	0.03	0.28	0.014	0.013	0.028	2.717
ConstMin - Crawler Tractors		300	0.08	1.01	0.041	0.037	0.047	4.585
ConstMin - Excavators		175	0.03	0.28	0.014	0.013	0.029	2.886
Agricultural - Sprayers/Spray rigs		50	0.06	0.19	0.015	0.014	0.001	0.920
ConstMin - Off-Highway Trucks		25	0.05	0.11	0.012	0.011	0.006	0.549
Agricultural - Combine Harvesters		300	0.09	0.96	0.035	0.032	0.008	5.432
ConstMin - Rubber Tired Dozers		300	0.13	1.37	0.067	0.061	0.046	4.465

Source: Calculations using values in the above table.

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory
 Region Type: Statewide
 Region: California
 Calendar Year: 2020
 Scenario: All Adopted Rules - Exhaust
 Vehicle Classification: OFFROAD2017 Equipment Types
 Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board, 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO2_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	NH3_tpd	SOx_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hhpy	Fuel Use_gwh
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	50	Diesel	1.174893524	1.421621164	1.691846674	3.661714451	3.297612359	0.51836351	0.315889953	0.290618757	0.315889953	0.000383762	0.000369898	10430249.63	9311653.087	25996.44037	379403510.8	1.1201
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	75	Diesel	1.079248722	1.305890953	1.554118159	4.211739898	7.997859024	80.1763049	0.62658175	0.57645521	0.62658175	0.000173864	0.000658777	18575950.11	10514434.3	28229.0296	663170144.2	1.7667
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	100	Diesel	1.552987137	1.879114436	2.236301478	9.749911448	13.09971466	214.0655554	1.049749589	0.965769622	1.049749589	0.001945828	0.001758893	49596586.94	20709267.73	34749.80848	1755062239	2.3949
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	175	Diesel	1.214066651	1.469530467	1.748889577	7.095777752	11.50062471	150.5682992	0.659165283	0.60432601	0.659165283	0.001364981	0.001237161	3484888.25	11709777.43	17144.87696	135017012	3.1405
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	300	Diesel	1.000148894	1.210180016	1.4402114407	3.665666666	10.92254709	161.5712221	0.465994799	0.418712515	0.465994799	0.00147383	0.001327575	37344447.53	6780303.223	8568.806543	1468989513	5.5189
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	600	Diesel	0.443569199	0.536752272	0.638779564	1.881081794	4.445913926	113.278701	0.196122145	0.180432373	0.196122145	0.00104035	0.000930767	26245403.82	2864401.43	2568.188081	1051843155	9.1626
Statewide	2020	Agricultural - Bale Wagons (Self Propelled)	Aggregated	50	Diesel	0.001280879	0.001498386	0.001844466	0.007552208	0.008084587	0.129773362	0.00477471	0.00439273	0.00477471	1.16944e-06	1.06636e-06	30067.03177	29477.48265	45.99841127	1031711.893	1.0200
Statewide	2020	Agricultural - Bale Wagons (Self Propelled)	Aggregated	100	Diesel	0.006560757	0.007939538	0.009447516	0.057290535	0.061335729	1.322500137	0.005042412	0.004639019	0.005042412	1.21124e-05	1.08665e-05	306408.4406	125841.9494	202.113679	10512139.25	2.4349
Statewide	2020	Agricultural - Bale Wagons (Self Propelled)	Aggregated	175	Diesel	0.013974716	0.016909406	0.020123591	0.134192004	0.142509049	3.223264844	0.008548642	0.007864475	0.008548642	2.95815e-05	2.64845e-05	746799.3068	223195.2816	357.2412699	28767296.71	3.3459
Statewide	2020	Agricultural - Bale Wagons (Self Propelled)	Aggregated	300	Diesel	0.003159606	0.003823123	0.004549833	0.013323921	0.038042555	0.884978234	0.001489216	0.001370079	0.001489216	8.14216e-06	7.27152e-06	205039.5257	40430.10859	66.99637194	7821670.77	5.0715
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	50	Diesel	0.012135549	0.014680414	0.01747531	0.052390648	0.059443660	0.937897158	0.004014391	0.003693239	0.004014391	3.84562E-06	3.76034E-06	217300.2465	161225.9496	495.018377	7405267.81	1.3478
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	75	Diesel	0.005420173	0.006558412	0.007805502	0.03575526	0.051386362	0.831645955	0.003806335	0.003611128	0.003806335	7.57795E-06	6.83331E-06	192683.0315	102676.0254	132.6240517	6634925.959	1.8823
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	100	Diesel	0.001114069	0.001348023	0.001604259	0.007394109	0.010283976	0.171982558	0.000751879	0.000751879	0.000751879	1.41311E-06	1.41311E-06	39846.42878	17263.7729	52.92957485	1370138.623	2.3064
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	175	Diesel	0.000753353	0.000911558	0.01084829	0.005943969	0.008531708	0.145369193	0.000438413	0.000438413	0.000438413	1.33042E-06	1.19444E-06	33680.41059	12233.94059	37.53435701	1294385.771	2.7530
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	75	Diesel	0.000942918	0.00114093	0.001357801	0.005275969	0.007967445	0.118305486	0.000600252	0.000552332	0.000600252	1.07284E-06	9.7207E-07	27410.05356	17201.92587	47.58589721	598811.742	1.5934
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	100	Diesel	0.006153571	0.007445821	0.008661142	0.034434148	0.05172082	0.77103328	0.004133207	0.003802255	0.004133207	6.39197E-06	6.32852E-06	178639.7584	79702.18414	219.5106399	1080396.683	2.2413
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	175	Diesel	0.011474849	0.013884586	0.016523783	0.077026534	0.121267114	1.853103126	0.006434778	0.005919995	0.006434778	1.69935E-05	1.52262E-05	429343.1989	134334.8843	375.7215474	38960379.34	3.1961
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	300	Diesel	0.073750993	0.089238701	0.10620143	0.309101165	0.989596215	17.64369847	0.036368474	0.034589054	0.036368474	0.000162006	0.000144971	408786.9347	752536.5261	1991.546359	174193814	5.4321
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	600	Diesel	0.013794052	0.016698002	0.019863424	0.092097337	0.159662527	2.808890938	0.004090606	0.003740916	0.004090606	5.36517E-06	4.77278E-05	134585.937	64888.9641	371.6783816	55719673.04	9.8777
Statewide	2020	Agricultural - Construction Equipment	Aggregated	50	Diesel	0.086376509	0.104515576	0.124832173	0.294010359	0.276092987	3.93342189	0.024322656	0.023746844	0.024322656	3.40183E-05	3.2187E-05	911311.2454	808706.311	2240.908598	3903008.984	1.0348
Statewide	2020	Agricultural - Construction Equipment	Aggregated	75	Diesel	0.066867336	0.080990946	0.096289863	0.33053801	0.544563319	6.976536868	0.040015831	0.036814394	0.040015831	6.29248E-05	5.73237E-05	1616391.557	1094030.325	2961.909142	68917836.31	1.4775
Statewide	2020	Agricultural - Construction Equipment	Aggregated	100	Diesel	0.136193947	0.164794676	0.196119284	0.785566705	1.124540772	17.0677041	0.057967724	0.083532986	0.090796724	0.000154772	0.000154772	3954984.883	2008315.44	4133.845005	16933074.3	1.9690
Statewide	2020	Agricultural - Construction Equipment	Aggregated	175	Diesel	0.276514086	0.334582045	0.398180284	1.807895066	2.61704323	39.81744342	0.192087353	0.183672353	0.192087353	0.000632306	0.000327164	9225254.81	3589535.805	5656.753706	440274153.2	2.5705
Statewide	2020	Agricultural - Construction Equipment	Aggregated	300	Diesel	0.149053671	0.180354942	0.214637286	0.564713831	1.68835929	26.1642193	0.071291521	0.0655588	0.071291521	0.000239052	0.000219481	6061995.999	3463004.441	2592.486263	28802784.4	4.1434
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	600	Diesel	0.016139423	0.019528702	0.023420769	0.07757327	0.164771411	2.467394483	0.007074227	0.006580289	0.007074227	2.24811E-05	2.02736E-05	571667.6128	7922.83976	88.23845202	27583416.28	7.3363
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	100	Diesel	0.002600208	0.003146252	0.003742959	0.028156738	0.028965988	0.690589845	0.002147071	0.001975305	0.002147071	6.34967E-06	5.7431E-06	160001.9173	68738.73276	51.95885274	6386485.948	2.3277
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	175	Diesel	0.006091997	0.007371295	0.00877245	0.073430701	0.073466449	1.841407513	0.004060668	0.00375826	0.004060668	1.69592E-05	1.51301E-05	426633.4566	184222.0575	323.4112343	1805911.909	2.8783
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	300	Diesel	0.005751112	0.006958846	0.008281361	0.029182301	0.032115699	21.12614924	0.003050704	0.002806648	0.003050704	1.94909E-05	1.73588E-05	489475.4259	121041.9412	152.7442	12041047.12	5.7442
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	600	Diesel	0.010983765	0.013290356	0.015816622	0.057866305	0.153502638	1.149050988	0.005938874	0.005463764	0.005938874	3.87071E-05	3.44612E-05	971724.7658	128515.6876	179.650665	14667093.81	7.5611
Statewide	2020	Agricultural - Forage & Silage Harvesters	Aggregated	100	Diesel	0.000511384	0.000618774	0.000736393	0.028638371	0.040330163	0.064217904	0.000344783	0.00031628	0.000344783	5.27654E-06	4.75276E-06	14878.56782	1191.01153	6.25344989	575280.9226	2.0691
Statewide	2020	Agricultural - Forage & Silage Harvesters	Aggregated	300	Diesel	0.000486145	0.000585233	0.000700048	0.019060188	0.006549342	0.102868461	0.000232798	0.000214474	0.000232798	9.41171E-07	8.47335E-07	23791.30057	4648.45272	13.0369854	1021659.598	5.1181
Statewide	2020	Agricultural - Forage & Silage Harvesters	Aggregated	600	Diesel	0.000488234	0.000517624	0.006607528	0.042647489	0.062222317	1.358697771	0.002385712	0.002194851	0.002385712	1.25084E-05	1.11639E-05	314795.0264	32280.22898	80.0258389	13654963.56	9.7519
Statewide	2020	Agricultural - Forage & Silage Harvesters	Aggregated	750	Diesel	0.000751226	0.000848423	0.010101925	0.04571679	0.099748618	2.855559642	0.004004475	0.003712237	0.004004475	2.63677E-05	2.3463E-05	661601.124	40769.8976	102.7193726	2826191.93	14.1459
Statewide	2020	Agricultural - Forage & Silage Harvesters	Aggregated	9999	Diesel	0.004512899	0.005466005	0.006498571	0.028469851	0.099466418	1.748995728	0.002554836	0.002554836	0.002554836	1.61434E-05	1.43708E-05	405222.683	26253.8793	44.20985054	1741836.2	20.0072
Statewide	2020	Agricultural - Forklifts	Aggregated	50	Diesel	0.008329891	0.010079168	0.011995043	0.031867773	0.030535396	0.452964823	0.002431376	0.002236866	0.002431376	3.96087E-06	3.72184E-06	104946.8663	138599.0676	225.4047662	4501397.564	0.7722
Statewide	2020	Agricultural - Forklifts	Aggregated	75	Diesel	0.000665511	0.000806527	0.000959834	0.00354922	0.005939008	0.070354736	0.000390008	0.000367087	0.000390008	5.9961E-07	6.00262E-07	16925.96242	111669.093	123.753232	725991.0514	1.5154
Statewide	2020	Agricultural - Forklifts	Aggregated																		

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory
 Region Type: Statewide
 Region: California
 Calendar Year: 2020
 Scenario: All Adopted Rules - Exhaust
 Vehicle Classification: OFFROAD2017 Equipment Types
 Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board. 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	VehClass	MdYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hhpy	Fuel Use_gph		
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	50	Diesel	1.31441E-05	1.59044E-05	1.89276E-05	0.000303016	0.000253335	0.051197509	9.8678E-07	9.07838E-07	9.8678E-07	4.72952E-07	1.47867E-07	1661.046784	1110.519052	2.789968158	53860.17402	1.4957		
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	75	Diesel	0.0001231	0.000148951	0.000177264	0.00075579	0.001294717	0.090206243	9.8359E-05	8.3569E-05	9.8359E-05	8.30308E-07	7.36251E-07	2926.642214	1665.778578	105499238	16657.78578	1.7569		
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	100	Diesel	0.000186108	0.000225191	0.000267996	0.001706014	0.002622855	0.244981166	0.000166148	0.000152856	0.000166148	2.25939E-06	1.9995E-06	7948.144118	3331.557156	8.369904475	286513.9154	2.3857		
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	175	Diesel	0.000702311	0.000849797	0.001011328	0.000897219	0.005607219	0.008895763	0.923427068	0.00051459	0.000473423	0.00051459	8.51647E-06	7.53689E-06	29959.57424	7218.373838	18.13479303	1079979.778	4.1505	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	300	Diesel	0.002272305	0.00274949	0.00327212	0.016903826	0.036316359	4.869873291	0.001188836	0.001093729	0.001188836	7.824E-05	6.913E-05	27495.711	40838.19719	103.228219	9905837.551	6.7289		
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	600	Diesel	0.001725955	0.002088406	0.002485375	0.010527904	0.033622302	3.771082193	0.001039424	0.00095627	0.001039424	3.48137E-05	3.07791E-05	122348.6086	11713.69411	30.68964974	4410510.084	10.4449		
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	750	Diesel	0.00018226	0.000220535	0.000262455	0.000659573	0.004157083	0.327667092	0.000105489	9.97406E-05	0.000105489	3.02398E-06	2.67437E-06	10630.79793	608.5035902	2.789968158	383357.2618	17.4704		
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	50	Diesel	0.000185417	0.002243477	0.002670006	0.007383921	0.005544894	5.172517254	0.000706055	0.000706055	4.72662E-06	4.22174E-06	16781.66252	17613.46935	24.58456825	795095.3243	0.9528			
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	75	Diesel	0.002874197	0.003473559	0.004138844	0.02049788	0.028636371	2.948583786	0.002570321	0.002364957	0.002570321	2.71749E-05	2.04569E-05	95663.55364	80941.39519	110.9457439	5014227.23	1.1819		
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	100	Diesel	0.003516599	0.004255085	0.005063902	0.033749466	0.04118686	4.476142567	0.002233302	0.002054638	0.002233302	4.12787E-05	3.65337E-05	145223.516	84573.1172	117.2494794	7618613.066	1.7171		
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	175	Diesel	4.87689E-05	5.90137E-05	7.02722E-05	0.00022771	0.000535305	0.03804743	3.64256E-05	3.35115E-05	3.64256E-05	3.11077E-07	1.0967.75742	459.8942704	0.630373545	57486.7838	2.3488			
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	300	Diesel	0.000132117	0.000159862	0.000190249	0.000446793	0.002793201	0.194715246	7.24309E-05	6.66344E-05	7.24309E-05	1.79628E-06	1.58924E-06	6317.321711	1839.577082	2.52149418	331123.8747	3.4341		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	25	Diesel	1.05411E-05	1.27547E-05	1.51791E-05	8.35062E-05	7.90918E-05	0.011167246	5.39381E-06	4.96231E-06	5.39381E-06	1.0293E-07	9.14566E-08	362.3089908	751.441548	1.472364875	18786.0387	0.4822		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	50	Diesel	0.000694593	0.000840458	0.001000215	0.003371506	0.002698535	0.320964644	0.000251607	0.000231479	0.000251607	2.94674E-06	2.61952E-06	10412.7604	11647.34399	22.82165557	539910.7522	0.8940		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	75	Diesel	0.001559955	0.001887545	0.002246335	0.012775209	0.017722169	1.796657117	0.001305208	0.001002091	0.001305208	1.65642E-05	1.46641E-05	58290.56151	54479.51223	106.7464535	3360070.882	1.0700		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	100	Diesel	0.001502062	0.001839275	0.002118889	0.013707368	0.016137925	1.927702635	0.001404098	0.00129177	0.001404098	1.7777E-05	1.57336E-05	65242.189	40262.13478	83.18861546	3605175.101	1.4882		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	175	Diesel	0.000124762	0.000150962	0.000179657	0.000793724	0.001414035	0.120249028	6.61183E-05	6.08288E-05	6.61183E-05	1.10802E-06	9.84556E-07	3901.347268	16263.447529	3.680912189	224920.6018	2.3943		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	300	Diesel	2.25247E-05	2.73154E-05	3.25076E-05	0.000197509	0.000289856	0.105874796	1.28627E-05	1.18373E-05	1.28627E-05	9.78188E-07	8.64136E-07	3434.991157	751.441548	1.472364875	198004.9479	4.7513		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	600	Diesel	3.29004E-05	3.98095E-05	4.73765E-05	0.000179931	0.000436308	0.091409928	2.02752E-05	1.86853E-05	2.02752E-05	8.44143E-07	7.46076E-07	2965.694452	375.720774	1.672812438	170952.9522	7.8932		
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	750	Diesel	9.33342E-05	0.000112934	0.000134401	0.001440072	0.002124597	0.0536091	6.33924E-05	5.8321E-05	6.33924E-05	4.92843E-07	4.3755E-07	1739.288215	160.5644333	0.736182438	100352.7708	10.8232		
Statewide	2020	AirGrSupp - Bobtail	Aggregated	25	Diesel	3.51068E-06	4.24792E-06	5.05537E-06	7.29378E-05	9.51235E-05	0.11372948	3.9219E-06	3.12081E-06	3.9219E-06	1.05043E-07	9.28245E-08	368.9827583	695.8579192	1.515669725	17396.44798	0.5303		
Statewide	2020	AirGrSupp - Bobtail	Aggregated	50	Diesel	5.00383E-05	6.05464E-05	7.20552E-05	0.000462245	0.000405333	0.07175677	1.50279E-05	1.38671E-05	1.50279E-05	6.61926E-07	5.85659E-07	2328.069614	2418.147591	6.062678899	109773.6528	0.9627		
Statewide	2020	AirGrSupp - Bobtail	Aggregated	75	Diesel	1.49167E-05	1.80492E-05	2.148E-05	0.000206959	0.000297959	0.030281023	1.61136E-05	1.48245E-05	1.61136E-05	2.79516E-07	2.4715E-07	982.4348813	685.8579192	1.515669725	51493.48602	1.4118		
Statewide	2020	AirGrSupp - Bobtail	Aggregated	100	Diesel	3.63956E-05	4.40387E-05	5.24097E-05	0.000888602	0.000694300	0.139538262	3.13307E-05	2.88242E-05	3.13307E-05	1.28901E-06	1.13889E-06	4527.165211	2783.431677	6.062678899	237287.5504	1.6265		
Statewide	2020	AirGrSupp - Bobtail	Aggregated	175	Diesel	0.000119913	0.00014509	0.000172675	0.001411366	0.00136285	0.222815364	8.649E-05	7.95708E-05	8.649E-05	2.05644E-06	1.8189E-06	7228.999096	3114.00551	7.75348624	378935.1323	2.3214		
Statewide	2020	AirGrSupp - Bobtail	Aggregated	300	Diesel	0.000517042	0.00062562	0.00074454	0.003202979	0.007441623	1.218417846	0.000293666	0.000270172	0.000293666	1.12449E-05	9.94456E-06	39530.22518	10072.5847	22.7504587	2071995.466	3.9245		
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	25	Diesel	9.37969E-05	0.000113499	0.000135068	0.000473894	0.000418277	0.047609844	1.44352E-05	1.381204E-05	1.44352E-05	4.37363E-07	3.8859E-07	1544.648957	3208.612593	6.748339012	10215.31482	0.8414		
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	50	Diesel	0.000177178	0.000227774	0.000247274	0.001022668	0.000926824	0.106246019	8.67746E-05	6.31823E-05	8.67746E-05	9.77146E-05	8.71665E-07	4427.035088	4786.425758	10.79734242	7047.035088	3.7007		
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	100	Diesel	0.000161649	0.001955957	0.002327751	0.01394249	0.020680607	4.972286708	0.001132629	0.001042019	0.001132629	5.92282E-05	5.10831E-05	161320.3672	108186.1474	234.821976	9310042.006	1.4911		
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	175	Diesel	0.001239266	0.001499512	0.001784543	0.010893128	0.000357159	0.000581766	0.000535224	0.000581766	6.46848E-05	5.71362E-05	22671.88785	98477.91347	207.1188785	13112157.26	2.3018			
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	300	Diesel	0.000191672	0.000231923	0.000276007	0.001055329	0.003033246	0.780495782	3.23655E-05	4.89762E-05	3.23655E-05	7.21032E-06	6.3703E-06	25322.32607	6711.593313	14.84634583	1463975.123	3.7729		
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	600	Diesel	4.68895E-05	5.67319E-05	6.75157E-05	0.000995322	0.000275363	0.560500425	3.97294E-06	8.23121E-06	3.97294E-06	5.1807E-06	4.57473E-06	18184.81901	3208.612593	6.748339012	1049858.04	5.6675		
Statewide	2020	AirGrSupp - Cargo Loader	Aggregated	750	Diesel	0.000133031	0.000160968	0.000191565	0.001333609	0.001709391	0.713987904	6.06092E-05	5.57604E-05	6.06092E-05	6.59717E-05	5.82746E-06	23164.52495	1925.167556	4.049030047	1337349.729	12.0235		
Statewide	2020	AirGrSupp - Cargo Tractor	Aggregated	25	Diesel	0.000331431	0.000410031	0.00047726	0.001019393	0.0117836014	0.117836014	0.000112375	0.000112375	0.000112375	1.07951E-06	9.61762E-07	3823.059695	7953.899288	18.07932288	183487.3744	3.1993		
Statewide	2020	AirGrSupp - Cargo Tractor	Aggregated	50	Diesel	0.000301368	0.000364982	0.000434359	0.001716431	0.001407456	0.172982557</												

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory
 Region Type: Statewide
 Region: California
 Calendar Year: 2020
 Scenario: All Adopted Rules - Exhaust
 Vehicle Classification: OFFROAD2017 Equipment Types
 Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board, 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?tbay>. Accessed January 14, 2020.

Region	CalYr	VehicleClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO2_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hpy	Fuel Use gph
Statewide	2020	CHC - AE Work Boats	Aggregated		Diesel	0.002790761	0.003376821	0.004018696	0.16432183	0.026673147	0.313645564	0.001052375	0.000968185	0.001052375	2.81609E-06	1.81592E-05	72183.98786	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Barge and Dredge	Aggregated		Diesel	0.003033354	0.003997059	0.00475683	0.0305789	0.124870042	2.354634984	0.0033769	0.003106748	0.0033769	2.16707E-05	0.000136327	541907.6902	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Charter Fishing	Aggregated		Diesel	0.64857278	0.784773064	0.933944804	4.00448483	9.078221831	96.18142221	0.383271879	0.352610128	0.383271879	0.000869788	0.005568642	22135682.48	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Commercial Fishing	Aggregated		Diesel	0.571784986	0.691859833	0.82337038	2.669592658	10.359490246	64.72790108	0.449495887	0.413536216	0.449495887	0.000518288	0.003747569	14896808.89	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Crew and Supply	Aggregated		Diesel	0.106146495	0.128437259	0.152850953	0.769352849	0.912683767	16.18869791	0.02488534	0.022894513	0.02488534	0.000146488	0.000937281	3725749.406	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Ferry and Excursion	Aggregated		Diesel	0.101318845	1.223772032	1.456389857	1.984956283	9.983174319	191.9487631	0.250148104	0.230136256	0.250148104	0.00174432	0.01113331	44176066.17	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Others	Aggregated		Diesel	0.085540095	0.103503515	0.123177737	0.479783099	1.27727512	11.80802422	0.057405206	0.05281279	0.057405206	0.000106605	0.000683652	2717558.847	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Pilot Vessels	Aggregated		Diesel	0.018810559	0.022760776	0.027087205	0.119595164	0.247204129	3.00757675	0.01044731	0.009611526	0.01044731	2.72422E-05	0.00017413	692179.0344	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Tow Boats	Aggregated		Diesel	0.118770124	0.14371185	0.171028979	1.07934156	1.190578791	23.02506997	0.028110997	0.028611128	0.028110997	0.000209315	0.000333089	5299106.899	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Tug Boats	Aggregated		Diesel	0.510994755	0.618303654	0.758324447	4.559303147	5.545477653	95.75923789	0.162091718	0.149124381	0.162091718	0.000070012	0.000554419	22038518.85	0	0	0	#DIV/0!
Statewide	2020	CHC - ME Work Boats	Aggregated		Diesel	0.018447665	0.022321675	0.026564638	1.20367844	1.27727512	2.754128184	0.009676381	0.008902271	0.009676381	2.49099E-05	0.000159457	633849.0905	0	0	0	#DIV/0!
Statewide	2020	CHC - Port Construction Equipment	Aggregated	50	Diesel	0.000542269	0.000651446	0.000780867	0.0511397	0.003818492	0.514078991	5.6216E-05	6.03719E-05	5.6216E-05	4.73665E-06	1.49584E-06	16678.7267	12619.48542	7.066599102	527240.4534	1.3217
Statewide	2020	CHC - Port Construction Equipment	Aggregated	75	Diesel	0.001849127	0.002373443	0.002662742	0.018352492	0.01999527	2.691731209	0.000394831	0.000363245	0.000394831	2.48309E-05	2.16995E-05	87330.25468	42130.37305	15.08132497	2759801.10	2.0729
Statewide	2020	CHC - Port Construction Equipment	Aggregated	100	Diesel	0.001391287	0.001684546	0.002004749	0.020668793	0.009382631	3.11866589	0.000187994	0.000172955	0.000187994	2.87918E-05	2.54541E-05	101181.6802	36898.08675	17.24836224	3190778.729	2.7422
Statewide	2020	CHC - Port Construction Equipment	Aggregated	175	Diesel	0.004276066	0.005174039	0.006157534	0.053988103	0.044652034	8.213087488	0.000617424	0.000617113	0.000617424	7.58058E-05	6.70341E-05	266464.5785	66520.41123	38.9723763	9388658.028	4.0058
Statewide	2020	CHC - Port Construction Equipment	Aggregated	300	Diesel	0.007954712	0.009625202	0.011454785	0.048078386	0.083275892	17.26331203	0.01080379	0.000993949	0.01080379	0.000159369	0.000140901	560089.1468	79259.80227	35.6523426	19744522.48	7.0665
Statewide	2020	CHC - Port Construction Equipment	Aggregated	600	Diesel	0.021443738	0.02946923	0.030878983	0.40052222	0.21135755	56.0804647	0.022248687	0.022248687	0.022248687	0.000517848	0.000457721	1819468.196	163696.688	68.86037089	63603859.84	11.1149
Statewide	2020	CHC - Port Container Handling Equipment	Aggregated	100	Diesel	0.000149504	0.000180899	0.000215285	0.0002147892	0.00093272	0.332894433	2.06749E-05	1.90209E-05	2.06749E-05	3.07329E-06	2.71700E-06	10800.40623	3744.360676	2.169897236	318270.6574	2.8844
Statewide	2020	CHC - Port Container Handling Equipment	Aggregated	175	Diesel	0.008288802	0.010029451	0.01238187	0.116322812	0.076864037	18.19361664	0.000883941	0.000813226	0.000883941	0.000167984	0.000148515	590354.5807	126210.8895	57.27861481	19306936.92	4.6775
Statewide	2020	CHC - Port Container Handling Equipment	Aggregated	300	Diesel	0.047242226	0.057163093	0.068028805	0.313280138	0.450238706	139.7101671	0.004220621	0.003882972	0.004220621	0.0001290273	0.0001140296	4532742.51	590407.6455	271.0869885	148471473.2	7.6773
Statewide	2020	CHC - Port Container Handling Equipment	Aggregated	600	Diesel	0.044905427	0.054335566	0.064663815	0.297990631	0.35879455	144.1113598	0.003796553	0.003492829	0.003796553	0.001331034	0.001176218	467554.359	459409.9137	205.782281	153271805.7	10.1773
Statewide	2020	CHC - Port Forklift	Aggregated	50	Diesel	0.000269161	0.000325685	0.000387593	0.003492328	0.003050222	0.456133458	6.57194E-05	6.04619E-05	6.57194E-05	4.20912E-06	3.72729E-06	14798.81331	20388.59665	28.35097808	853093.9608	0.7258
Statewide	2020	CHC - Port Forklift	Aggregated	75	Diesel	0.000902893	0.001092501	0.001300167	0.011217573	0.012900026	1.964806709	0.000385038	0.000354235	0.000385038	1.81385E-05	1.60365E-05	63745.98981	54167.23429	54.43960301	3687519.239	1.1768
Statewide	2020	CHC - Port Forklift	Aggregated	100	Diesel	0.001729596	0.002092811	0.002490618	0.044930051	0.008785549	7.530356603	0.000332773	0.000306611	0.000332773	6.9595E-05	6.14838E-05	244401.7253	165542.7299	173.9250265	14154286.04	1.4764
Statewide	2020	CHC - Port Forklift	Aggregated	175	Diesel	0.005023244	0.006078221	0.007233586	0.106456376	0.051503905	18.00726825	0.001078454	0.001078454	0.001078454	0.000166335	0.000146973	584225.9869	261296.3569	276.845886	37632746.93	2.2359
Statewide	2020	CHC - Port Forklift	Aggregated	300	Diesel	0.002120673	0.002566014	0.003053769	0.019090543	0.018015584	9.269338665	0.000285031	0.000262228	0.000285031	8.5636E-05	7.5651E-05	300733.4866	96.99237179	1935607.98	13956707.98	3.3093
Statewide	2020	CHC - Port Forklift	Aggregated	600	Diesel	0.000255455	0.0003901	0.000367855	0.003015226	0.001865388	1.653364124	3.27375E-05	3.01185E-05	3.27375E-05	1.52785E-05	1.34949E-05	53641.57816	10753.23352	19.9782119	346451.46	4.9884
Statewide	2020	CHC - Port Other General Industrial Equipment	Aggregated	50	Diesel	0.001681516	0.002034634	0.00241383	0.013361663	0.010289677	1.35524277	0.000208402	0.000191767	0.000208402	2.24794E-05	1.10613E-05	43969.35913	38964.71663	30.3381143	1496732.988	1.1284
Statewide	2020	CHC - Port Other General Industrial Equipment	Aggregated	75	Diesel	0.000760364	0.000920004	0.001049424	0.016825373	0.008684248	1.195483536	0.000164283	0.000151144	0.000164283	1.103E-05	9.57387E-06	38786.14674	20492.55045	12.54617499	1337739.551	1.8927
Statewide	2020	CHC - Port Other General Industrial Equipment	Aggregated	100	Diesel	0.001308461	0.001583238	0.001848184	0.071052058	0.008845437	2.474844357	0.000193609	0.00017812	0.000193609	2.28419E-05	2.01993E-05	80293.59962	32880.40484	16.54674819	217149.795	2.4420
Statewide	2020	CHC - Port Other General Industrial Equipment	Aggregated	175	Diesel	0.002683564	0.003241711	0.003844332	0.033301002	0.028683112	5.237890559	0.000417304	0.00038392	0.000417304	4.83472E-05	4.21571E-05	169940.5041	47484.46616	30.8357898	349966.729	3.5639
Statewide	2020	CHC - Port Other General Industrial Equipment	Aggregated	300	Diesel	0.001907426	0.002307985	0.002746693	0.01788394	0.019991166	4.458841465	0.000227512	0.000209311	0.000227512	1.41167E-05	1.36925E-05	144662.2008	26799.65197	13.62292095	5610744.392	5.8332
Statewide	2020	CHC - Port Other General Industrial Equipment	Aggregated	600	Diesel	0.006372783	0.007711067	0.0095176808	0.057453072	0.03693476	12.89765384	0.000875196	0.00080518	0.000875196	0.000119504	0.000105269	418450.1745	36164.91377	22.96858553	15808799.88	11.5706
Statewide	2020	CHC - Port RTG Crane	Aggregated	100	Diesel	1.14165E-06	1.38119E-06	1.64397E-06	1.53555E-05	1.23218E-05	0.002763825	1.46828E-07	1.35131E-07	1.46828E-07	2.55387E-08	2.2558E-08	479.50000	7795.106678	8.669259979	7795.10678	1.1503
Statewide	2020	CHC - Port RTG Crane	Aggregated	300	Diesel	0.000983143	0.001189603	0.001415725	0.006452236	0.002984843	2.188214111	0.000115394	0.000106163	0.000115394	2.02016E-05	1.78599E-05	70994.19694	29218.22564	17.89212337	6898878.864	2.4298
Statewide	2020	CHC - Port RTG Crane	Aggregated	600	Diesel	0.011842604	0.01432955	0.017053499	0.07832691	0.10557842	34.70560124	0.001081435	0.00099492	0.001081435	0.000230515	0.000283262	1125985.011	219871.8689	122.0494924	108888877.7	5.1211
Statewide	2020	CHC - Port RTG Crane	Aggregated	750	Diesel	0.011208971	0.013536345	0.016133171	0.071784276	0.091720235	34.73081975	0.000927486	0.000853287	0.000927486	0.000202768	0.000283468	1126803.197	165398.3077	88.58768449	108884702	6.8127
Statewide	2020	CHC - Port RTG Crane	Aggregated	9999	Diesel	0.000896743	0.010733289	0.012772429	0.047112114	0.14192745	22.85174146	0.001883931	0.001732117	0.001883931	0.000211009	0.000186513	741398.6993	74065.32923	42.4194385	7165136.15	10.0101
Statewide	2020	CHC - Port Yard Tractor	Aggregated	175	Diesel	0.027182171	0.032890427	0.039144236	1.89644895	1.74865554	303.0082303	0.005982498	0.005503899	0.005982498	0.000800646	0.000473112	9830768.329	2815123.921	1340.297089	487197961.6	3.4921
Statewide	2020	CHC - Port Yard Tractor	Aggregated	300	Diesel	0.022918125	0.027730931	0.0330021	1.595407404	0.11778007	276.3307267	0.00406302	0.00406302	0.002554127	0.000255374	8965246.084	2023444.516	930.297484	443860096.1	4.4307	
Statewide	2020	CHC - Port Yard Tractor	Aggregated	600	Diesel	0.000156449	0.000189304	0.000225287	0.0003970638	0.00108383											

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board, 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <http://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	NOx_tpd	CO2_tpd	CO_tpd	NO2_tpd	PM10_tpd	PM2.5_tpd	PM_tpd	NH3_tpd	SOX_tpd	Total_Aquy	Total_Activity	Total_Population	Horsepower_Hours_hpy	Fuel_Use_gpy		
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	175	Diesel	0.054882035	0.066407262	0.07903013	0.464453863	0.678747961	0.037970883	0.034993212	0.037970883	0.000674903	0.000597253	2374117.757	718031.6236	1624.801071	107051310.4	3.3064		
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	300	Diesel	0.051024636	0.061739809	0.073475476	0.324519919	0.766138971	0.28283673	0.030743122	0.028283673	0.030743122	0.000721697	0.000638461	2537919.919	553582.907	1293.238309	114494896	4.5845	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	600	Diesel	0.110619984	0.133850181	0.159292777	0.839025117	1.620152223	0.647779805	0.06089731	0.060252525	0.06089731	0.002444685	0.002161082	8590429.977	1005715.613	2145.82827	387108544.1	8.5416	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	750	Diesel	0.003255136	0.004059714	0.004831396	0.020939202	0.064385614	0.588886556	0.001886486	0.001355567	0.001886486	0.002459950	0.004191950	184569.6591	13437.35655	30.14206935	8339590.964	13.7356	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	9999	Diesel	0.01026947	0.012426050	0.014788037	0.052402357	0.201317043	0.155989712	0.005708065	0.005708065	0.005708065	0.000413884	0.000127292	505991.7063	23275.6213	43.06009907	34306000.0	21.7391	
Statewide	2020	ConstMin - Excavators	Aggregated	25	Diesel	4.19918E-05	5.08101E-05	6.04682E-05	0.000142684	9.691373E-05	0.007507832	1.35074E-05	1.24268E-05	1.35074E-05	6.81539E-06	6.12779E-06	243.5833332	444.3691972	1.438207673	11109.22993	0.5482	
Statewide	2020	ConstMin - Excavators	Aggregated	50	Diesel	0.050649871	0.061286343	0.072935814	0.465188062	0.416738031	0.607592299	0.0229584	0.021211728	0.0229584	0.000560199	0.000495882	1971159.011	2508180.171	3512.10094	49707479.9	0.7859	
Statewide	2020	ConstMin - Excavators	Aggregated	75	Diesel	0.001084086	0.001311744	0.001561083	0.001369788	0.019382637	1.918646714	0.001121245	0.001031546	0.001121245	1.77063E-05	0.00076E-05	62248.37961	42879.22119	63.28109802	3146750.119	1.4517	
Statewide	2020	ConstMin - Excavators	Aggregated	100	Diesel	0.035778846	0.043292404	0.051521539	0.513919181	0.442672884	77.02209764	0.026454767	0.024338836	0.026454767	0.000711034	0.000506284	2498897.133	1556634.923	2466.524616	127079786.3	1.6053	
Statewide	2020	ConstMin - Excavators	Aggregated	175	Diesel	0.060684682	0.073428465	0.087385942	0.973384051	0.72197501	166.4622268	0.03059013	0.03228292	0.03059013	0.001358642	0.000586642	5400683.623	1871529.053	3240.27986	273257506.9	2.8857	
Statewide	2020	ConstMin - Excavators	Aggregated	300	Diesel	0.059409113	0.071885027	0.085549123	0.454862636	0.821343499	0.250546186	0.023402176	0.023402176	0.001955545	0.00127917	6688570.371	1591024.607	2787.244726	347051309.9	4.3171		
Statewide	2020	ConstMin - Excavators	Aggregated	600	Diesel	0.089532496	0.10833432	0.128926794	0.778734813	1.104904583	375.3528977	0.036370556	0.033460912	0.036370556	0.003467638	0.00306358	1217911.39	1829480.207	2923.87437	67197878.6	6.6565	
Statewide	2020	ConstMin - Excavators	Aggregated	750	Diesel	0.005008834	0.006060609	0.007321127	0.017538357	0.041989192	6.657783456	0.001266328	0.001266328	0.001376443	0.00076E-05	0.000543996	216004.452	14984.82078	61.6054901	109577049.7	12.3496	
Statewide	2020	ConstMin - Excavators	Aggregated	9999	Diesel	0.002576325	0.003117354	0.003709908	0.023196396	0.065063725	10.49153725	0.001219913	0.00112232	0.001219913	0.69222E-05	0.86350E-05	340386.3717	14298.42113	21.5731016	17213439.75	23.8059	
Statewide	2020	ConstMin - Graders	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!		
Statewide	2020	ConstMin - Graders	Aggregated	50	Diesel	0.001444012	0.001747255	0.002079378	0.00561789	0.004028677	0.377837502	0.000495033	0.000454543	0.000495033	3.44997E-06	3.08386E-06	12258.52165	14410.43829	41.91248418	521715.6862	0.8507	
Statewide	2020	ConstMin - Graders	Aggregated	75	Diesel	0.000630401	0.000762785	0.000907778	0.004785471	0.005858066	0.622699245	0.00041414	0.000381009	0.00041414	5.73825E-06	5.08239E-06	20202.79122	13301.323	36.13145188	955754.304	1.5189	
Statewide	2020	ConstMin - Graders	Aggregated	100	Diesel	0.015100674	0.018271815	0.02174497	0.076668461	0.141944413	8.388855137	0.011736812	0.010797661	0.011736812	6.84687E-05	0.271671662	144663.7768	401.7817449	1.2998441	1299848.41	1.8814	
Statewide	2020	ConstMin - Graders	Aggregated	175	Diesel	0.088387797	0.106942324	0.127278428	0.688809182	1.043941422	101.6534027	0.058274995	0.0582712995	0.058274995	0.000937184	0.000802981	3298030.688	1048194.55	2273.390952	55787854.3	3.1264	
Statewide	2020	ConstMin - Graders	Aggregated	300	Diesel	0.115372211	0.139603075	0.166135984	0.561828527	1.745555828	214.6264786	0.057891833	0.053260486	0.057891833	0.001980667	0.001751752	6963319.729	1518857.616	2046.485435	329199174.4	4.5846	
Statewide	2020	ConstMin - Graders	Aggregated	600	Diesel	0.005008834	0.006060609	0.007321127	0.017538357	0.080172221	9.360577776	0.002480916	0.002480916	0.002480916	6.63929E-05	0.763998E-05	303693.6371	4748.70216	56.38506493	14294847.41	7.4528	
Statewide	2020	ConstMin - Graders	Aggregated	9999	Diesel	0.005666585	0.006856568	0.008159883	0.028964461	0.094892685	2.726127389	0.002975645	0.002737594	0.002975645	6.71014E-05	5.93868E-05	236065.9594	6171.065866	8.671548451	11165444.24	38.2537	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!		
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	50	Diesel	0.035938508	0.043485595	0.051751451	0.237491449	0.200592600	25.19652336	0.014935095	0.014935095	0.000231876	0.000205551	817473.453	866567.063	3369705.29	9.9432			
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	75	Diesel	0.009090084	0.010999002	0.013088772	0.118194828	0.105457376	1.37680202	0.006350599	0.005466691	0.006350599	0.000159737	0.000141256	561250.7234	351483.9629	559.1132323	24924680.88	1.5975	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	100	Diesel	0.01235036	0.016032936	0.019085119	0.110405016	0.146991519	14.70005259	0.012172738	0.011198919	0.012172738	0.000135511	0.000119679	476925.4824	246484.1516	420.0403029	21096186.91	1.8019	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	175	Diesel	0.011587824	0.014021267	0.016684667	0.166349385	0.149544763	27.36974784	0.007255224	0.006674806	0.007255224	0.000526699	0.000223388	887981.3263	249070.734	371.7948387	39435716.5	3.5652	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	300	Diesel	0.009283468	0.01123997	0.01368194	0.059749162	0.134594269	24.4826313	0.004558947	0.004194231	0.004558947	0.000226076	0.000199824	794312.0096	162851.8716	259.6887614	35337860.58	4.8775	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	600	Diesel	0.018280494	0.022777298	0.027101512	0.151370925	0.223239638	74.89357252	0.007565884	0.006952057	0.007565884	0.000691864	0.000611271	2429839.48	302626.5964	447.005245	108182856	8.0289	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	750	Diesel	0.001623268	0.001964454	0.002337506	0.008804188	0.0195751	4.360698559	0.000794496	0.000790396	0.000794496	0.02681E-05	0.355914E-05	141478.0623	9975.239051	41.1780263	6360560.49	14.1829	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	9999	Diesel	0.001583725	0.001916307	0.002280564	0.010218102	0.028875052	42.56810767	0.000759947	0.000699512	0.000759947	9.39088E-05	3.47435E-05	138107.5343	3752.981877	7.092314079	613447.528	36.7994	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	25	Diesel	0.000328398	0.000397361	0.000472893	0.010487585	0.000877343	0.106877177	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190	0.000101190
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	50	Diesel	0.002655281	0.003213544	0.003824382	0.02227393	0.018664515	2.31583599	0.001298578	0.001194692	0.001298578	1.21331E-05	1.89015E-05	75134.74824	119589.348	75.92529714	344225.249	0.6283	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	75	Diesel	0.000455536	0.000418009	0.000495752	0.005011627	0.003174861	0.072963306	0.000127972	0.000117734	0.000127972	6.73898E-06	5.95379E-06	23666.65308	16864.17923	11.2819152	1199626.35	1.4034	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	100	Diesel	0.00124835	0.001510503	0.001797623	0.012752808	0.012836151	1.688953929	0.000103963	0.000103963	0.000103963	1.55778E-05	1.3785E-05	54796.25018	31549.95755	25.3084901	2777073.78	1.7368	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	175	Diesel	0.028477158	0.034455362	0.041007108	0.367192702	0.291878483	57.64658755	0.015297306	0.014073521	0.015297306	0.000532117	0.000470504	1807280.047	910621.175	438.6794692	94855263.35	3.1106	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	300	Diesel	0.005076055	0.0061354871	0.0073017367	0.031061724	0.559852045	117.4322756	0.0218129	0.020067868	0.0218129	0.001084198	0.00						

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board, 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	VehClass	MdYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO2_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity	Total_Population	Horsepower_Hrs	Chassis_hhpy	Fuel Use gph
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	300	Diesel	0.000377056	0.000456238	0.000542961	0.004063785	0.006485722	2.197243319	0.000148026	0.000136184	0.000148026	2.03033E-05	1.793963E-05	71287.13966	16307.2217	66.4230205	3428951.563	4.3715	
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	600	Diesel	0.00011803	0.000142816	0.000169963	0.001474037	0.002196923	0.815341659	4.68756E-05	4.43256E-05	4.68756E-05	7.5347E-06	6.65471E-06	26452.86219	3330.204134	13.2846005	1202833.075	7.9433	
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	750	Diesel	2.24673E-05	2.71854E-05	3.23529E-05	0.000257403	0.000354597	0.140557685	2.48477E-06	2.28847E-06	2.48477E-06	1.29885E-06	1.14721E-06	4560.239293	351.2324673	1.666057562	219520.2921	12.9835	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	50	Diesel	0.0026373	0.003191132	0.003797711	0.015472419	0.011668467	1.517735925	0.000964971	0.000887774	0.000964971	1.39351E-05	1.23876E-05	49241.27061	52215.1405	56.3151351	2165433.778	0.9430	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	75	Diesel	0.002439927	0.002952312	0.003513495	0.011500167	0.023225987	1.182614908	0.001853048	0.001704804	0.001853048	1.08607E-05	9.65234E-06	38368.63828	26518.93627	39.82365654	1860320.387	1.4468	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	100	Diesel	0.00770373	0.009321513	0.011093371	0.047018532	0.073075632	5.779817303	0.006414844	0.005901657	0.006414844	5.32062E-05	4.71741E-05	187519.8071	108105.7636	123.8185892	9084257.978	1.7346	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	175	Diesel	0.007097595	0.008858809	0.010220537	0.046102239	0.084374702	6.217326312	0.004605086	0.004471359	0.004605086	5.72693E-05	5.0745E-05	201714.305	56699.51415	90.65362132	9868829.447	3.0242	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	300	Diesel	0.007329059	0.008681661	0.010553844	0.046607973	0.094461534	6.945496914	0.004603088	0.004603088	6.39947E-05	5.66828E-05	22538.9983	50470.09062	75.54349343	60670.42622	11207793.67	4.4648	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	600	Diesel	0.062914875	0.076126998	0.090597419	0.60735736	1.817804455	77.19726779	0.036801478	0.03385736	0.036801478	0.00071184	0.000630074	2504580.336	329652.0262	4642189297	121808749.3	7.5976	
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	750	Diesel	0.000824286	0.000997386	0.001186971	0.00445176	0.015006498	2.192950277	0.000419943	0.000386348	0.000419943	2.02502E-05	1.78986E-05	71147.85664	5350.056355	5.494159522	3479957.332	13.2985	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	50	Diesel	0.009911013	0.011992326	0.014271859	0.054821622	0.042555963	4.754064869	0.003840635	0.003533384	0.003840635	4.36564E-05	3.8802E-05	154240.399	177805.3911	211.8834193	7398726.533	0.8675	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	100	Diesel	0.10176897	0.123150046	0.146558732	0.875574833	1.038950847	115.5201928	0.081362509	0.074853508	0.081362509	0.001064988	0.00094286	3747925.431	2356215.261	2632.794649	472025606.8	1.5907	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	175	Diesel	0.163093075	0.197342621	0.234854028	1.754681418	1.832763086	274.5781094	0.100881434	0.09281092	0.100881434	0.002533718	0.00224107	8908384.366	3453.127077	40004959.1	2.8025		
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	300	Diesel	0.178275271	0.215713077	0.25671639	0.989675296	2.508807642	410.4821603	0.083264026	0.083264026	0.083264026	0.003789763	0.0033503	1331641.63	3388731.793	3221.200631	713348539.7	3.9002	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	600	Diesel	0.24211208	0.292956617	0.348641395	1.568445503	3.056900662	509.9835402	0.114984501	0.105785741	0.114984501	0.004707787	0.004162417	16545854.32	2669471.427	2833.224911	16545854.32	6.1982	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	750	Diesel	0.016380647	0.019820583	0.023588132	0.130350484	0.212409337	37.68995249	0.007336951	0.006933995	0.007336951	0.000348701	0.000308265	1225372.069	99498.02768	115.9632227	6569443.7	12.3431	
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	9999	Diesel	0.015864327	0.019195836	0.022844631	0.078340048	0.332239748	35.427701466	0.008400019	0.007729018	0.008400019	0.000327064	0.000289151	1149390.475	64286.00415	55.83414428	91451252.16	17.8765	
Statewide	2020	ConstMin - Scrapers	Aggregated	25	Diesel	6.79648E-05	8.22374E-05	9.78693E-05	0.000230938	0.000158663	0.012151601	1.2862E-05	2.013E-05	1.2862E-05	1.10309E-07	9.19797E-08	394.2453239	568.4126691	1.415292771	14210.35188	0.6936	
Statewide	2020	ConstMin - Scrapers	Aggregated	50	Diesel	0.000456032	0.000551799	0.000656686	0.001557197	0.011186632	0.096717427	0.000159426	0.000159426	0.000159426	1.80859E-07	7.89395E-07	3157.890409	2399.9593	3.0569352	115026.3184	1.0565	
Statewide	2020	ConstMin - Scrapers	Aggregated	75	Diesel	0.001507558	0.001824172	0.002170915	0.013972098	0.013949672	0.822651815	0.001219041	0.001125158	0.001219041	7.5606E-06	6.71437E-06	26690.03214	15786.09946	38.21929301	106770.561	1.6907	
Statewide	2020	ConstMin - Scrapers	Aggregated	100	Diesel	0.003790631	0.046806663	0.005485059	0.030769545	0.046994449	4.041348006	0.003457421	0.003180257	0.003457421	3.72505E-05	3.29849E-05	131117.0853	57815.52387	91.0181075	5237587.598	2.2679	
Statewide	2020	ConstMin - Scrapers	Aggregated	175	Diesel	0.036883324	0.046806663	0.055703987	0.343557074	0.477184028	52.53748818	0.025664644	0.023611472	0.025664644	0.000484575	0.000428004	1704520.944	68072923.91	92.1509855	68072923.91	4.1993	
Statewide	2020	ConstMin - Scrapers	Aggregated	300	Diesel	0.024296716	0.051300027	0.061051271	0.237171821	0.585676787	60.31098149	0.025662935	0.023610999	0.025662935	0.000556333	0.00049225	1956723.374	359294.1383	851.7834405	78702794.56	5.7559	
Statewide	2020	ConstMin - Scrapers	Aggregated	600	Diesel	0.349695724	0.423131826	0.503561842	3.03653132	4.988937799	75.4652033	0.19022819	0.17509962	0.19022819	0.006983405	0.006174167	24562680.42	232850.195	496.923269	982307934.1	10.539	
Statewide	2020	ConstMin - Scrapers	Aggregated	750	Diesel	0.13104902	0.15856932	0.18871059	0.149426646	0.217447818	12.12045143	0.00854982	0.008146583	0.00854982	0.000112499	9.96601E-05	396154.6491	25398.59931	66.52987572	15805347.64	15.5975	
Statewide	2020	ConstMin - Scrapers	Aggregated	9999	Diesel	0.01913936	0.023158626	0.027560679	0.231996676	0.29312723	17.51522205	0.012248722	0.011688234	0.012248722	0.000161363	0.000142957	568262.0899	14265.59398	36.80376103	22785164.44	39.8344	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	50	Diesel	0.015920132	0.01962339	0.02292499	0.165060776	0.16186651	25.88768669	0.0063456	0.006337952	0.0063456	0.000328867	0.000211292	839897.4845	906264.7269	2947.82123	39493188.26	0.9268	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	75	Diesel	0.039621835	0.04794242	0.057055442	0.834212827	0.635045573	134.479181	0.027136221	0.024965322	0.027136221	0.001921621	0.00197601	4363028.924	324923.612	9324.293208	228948325.6	1.3428	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	100	Diesel	0.000870471	0.001053205	0.011845706	0.016388374	0.218434077	0.01063335	0.000978282	0.00106335	2.59939E-05	2.29703E-05	91308.18739	63474.68849	83491.81973	4844953.425	1.4385		
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	175	Diesel	0.000224906	0.000272137	0.000323865	0.005000444	0.003009961	0.927973366	0.000126601	0.000116473	0.000126601	5.87528E-06	7.57399E-06	30107.0739	10407.12976	39.46017502	1584227.12	2.8929	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	300	Diesel	0.000130991	0.000158499	0.000186267	0.001583676	0.002010196	0.861923497	5.67509E-05	5.22108E-05	5.67509E-05	7.96498E-06	7.0349E-06	27964.15863	7159.792276	24.84529538	1467622.111	3.9295	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	600	Diesel	5.98759E-05	7.24498E-05	8.62213E-05	0.000465292	0.000976704	0.249345997	4.19371E-05	3.85821E-05	4.19371E-05	2.30353E-06	2.03513E-06	8089.756266	896.604224	2.922975927	423914.4771	9.0227	
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	9999	Diesel	0.000152967	0.000185091	0.000220723	0.010591999	0.028135807	0.337524192	0.23231E-05	0.84927E-05	0.23231E-05	1.15599E-06	2.75483E-06	10950.6007	575.4568928	2922975927	54456892.8	19.0294	
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	50	Diesel	0.000177038	0.000214215	0.000254934	0.001695436	0.239582108	8.65572E-05</											

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory
 Region Type: Statewide
 Region: California
 Calendar Year: 2020
 Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board. 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	Vehicle Class	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hpy	Fuel Use gph	
Statewide	2020	Industrial - Forklifts	Aggregated	25	Diesel	0.02990517	0.036185255	0.043063444	0.183717863	0.150877513	18.92637709	0.011596138	0.010668447	0.011596138	0.000174087	0.000154475	614045.4611	1251643.346	1750.570951	53069676.95	0.4906	
Statewide	2020	Industrial - Forklifts	Aggregated	50	Diesel	0.004235367	0.005233695	0.006228529	0.017534128	0.040923212	1.792114521	0.00338422	0.003113482	0.00338422	1.64392E-05	1.4627E-05	58143.18196	76265.99005	150.4622966	5609780.669	0.7624	
Statewide	2020	Industrial - Forklifts	Aggregated	100	Diesel	0.159533666	0.193053735	0.229728478	1.607608837	1.745471727	22.62102927	0.12970248	0.119326048	0.12970248	0.00208664	0.0001846298	7339143.82	8575972.671	11536.40724	707022296	0.8558	
Statewide	2020	Industrial - Forklifts	Aggregated	175	Diesel	0.038128317	0.046135263	0.054904776	0.443072844	0.452097689	72.00842602	0.024522443	0.022560648	0.005462343	0.00066461	0.000587723	2336234.079	159160.943	210.129277	22485967.1	1.4683	
Statewide	2020	Industrial - Forklifts	Aggregated	300	Diesel	0.007380693	0.008930966	0.010628587	0.044757395	0.098685485	15.70674114	0.003880797	0.003570333	0.003880797	0.000144995	0.000128196	509587.9183	23306.692	318.285274	4892440.58	2.1861	
Statewide	2020	Industrial - Forklifts	Aggregated	600	Diesel	0.001314935	0.001695765	0.001893506	0.009073146	0.01492497	3.951566344	0.000546373	0.000502663	0.000546373	3.64947E-05	3.2522E-05	128204.2181	34695.70008	49.18959696	12256785.9	3.6951	
Statewide	2020	Industrial - Forklifts	Aggregated	9999	Diesel	3.86624E-05	4.67815E-05	5.56738E-05	0.000584127	0.001388073	0.313844315	1.18743E-05	1.09244E-05	1.18743E-05	2.90049E-06	2.56156E-06	10182.33318	1113.48991	1.466752852	979871.1205	9.1445	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	25	Diesel	2.47057E-05	2.98939E-05	3.55762E-05	8.21461E-05	0.56642E-05	0.004322404	7.77466E-06	7.15434E-06	7.77466E-06	3.92216E-08	3.52798E-08	140.2356465	285.483923	1.279408147	7135.45008	0.4913	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	50	Diesel	0.054045322	0.065394839	0.078725623	3.80551489	0.319596878	40.69836448	0.023808917	0.021241804	0.023088917	0.000374655	0.000332175	1320413.517	1908290.246	2333.64046	6699559.06	1.6619	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	75	Diesel	0.014029463	0.01697565	0.020202426	0.184314334	0.171677979	26.51624948	0.010992484	0.01113085	0.010992484	0.000244735	0.000216422	860290.5119	679472.7331	822.6594384	26609788.63	0.2921	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	100	Diesel	0.008594887	0.010398814	0.012376638	0.050011725	0.078238157	6.253837828	0.007133898	0.006636786	0.007133898	5.7562E-05	5.1043E-05	202988.881	146773.5541	194.4700383	11493117.53	1.3824	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	175	Diesel	0.006829495	0.008639264	0.009834473	0.094628742	0.07839234	35.32387737	0.004200144	0.003864132	0.004200144	0.000141472	0.000125071	497166.325	189290.246	232.8522827	2069955.2827	2.6269	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	300	Diesel	0.006921922	0.008375526	0.009967568	0.042058916	0.105437028	16.47658213	0.003428345	0.003154078	0.003428345	0.000152127	0.00013448	534564.5614	138168.1895	173.999508	30185562.18	3.6869	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	600	Diesel	0.014169877	0.017145551	0.020404622	0.114342418	0.159529616	47.63169453	0.005622382	0.005172591	0.005622382	0.000439954	0.000388763	1545357.872	228565.9028	275.0727516	87334202.02	6.7611	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	750	Diesel	0.002122101	0.002567743	0.003055826	0.027467105	0.020573945	8.00495737	0.00980141	0.009009173	0.00980141	7.39461E-05	6.53354E-05	259771.973	23241.61969	28.14699723	14654062.41	11.7174	
Statewide	2020	Industrial - Other General Industrial Equipment	Aggregated	9999	Diesel	0.000780678	0.000944621	0.001124176	0.005389888	0.001969677	2.73616928	0.000396857	0.000365109	0.000396857	2.562E-05	2.26379E-05	89986.94663	4372.60977	5.117632587	5088624.62	5.0009	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	25	Diesel	3.1914E-05	3.86159E-05	4.59561E-05	0.000108441	7.36576E-05	0.000579687	1.02675E-05	9.44441E-06	1.02675E-05	5.17937E-08	4.65715E-08	185.12447	325.6980272	1.459992187	8142.270681	0.5684	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	50	Diesel	0.003311879	0.00407374	0.004769106	0.01993057	0.016625515	1.89776363	0.001416966	0.001303608	0.001416966	1.74446E-06	1.54893E-06	61570.85097	75846.87985	102.1952531	2692013.274	0.8118	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	75	Diesel	0.000461156	0.00057999	0.000664065	0.003943325	0.004973178	0.156399102	0.004000553	0.000368049	0.004000553	4.76003E-06	4.21478E-06	16754.00016	13368.23832	17.51918624	823166.6299	1.4738	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	100	Diesel	0.00779601	0.009324722	0.011096654	0.137932272	0.106129967	20.82314028	0.004868272	0.004478811	0.004868272	0.000169956	0.000169956	675583.8538	31128.0868	465.7183677	3300864.991	1.9073	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	175	Diesel	0.007840414	0.009486901	0.011290197	0.090243116	0.080559608	14.37212952	0.005482746	0.005044216	0.005482746	0.000132642	0.000132642	600627.8174	164187.2598	200.6692855	22773224.17	2.8400	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	300	Diesel	0.011719418	0.014180496	0.016875963	0.063578075	0.162421164	25.24625318	0.005937622	0.005465261	0.005937622	0.000230607	0.000230607	819086.9806	167028.9123	224.8295568	4054926.8	4.9039	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	600	Diesel	0.012114817	0.014658929	0.017445337	0.085202343	0.173785355	29.54699108	0.005978827	0.005500521	0.005978827	0.000272813	0.000241159	958619.5856	127122.0152	172.719981	46764698.45	7.5409	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	750	Diesel	0.000570488	0.000690291	0.000849697	0.00277939	0.000661652	1.360424215	0.00032652	0.000300398	0.00032652	1.25061E-05	1.11039E-05	44137.46542	3463.721948	4.379795651	2159053.347	12.7428	
Statewide	2020	Industrial - Other Material Handling Equipment	Aggregated	9999	Diesel	0.000570488	0.000690291	0.000849697	0.00277939	0.000661652	1.360424215	0.00032652	0.000300398	0.00032652	1.25061E-05	1.11039E-05	44137.46542	3463.721948	4.379795651	2159053.347	12.7428	
Statewide	2020	Locomotive - Line haul	Aggregated	9999	Diesel	1.150215233	1.833176024	2.181630993	17.6882119	52.33907175	6782.160964	0.177596242	0.70863681	0.177596242	0.06894099	0.055336149	219957237.6	0	0	0	#DIV/0!	
Statewide	2020	Locomotive - Passenger	Aggregated	9999	Diesel	0.244261151	0.00275029	0.00298626	1.395551619	5.915809663	0	0.07764804	0.099051619	0.07764804	0.000485019	0.000485019	0.04862486	0	0	0	#DIV/0!	
Statewide	2020	Locomotive - Short line	Aggregated	9999	Diesel	0.060713538	0.10938E-05	1.2138E-05	0.23472818	1.73494679	0	0.029154344	0.026819206	0.029154344	0.000997524	0.000997524	0.000894056	0	0	0	#DIV/0!	
Statewide	2020	Locomotive - Switcher	Aggregated	9999	Diesel	0.297612364	0.000470095	0.000559451	0.799512681	4.616170039	0	0.097504642	0.087042971	0.097504642	0.002662034	0.002662034	0.02394284	0	0	0	#DIV/0!	
Statewide	2020	Ocean Going Vessels	Aggregated	1999	Diesel	9.937150594	12.90660493	15.42066482	18.860394	213.4639362	9045.801951	2.384880102	2.194905922	2.384880102	6.760104932	6.719193207	28997.38967	285620623.9	0	0	6248901685	#DIV/0!
Statewide	2020	Off - Agricultural - 2-Wheel Tractors	Aggregated	25	Gasoline	0.055398103	0.050955175	0.060962923	0.211661384	0.400738984	3.565416188	0.02665358	0.017116038	0.02665358	0.012170644	0.000104704	9.21893105	263154.05	633483.05	2494	4433884.0	0.4154
Statewide	2020	Off - Agricultural - Agricultural Mowers	Aggregated	25	Gasoline	0.044193629	0.04069493	0.048632933	1.888776706	0.03304239	3.009625667	0.02270675	0.017156211	0.02270675	7.9635E-05	8.12014E-05	23178.6	387643.05	2145.62	4833641.4	0.5993	
Statewide	2020	Off - Agricultural - Agricultural Tractors	Aggregated	25	Diesel	0.299910254	0.356919848	0.431870766	3.61.762241	12.1963913	361.762241	0.103004538	0.094764761	0.103004538	0.004890956	0.003028289	12037627	1666004.38	31269.93	301117002.8	0.7225	
Statewide	2020	Off - Agricultural - Agricultural Tractors	Aggregated	100	Gasoline	0.045616886	0.041958412	0.050198601	1.666383955	0.11950358	29.51690203	0.002057989	0.001554292	0.002286655	0.000285174	0.000248334	2122680.65	248006.55	450.36	2036357.1	4.9300	
Statewide	2020	Off - Agricultural - Agricultural Tractors	Aggregated	175	Gasoline	0.005960083	0.005482774	0.006559328	0.267614141	0.027987315	5.997188891	0.000429935	0.000438429	0.000429935	5.95758E-05	8.4471E-05	241122.65	61.14	112.62	427156.25	7.1302	
Statewide	2020	Off - Agricultural - Balers	Aggregated	50	Gasoline	0.007917825	0.007282815	0.008713083	0.400218994	0.015123238	5.102187349	0.00035174	0.000265759	0.000390822	6.20332E-05	7.6327E-05	218785.8	51194.85	1645.01	3917709.25	1.9465	
Statewide	2020	Off - Agricultural - Balers	Aggregated	100	Gasoline	0.003788799	0.003466523	0.004173112	0.10184175	0.104547944	4.717954209	0.000328947	0.000365497	0.000328947	4.5582E-05	6.49954E-05	185529.5					

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory
 Region Type: Statewide
 Region: California
 Calendar Year: 2020
 Scenario: All Adopted Rules - Exhaust
 Vehicle Classification: OFFROAD2017 Equipment Types
 Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board, 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO2_tpd	NOx_tpd	CO2_tpd	PM10_5_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hpy	Fuel Use gph
Statewide	2020	OFF - AirGrSupp - Forklift	Aggregated	50	Gasoline	0.00512521	0.004714168	0.00563998	0.481938517	0.011332305	3.541866611	0.00244173	0.000184486	0.000271303	4.306262-05	5.72325E-05	163370.35	99765.45	137.09	4988272.5	1.6375
Statewide	2020	OFF - AirGrSupp - Forklift	Aggregated	50	Nat Gas	0	0	0.00033165	0.088600738	0.023495987	17.138465977	0	0	0.00063485	0	0	377446.5	233545.25	321.06	11677262.5	1.6162
Statewide	2020	OFF - AirGrSupp - Fuel Truck	Aggregated	175	Gasoline	5.26185E-05	4.83985E-05	5.79035E-05	0.004484352	0.00056867	0.14087616	1.00993E-06	7.6306E-06	1.12215E-05	1.39946E-06	1.92697E-06	5500.55	1806.75	86	234877.5	3.0444
Statewide	2020	OFF - AirGrSupp - Fuel Truck	Aggregated	175	Nat Gas	0	0	2.91357E-05	0.013829749	0.00180957	0.442593254	0	0	3.96315E-05	0	0	23936.7	6117.4	10.59	856436	3.9129
Statewide	2020	OFF - AirGrSupp - Generator	Aggregated	100	Gasoline	0.001988111	0.001828665	0.002187795	0.100080737	0.006614571	1.207823154	8.42123E-05	6.36271E-05	9.35693E-05	9.97191E-06	1.81368E-05	51771.6	6069.95	6.54	649486.5	8.5292
Statewide	2020	OFF - AirGrSupp - Ground Power Unit	Aggregated	175	Gasoline	0.007925505	0.007289466	0.008721004	0.809300865	0.071273206	22.96373813	0.001646255	0.001243837	0.001829173	0.000222121	0.000325126	917894.7	89691.45	112.5	13453717.5	10.2339
Statewide	2020	OFF - AirGrSupp - Hydrant Truck	Aggregated	175	Gasoline	0.02627801	0.024170514	0.028917347	1.019872273	0.127584377	20.32562116	0.00145713	0.001100943	0.001619034	0.000072544	0.000292006	833532.25	104944.8	68.26	12750793.2	7.9426
Statewide	2020	OFF - AirGrSupp - Lav Cart	Aggregated	25	Gasoline	7.61519E-05	7.00445E-05	8.83005E-05	0.00479217	5.97315E-05	0.008014965	3.64361E-06	2.75295E-06	4.04845E-06	2.28528E-07	2.08425E-07	594.95	978.2	6.77	11738.4	0.6082
Statewide	2020	OFF - AirGrSupp - Lav Truck	Aggregated	175	Gasoline	0.005764898	0.005302553	0.006343918	0.411522303	0.036002113	10.10742501	0.000724595	0.000547472	0.000805105	0.000100407	0.000142795	407610.1	136641.4	112.28	17763382	2.9831
Statewide	2020	OFF - AirGrSupp - Lav Truck	Aggregated	175	Nat Gas	0	0	1.1599E-05	0.006138311	0.000811632	0.211127981	0	0	0.187764E-05	0	0	11355.15	3044.1	7.88	395733	3.7302
Statewide	2020	OFF - AirGrSupp - Lift	Aggregated	100	Gasoline	0.009793067	0.009076663	0.010776672	0.428991214	0.042277287	9.676115169	0.000674642	0.000509973	0.000749602	9.34848E-05	0.000137659	392940.85	82570.30	219.18	82570.30	4.7590
Statewide	2020	OFF - AirGrSupp - Lift	Aggregated	100	Nat Gas	0	0	2.21938E-05	0.010204637	0.001224453	0.286404714	0	0	2.5471E-05	0	0	15527.1	2682.75	7.95	26827.5	5.7878
Statewide	2020	OFF - AirGrSupp - Maint. Truck	Aggregated	175	Gasoline	0.004864146	0.00447153	0.005349691	0.36707071	0.038340167	10.13540982	0.000726601	0.000548987	0.000807334	0.000106885	0.000142173	405832.55	68415.6	151.97	8894208	5.9319
Statewide	2020	OFF - AirGrSupp - Other	Aggregated	50	Nat Gas	0	0	0.00037719	0.041631933	0.014827521	2.421913171	0	0	0.00021539	0	0	129403.45	47355.1	46.22	2367755	2.7326
Statewide	2020	OFF - AirGrSupp - Other GSE	Aggregated	50	Gasoline	0.004380087	0.004028804	0.004002199	0.281634697	0.008981778	6.278445181	0.00018465	0.000139513	0.000205166	3.2565E-05	4.15597E-05	118632.3	45088.45	246.56	2254422.5	2.6311
Statewide	2020	OFF - AirGrSupp - Passenger Stand	Aggregated	175	Gasoline	0.00169584	0.001559834	0.001866169	0.121332249	0.015331495	3.592682369	0.000257557	0.000194599	0.000286175	3.17961E-05	5.02113E-05	143328.2	21232.05	113.4	2656129.45	6.7506
Statewide	2020	OFF - AirGrSupp - Passenger Stand	Aggregated	175	Nat Gas	0	0	3.1818E-07	0.000241101	3.28399E-05	0.009817806	0	0	8.7314E-07	0	0	408.8	0	3.99	0	#DIV/0!
Statewide	2020	OFF - AirGrSupp - Service Truck	Aggregated	300	Gasoline	0.028497032	0.02621157	0.031359245	1.364736495	0.172276075	31.90304174	0.002353503	0.001778202	0.002615004	0.000326124	0.000452708	1292256.95	40071.75	476.16	72135315	3.2246
Statewide	2020	OFF - AirGrSupp - Service Truck	Aggregated	300	Nat Gas	0	0	0.000310293	0.158486993	0.015071708	4.454324907	0	0	0.000396014	0	0	240031.7	60575.4	46.32	10903572	4.0286
Statewide	2020	OFF - AirGrSupp - Sweeper	Aggregated	50	Nat Gas	0	0	2.91381E-06	0.000646049	0.000218088	0.053619741	0	0	4.7686E-06	0	0	2726.55	1135.15	3.9	51081.75	2.4019
Statewide	2020	OFF - AirGrSupp - Sweeper	Aggregated	100	Gasoline	0.000251055	0.000230921	0.000276271	0.010971359	0.001096542	0.252957948	1.76368E-05	1.33256E-05	2.08845E-06	3.55601E-06	10150.65	3828.85	10.59	204077.705	2.6511	
Statewide	2020	OFF - AirGrSupp - Water Truck	Aggregated	175	Gasoline	0.000413152	0.000380107	0.000454649	0.026707813	0.003366893	9.756713418	5.24838E-05	4.09876E-05	6.02759E-05	7.51716E-06	1.05491E-05	30112.5	10896.5	35.35	1647975	2.7409
Statewide	2020	OFF - ConstMtn - Asphalt Pavers	Aggregated	25	Gasoline	0.015858004	0.017095489	0.020452863	0.782310714	0.013512634	1.244788688	0.009391568	0.007095852	0.104455076	3.231E-05	3.37955E-05	96469.5	84519.4	213.11	1454156.35	1.1414
Statewide	2020	OFF - ConstMtn - Asphalt Pavers	Aggregated	50	Gasoline	0.002978905	0.002739997	0.003278103	0.192540529	0.004321699	1.380675913	9.18266E-05	7.19157E-05	0.000105758	1.67865E-05	2.23871E-05	63904.2	2785.95	69.79	876350.4	2.3335
Statewide	2020	OFF - ConstMtn - Asphalt Pavers	Aggregated	100	Gasoline	0.011585503	0.011458346	0.011744775	0.059397968	0.004323819	1.429457174	9.9652E-05	7.53026E-05	0.000110739	1.38106E-05	2.02147E-05	57702.85	14859.15	37.8	906408.15	3.8833
Statewide	2020	OFF - ConstMtn - Bore/Drill Rigs	Aggregated	25	Gasoline	0.006516635	0.006085981	0.007281203	0.29178774	0.004753185	4.461481621	0.003481745	0.002630561	0.003886805	1.18431E-05	1.24326E-05	35488.95	26688.8	217.31	445913.2	1.3297
Statewide	2020	OFF - ConstMtn - Bore/Drill Rigs	Aggregated	25	Diesel	0.000749203	0.000891614	0.001078853	0.004022797	0.006806925	0.899889828	0.000256224	0.000253726	0.000256224	1.81766E-05	7.48445E-06	2975.15	44957.05	55.11	68906.45	0.6618
Statewide	2020	OFF - ConstMtn - Bore/Drill Rigs	Aggregated	50	Gasoline	0.000231048	0.00012518	0.000254254	0.01138358	0.000423731	0.139777391	9.63613E-06	7.280631E-06	1.69844E-06	1.97684E-06	5642.9	1967.36	20.87	62955.2	2.8683	
Statewide	2020	OFF - ConstMtn - Bore/Drill Rigs	Aggregated	100	Gasoline	0.001491253	0.00137272	0.001641772	0.045635768	0.005449311	1.744864154	0.000121656	9.91179E-05	0.000135173	1.68578E-05	2.40571E-05	68671.1	10449.95	99.5	919595.6	6.5714
Statewide	2020	OFF - ConstMtn - Bore/Drill Rigs	Aggregated	175	Gasoline	0.000327049	0.000300087	0.000359897	0.019682172	0.002124989	6.601431053	4.31162E-05	3.25767E-05	4.79069E-05	1.68448E-06	23659.3	2729.95	23.79	286517.7	10.4045	
Statewide	2020	OFF - ConstMtn - Cement and Mortar Mixers	Aggregated	25	Gasoline	0.265197951	0.243920075	0.29184168	8.929593262	0.173922495	16.04679099	0.08993971	0.067954447	0.099933011	0.000483104	0.000415211	11852270.0	3023663.65	32841.64	20960522.85	0.3920
Statewide	2020	OFF - ConstMtn - Cement and Mortar Mixers	Aggregated	25	Diesel	0.001897829	0.002258574	0.002732874	0.102320251	0.017044032	2.304714368	0.00067734	0.000623153	0.3439E-05	1.92148E-05	76379.9	23192.1	772.75	138851.25	0.3293	
Statewide	2020	OFF - ConstMtn - Concrete/Industrial Saws	Aggregated	25	Gasoline	0.202804357	0.186539613	0.223714022	8.426981833	0.154227678	13.8849716	0.102201829	0.07721916	0.113557588	0.000382094	0.000370667	105080.69	133165.75	4622.58	1372610.8	0.8054
Statewide	2020	OFF - ConstMtn - Concrete/Industrial Saws	Aggregated	25	Diesel	6.22035E-05	4.78231E-05	9.25711E-05	0.000350725	0.00056603	0.07424934	2.11499E-05	1.94579E-05	9.42083E-06	5.91337E-07	2350.6	3160.9	5.21	56896.2	0.7436	
Statewide	2020	OFF - ConstMtn - Concrete/Industrial Saws	Aggregated	50	Gasoline	0.03615697	0.03325718	0.03978853	0.269383832	0.005802727	3.207448853	0.000221119	0.000167067	0.000245687	3.89967E-05	4.83111E-05	137904.3	49661.9	81.27	178816.6	2.7769
Statewide	2020	OFF - ConstMtn - Concrete/Industrial Saws	Aggregated	50	Diesel	0.001138259	0.001354622	0.001639092	0.009348131	0.008617129	1.166939581	0.000435381	0.000405381	0.000435381	1.50856E-05	1.97614E-06	37821.25	27838.5	47.72	91867.15	1.9391
Statewide	2020	OFF - ConstMtn - Concrete/Industrial Saws	Aggregated	100	Gasoline	0.001489518	0.001366748	0.001635163	0.073423193	0.003714093	3.427779809	0.000238993	0.000180573	0.000265548	3.31171E-05	4.70171E-05	134210.5	28437.15	46.55	718651.9	4.7195
Statewide	2020	OFF - ConstMtn - Cranes	Aggregated	50	Gasoline	0.001050844	0.000965662	0.00115569	0.064717025	0.010603723	0.42378062	2.92151E-05	2.20736E-05	5.1524E-06	6.92789E-06	1.9764E-06	9906.1	2379.9	36.6525	7.19963	
Statewide	2020	OFF - ConstMtn - Cranes	Aggregated	100	Gasoline	0.00222805	0.00204936	0.002451833	0.07904507	0.006257825	1.676078509	0.00011686	8.82944E-05	0.000129845	1.61933E-05	2.38794E-05	68163.75	20330.5	48.77	150457	3.3528
Statewide	2020	OFF - ConstMtn - Cranes	Aggregated	175	Gasoline	9.42309E-05	8.66736E-05	0.0001036													

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board, 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?tab>. Accessed January 14, 2020.

Region	CalYr	VehicleClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO2_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hpy	Fuel Use_gph
Statewide	2020	OFF - ConstMin - Trenchers	Aggregated	50	Gasoline	0.020795298	0.019127515	0.022883957	1.275287113	0.031920021	0.50660108	0.000586437	0.000443086	0.000651597	0.000103425	0.000140371	400689.7	181459.75	451.05	5443792.5	2.2081
Statewide	2020	OFF - ConstMin - Trenchers	Aggregated	100	Gasoline	0.008039786	0.007394996	0.008847295	0.284097856	0.022771451	6.140978828	0.000428164	0.000323502	0.000475738	5.93304E-05	8.76498E-05	250196.55	60155.65	149.21	3970272.9	4.1592
Statewide	2020	OFF - Industrial - Aerial Lifts	Aggregated	25	Gasoline	0.054119779	0.049779377	0.059555515	2.446683385	0.038359551	3.541784569	0.006217135	0.002189756	0.0029690817	8.99424E-05	9.66721E-05	275950.95	314673.8	838.29	5937570.0	0.8769
Statewide	2020	OFF - Industrial - Aerial Lifts	Aggregated	25	Diesel	0.005853037	0.006965598	0.008428373	0.033122609	0.052459486	6.882136648	0.002119701	0.001950125	0.002119701	9.37653E-05	5.75433E-05	228738.2	498509.7	1248.23	8714411.5	0.4588
Statewide	2020	OFF - Industrial - Aerial Lifts	Aggregated	25	Nat Gas	0	0	0.00437447	1.155747383	0.031804795	6.800198702	0	0	0.003495189	0	0	454574.65	384611.45	1024.6	7255055.5	1.1819
Statewide	2020	OFF - Industrial - Aerial Lifts	Aggregated	50	Gasoline	0.016764212	0.015419722	0.018447993	1.385361219	0.023534563	12.991744396	0.000895639	0.000676705	0.000995155	0.000517956	0.000201909	576349.6	361674.85	1001.1	11935270.0	1.5936
Statewide	2020	OFF - Industrial - Aerial Lifts	Aggregated	100	Gasoline	0.01322626	0.012165514	0.014554693	0.736452515	0.033455625	26.0808056	0.001818419	0.001373917	0.002020465	0.000251977	0.000361646	1032318.55	361674.85	1001.1	2423214.95	2.8543
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	25	Gasoline	0.001596002	0.001468003	0.001756303	0.098918648	0.001336785	0.154870849	7.7897E-05	5.88555E-05	8.65523E-05	3.92515E-06	4.18257E-06	11939.15	12725.45	19.09	397335.35	0.6911
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	25	Nat Gas	0	0.000209549	0.033166358	0.000926707	0.0172901049	0	0	0.000113813	0	0	12037.7	12253.05	9.65	288120.15	0.9824	
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	50	Gasoline	0.424132765	0.390117317	0.466732236	50.24905923	98.3844126	175.0611849	0.012068562	0.009118469	0.013409513	0.0002128425	0.00389343	9674890.75	6016254.95	3393.53	246677522.9	1.6081
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	50	Nat Gas	0	0.009450008	4.824438772	1.261758667	300.639046	0	0	0.026736938	0	0	16015188.95	1199614.9	6658.92	49184350.9	1.3305	
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	100	Gasoline	0.895261944	0.823461936	0.985181158	85.46009534	4.439823594	1037.095264	0.072308766	0.05463329	0.080343074	0.010091987	0.015570514	44446090.15	2113782.7	11719.79	147796489	2.1051
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	100	Nat Gas	0	0.172290927	81.32940586	8.156117586	1801.474267	0	0	0.160211743	0	0	100227317.3	42102987.25	23370.34	2947209108	2.3805	
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	175	Gasoline	0.0467453	0.042996327	0.051440351	3.272767747	0.274430403	76.886773	0.005511962	0.004164594	0.006124402	0.00076379	0.001089475	3109999.5	771661.1	428.09	112662520.6	4.0301
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	175	Nat Gas	0	0.007903639	4.764547021	0.405799968	137.5005627	0	0	0.012228431	0	0	7522405.45	1540701.5	855.01	224942419	4.8825	
Statewide	2020	OFF - Industrial - Other General Industrial Equipment	Aggregated	25	Gasoline	0.044684465	0.041100936	0.049172726	2.744803972	0.036019226	4.493076452	0.002165608	0.001636237	0.002406231	0.000114544	0.00011913	340055.9	1565.15	641006.4	55599	0.5249
Statewide	2020	OFF - Industrial - Other General Industrial Equipment	Aggregated	25	Diesel	0.007043318	0.00838213	0.010142378	0.039910619	0.06561041	6.696761966	0.002477269	0.002279087	0.002477269	0.00012671	7.27537E-05	282950.45	51420.1	386.3	9935219.7	7.75737
Statewide	2020	OFF - Industrial - Other General Industrial Equipment	Aggregated	50	Gasoline	0.013165609	0.01210923	0.01487355	1.270837209	0.029268653	8.746730305	0.000602992	0.000455594	0.000669991	0.000106344	0.000143075	408409.45	228165.15	319.63	6884954.5	1.7900
Statewide	2020	OFF - Industrial - Other General Industrial Equipment	Aggregated	100	Gasoline	0.004072513	0.003745898	0.004481553	2.988239812	0.024126534	7.484131406	0.000521812	0.000394258	0.000579791	7.23071E-05	0.000105565	301336.7	74887.05	104.84	5991607.95	4.0239
Statewide	2020	OFF - Industrial - Other General Industrial Equipment	Aggregated	175	Gasoline	0.000571578	0.000525738	0.000628987	0.055341532	0.004857844	1.551460971	0.000111223	8.40353E-05	0.000123581	1.54212E-05	2.16899E-05	61896.7	7146.7	9.59	1243525.8	8.6609
Statewide	2020	OFF - Industrial - Other Material Handling Equipment	Aggregated	50	Gasoline	0.000197157	0.000181345	0.000216966	0.0013680971	0.000838429	0.089776306	6.1891E-06	4.67621E-06	6.87678E-06	1.09152E-06	1.3618E-06	3887.25	1423.5	3.7	5863.5	2.708
Statewide	2020	OFF - Industrial - Other Material Handling Equipment	Aggregated	100	Gasoline	0.00560064	0.005206127	0.006285556	2.324727747	0.023538579	5.173425999	0.000360704	0.000272552	0.000400782	4.99825E-05	7.36431E-05	210214.45	77033.25	199.52	4159795.5	2.7289
Statewide	2020	OFF - Industrial - Sweepers/Scrubbers	Aggregated	25	Gasoline	0.034102588	0.031367561	0.037527818	2.074665047	0.027711664	3.54397359	0.000555336	0.001250698	0.001839262	9.33346E-05	9.47899E-05	270578.15	297381.2	1100.79	3848063.6	0.9097
Statewide	2020	OFF - Industrial - Sweepers/Scrubbers	Aggregated	25	Diesel	0.004102674	0.001669298	0.002109851	0.008611	0.013256476	1.768206607	0.000503673	0.000463379	0.000503673	2.43572E-05	1.47586E-05	58666.45	81763.65	125.54	1512019.8	0.7175
Statewide	2020	OFF - Industrial - Sweepers/Scrubbers	Aggregated	50	Gasoline	0.036476979	0.033551525	0.04014069	3.171484464	0.079356612	28.27209721	0.001949053	0.001472618	0.002165615	0.000434737	0.000448783	1263611.75	480913.05	931.26	16831956.75	2.6275
Statewide	2020	OFF - Industrial - Sweepers/Scrubbers	Aggregated	100	Gasoline	0.021288584	0.019581244	0.023426788	1.358580344	0.1348998	45.34750953	0.003161737	0.002388868	0.003513041	0.00043812	0.000630268	1799103.25	401525.55	777.31	27303737.4	4.4807
Statewide	2020	OFF - Industrial - Sweepers/Scrubbers	Aggregated	175	Gasoline	0.000164843	0.000151623	0.0001814	0.180181751	0.001599158	0.527912364	3.79457E-05	2.85945E-05	4.20508E-05	5.24426E-06	7.34219E-06	20958.3	2157.15	4.12	30200.1	9.7157
Statewide	2020	OFF - Light Commercial - Air Compressors	Aggregated	25	Gasoline	0.482489572	0.443793908	0.53095342	11.7903317	0.287807906	24.16602901	0.092049781	0.069548724	0.102277535	0.000754925	0.000579763	1654935.55	5399269.8	11169.15	327115.5	0.3065
Statewide	2020	OFF - Light Commercial - Air Compressors	Aggregated	25	Diesel	0.002176652	0.002589682	0.003133515	0.101066936	0.018672826	2.338378713	0.000885701	0.000814849	0.000885701	3.10235E-05	1.94315E-05	77241.3	141572.55	172.7	2829173.4	0.5456
Statewide	2020	OFF - Light Commercial - Air Compressors	Aggregated	50	Gasoline	0.027245905	0.025605927	0.02898227	1.755440183	0.038725256	10.3725634	0.000715075	0.000540275	0.000126111	0.000175503	500973.45	232507.75	462.12	7822771.25	2.2414	
Statewide	2020	OFF - Light Commercial - Air Compressors	Aggregated	50	Diesel	0.032008484	0.030892724	0.046092217	0.237691034	0.202409862	26.1571278	0.01154862	0.01062473	0.01154862	0.000230952	0.000210953	87829.9	58009.15	1053.83	3174638.55	1.0236
Statewide	2020	OFF - Light Commercial - Air Compressors	Aggregated	100	Gasoline	0.093089743	0.08532224	0.102449488	3.461855161	0.244705575	66.51338834	0.004637473	0.000393869	0.005152748	0.000642612	0.000958521	7726102.05	5725723.25	15002.52	50769127.5	3.7725
Statewide	2020	OFF - Light Commercial - Air Compressors	Aggregated	175	Gasoline	0.007603512	0.006993711	0.008367202	0.310111764	0.034956706	8.33035881	0.000597198	0.000451216	0.000635553	8.27534E-05	0.000117196	34537.1	48482.95	100.12	6496715.3	6.9001
Statewide	2020	OFF - Light Commercial - Gas Compressors	Aggregated	50	Nat Gas	0	0.001542249	0.273060051	0.056002952	18.60702082	0	0	0	0	0	0	101425279.9	0	0	9886527.5	3.4191
Statewide	2020	OFF - Light Commercial - Gas Compressors	Aggregated	100	Nat Gas	0	0.008410083	4.368995669	0.331376649	104.5618583	0	0	0.008100337	0	0	5785742.75	59747.35	70.32	5252986.8	9.6809	
Statewide	2020	OFF - Light Commercial - Gas Compressors	Aggregated	175	Nat Gas	0	0.002345504	0.888797716	0.088678545	27.21256615	0	0	0.002176612	0	0	1485852.95	96334.45	11.3	14064829.7	15.4239	
Statewide	2020	OFF - Light Commercial - Gas Compressors	Aggregated	300	Nat Gas	0	0.001804495	1.022726196	0.08500371	28.04605006	0	0	0.002494239	0	0	1538800.15	77091.65	9.04	16189246.5	19.9617	
Statewide	2020	OFF - Light Commercial - Gas Compressors	Aggregated	600	Nat Gas	0	0.002541331	1.440339272	0.120835517	39.49818789	0	0	0.003512782	0	0	2167249.55	6749.45	7.94	2218414.1	32.1077	
Statewide	2020	OFF - Light Commercial - Generator Sets	Aggregated	25	Gasoline	3.708143451	3.410750346	4.080586517	193.2412513	2.559672098	318.8602664	0.021807742	0.1593292	0.234078324	0.008734233	0.0084					

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory
 Region Type: Statewide
 Region: California
 Calendar Year: 2020
 Scenario: All Adopted Rules - Exhaust
 Vehicle Classification: OFFROAD2017 Equipment Types
 Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board. 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?tbay>. Accessed January 14, 2020.

Region	CalYr	VehicleClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_HHpy	Fuel_Use_gph	
Statewide	2020	OFF - Military - Aircraft Support	Aggregated	175	Diesel	0.000546717	0.000650638	0.000787272	0.008868288	0.007268811	1.733224	0.000318845	0.000293337	0.000318845	1.9502E-05	4.14468E-05	12012.15	39.95	168170.1	4.7867	
Statewide	2020	OFF - Military - Cart	Aggregated	100	Diesel	0.000128993	0.000153512	0.000185749	0.001774973	0.001683206	0.300841647	9.36845E-05	8.61897E-05	9.36845E-05	3.52903E-06	2.51043E-06	9979.1	3500.35	11.62	283528.35	2.8509
Statewide	2020	OFF - Military - Cart	Aggregated	175	Diesel	4.48113E-05	5.32391E-05	6.45282E-05	0.000726883	0.000595783	0.142064111	2.16339E-05	2.40432E-05	2.16339E-05	1.59846E-06	1.15696E-06	4599	824.9	2.75	126209.7	5.5752
Statewide	2020	OFF - Military - Cart	Aggregated	300	Diesel	0.000145933	0.000173672	0.000210143	0.001105119	0.002193008	0.609730493	6.4237E-05	5.9098E-05	6.4237E-05	6.86051E-06	5.05299E-06	20085.95	2930.95	9.69	577397.15	6.8531
Statewide	2020	OFF - Military - Communications	Aggregated	50	Diesel	3.95383E-05	4.70538E-05	5.69351E-05	0.000339001	0.000356307	0.049521258	1.6716E-05	1.53788E-05	1.6716E-05	6.40186E-07	3.90246E-07	1155.25	1120.3	3.67	44092	1.4073
Statewide	2020	OFF - Military - Communications	Aggregated	100	Diesel	6.37E-05	7.80839E-05	9.1728E-05	0.00087653	0.000831213	0.148563774	4.62639E-05	4.25628E-05	4.62639E-05	1.74273E-06	1.21298E-06	4821.65	1737.4	5.93	138992	2.7752
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	50	Diesel	4.84344E-05	5.76409E-05	6.97455E-05	0.000415276	0.000436477	0.06066354	2.04772E-05	1.8839E-05	2.04772E-05	7.84228E-07	4.98596E-07	1981.95	1102.3	3.67	54012.7	1.7980
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	100	Diesel	0.001422767	0.00169321	0.002048784	0.019577663	0.018546282	3.31823386	0.001033324	0.000950658	0.001033324	3.82924E-05	2.77066E-05	110310.3	45358.55	150.93	3220455.05	2.4320
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	175	Diesel	6.52155E-05	7.76119E-05	9.39103E-05	0.00105786	0.000867065	0.20675125	3.80336E-05	3.49909E-05	3.80336E-05	3.26261E-06	1.70698E-06	6785.35	1102.3	3.67	184084.1	6.1556
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	300	Diesel	0.000132154	0.000157275	0.000190302	0.001007778	0.001985552	0.552162006	5.8172E-05	5.35182E-05	5.8172E-05	6.11277E-06	4.57552E-06	18187.95	2376.15	7.79	529884.5	7.6544
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	600	Diesel	0.000735101	0.000874831	0.01058545	0.005747742	0.01050718	0.323499991	0.000328752	0.000320452	0.000328752	3.12728E-06	2.68296E-06	106649.35	8365.8	27.9	3120443.4	12.7483
Statewide	2020	OFF - Military - Crane	Aggregated	100	Diesel	9.249E-05	0.000110071	0.000133186	0.002919164	0.001736392	0.519973241	3.66503E-05	3.37182E-05	3.66503E-05	6.09955E-06	4.32943E-06	17209.75	4785.15	15.95	502440.75	3.5965
Statewide	2020	OFF - Military - Crane	Aggregated	175	Diesel	1.9264E-05	2.92927E-05	2.77401E-05	0.000649983	0.000246781	0.130921825	6.11522E-06	5.626E-06	6.11522E-06	1.4731E-06	1.08718E-06	4321.6	839.5	2.91	118369.5	5.1478
Statewide	2020	OFF - Military - Crane	Aggregated	300	Diesel	1.69389E-05	2.01587E-05	2.4392E-05	0.000224082	0.000165689	0.132469362	4.1657E-06	3.83245E-06	4.1657E-06	1.49051E-06	1.09269E-06	4343.5	551.15	1.82	117964.1	7.8808
Statewide	2020	OFF - Military - Deicer	Aggregated	100	Diesel	5.83917E-05	6.94909E-05	8.4084E-05	0.000803486	0.000761546	0.136183461	4.24068E-05	3.90159E-05	4.24068E-05	1.10646E-06	1.35946E-06	4398.25	1102.3	3.67	121253	3.9901
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	50	Diesel	0.000253539	0.000301733	0.000365990	0.002173843	0.002284821	0.173555064	0.000107192	9.86136E-05	0.000107192	4.10519E-06	2.61694E-06	10581.35	8062.85	26.91	306388.3	1.3124
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	100	Diesel	0.007401944	0.008089825	0.010658799	0.011825787	0.009686918	17.26311041	0.00537587	0.00094958	0.000537587	0.000202505	0.000144434	57414.305	201965.45	62.91	16763132.35	2.8427
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	175	Diesel	0.007764063	0.009239877	0.011180251	0.125940771	0.10322619	24.61423259	0.004527992	0.004165753	0.004527992	0.000276952	0.000205545	817052.5	162851.95	541.01	23899546.65	5.0255
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	300	Diesel	0.002362261	0.002811285	0.003401655	0.017888903	0.035498895	9.869895595	0.001039824	0.000956638	0.001039824	0.000111053	8.19178E-05	325842.8	42956.85	142.9	9579377.55	7.5854
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	600	Diesel	0.001420651	0.001690692	0.002045738	0.011108047	0.020306101	6.247106504	0.000635343	0.000584516	0.000635343	6.13174E-05	5.18604E-05	206148.35	17406.85	57.91	605783.05	18.4299
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	750	Diesel	7.62514E-05	9.07455E-05	0.000109802	0.000587686	0.001097802	0.330511708	3.39561E-05	3.12396E-05	3.39561E-05	3.3232E-06	2.74182E-06	10898.9	481.8	1.77	25763	22.6122
Statewide	2020	OFF - Military - Hydraulic Unit	Aggregated	100	Diesel	0.000844689	0.00100525	0.001216352	0.011623153	0.011022227	1.970017591	0.000613479	0.000564401	0.000613479	2.31093E-05	1.64702E-05	65470.05	20096.9	66.9	1909205.5	3.2577
Statewide	2020	OFF - Military - Lift (Military)	Aggregated	100	Diesel	2.52146E-05	3.00075E-05	3.6309E-05	0.000346966	0.000392922	0.058064984	1.83128E-05	1.68478E-05	1.83128E-05	6.8983E-06	4.78395E-06	1901.65	481.8	1.77	45771	3.9470
Statewide	2020	OFF - Military - Light	Aggregated	50	Diesel	6.17785E-05	7.35216E-05	8.89611E-05	0.000292869	0.00055673	0.077379666	2.61182E-05	2.40239E-05	2.61182E-05	1.00029E-06	6.42758E-07	2555	1387	4.85	69350	1.8421
Statewide	2020	OFF - Military - Other tactical support equipment	Aggregated	50	Diesel	1.23575E-05	1.47004E-05	1.77922E-05	0.000105938	0.000111346	0.015475393	5.22376E-06	4.80586E-06	5.22376E-06	2.00058E-07	1.01005E-07	401.5	189.8	0.78	9490	2.1154
Statewide	2020	OFF - Military - Other tactical support equipment	Aggregated	100	Diesel	0.000167743	0.000199629	0.000241551	0.002308196	0.00218886	0.391217931	0.000121828	0.000121828	0.000121828	4.58919E-06	3.27164E-06	13004.95	4686.6	15.66	370241.4	2.7749
Statewide	2020	OFF - Military - Other tactical support equipment	Aggregated	175	Diesel	0.000231183	0.000271527	0.000332904	0.003750919	0.003736669	0.732914613	0.000134826	0.000112404	0.000134826	8.24655E-06	6.10987E-06	24287.1	4686.6	15.66	693616.8	5.1822
Statewide	2020	OFF - Military - Other tactical support equipment	Aggregated	300	Diesel	9.6835E-05	0.000115311	0.000139527	0.000737354	0.001456068	0.40483628	2.46068E-05	3.92387E-05	2.46068E-05	4.5551E-06	3.35979E-06	13355.35	1737.4	5.93	378753.2	7.6870
Statewide	2020	OFF - Military - Other tactical support equipment	Aggregated	600	Diesel	3.80079E-05	4.52325E-05	5.47341E-05	0.000297183	0.000543257	0.167134251	1.69979E-05	1.56381E-05	1.69979E-05	1.64088E-06	1.35989E-06	5405.65	481.8	1.77	130086	11.2197
Statewide	2020	OFF - Military - Other tactical support equipment	Aggregated	750	Diesel	4.47E-05	5.31967E-05	6.3496E-05	0.000344512	0.000645562	0.193751922	1.99056E-05	1.83132E-05	1.99056E-05	1.94812E-06	1.58578E-06	6303.55	189.8	0.78	118814.8	33.2115
Statewide	2020	OFF - Military - Pressure Washers	Aggregated	175	Diesel	4.45184E-05	5.29805E-05	6.41056E-05	0.000721312	0.000591889	0.141135587	2.59631E-05	2.3886E-05	2.59631E-05	1.58026E-06	1.14595E-06	4555.2	424.9	2.75	125384.8	5.5221
Statewide	2020	OFF - Military - Pump (Military)	Aggregated	50	Diesel	0.000558972	0.000665223	0.00080492	0.004792624	0.005037296	0.700106787	0.000236323	0.000217417	0.000236323	5.05063E-06	5.87205E-06	23417.5	8706.85	57.91	678867.15	13.410
Statewide	2020	OFF - Military - Pump (Military)	Aggregated	100	Diesel	0.000597188	0.000710703	0.00085995	0.008217469	0.007792619	1.392785362	0.000433724	0.000399026	0.000433724	6.33801E-05	1.16431E-05	46282	13519.6	44.92	1351960	3.4233
Statewide	2020	OFF - Military - Start Cart	Aggregated	100	Diesel	1.32708E-05	1.57934E-05	1.911E-05	0.000173161	0.0005950786	6.83823E-06	8.86725E-06	6.83823E-06	3.6309E-07	2.35984E-07	938.05	189.8	0.78	18980	4.9423	
Statewide	2020	OFF - Military - Start Cart	Aggregated	600	Diesel	1.9199E-05	2.37052E-05	2.86833E-05	0.000155746	0.000284712	0.087590727	8.90815E-06	8.1955E-06	8.90815E-06	5.92732E-07	7.07952E-07	2814.15	189.8	0.78	53173.4	18.6269
Statewide	2020	OFF - Military - Test Stand	Aggregated	100	Diesel	0.00042903	0.000479488	0.00058018	0.005544052	0.005257421	0.939665855	0.000292619	0.000292619	8.10228E-05	7.84164E-06	31171	9317.1	32.99	117161.6	3.1466	
Statewide	2020	OFF - Military - Test Stand	Aggregated	175	Diesel	2.77246E-05	3.29967E-05	3.9926E-05	0.00049749	0.000386633	0.087900233	1.617E-05	1.48746E-05	1.617E-05	9.89028E-07	7.14379E-07	2839.7	481.8	1.77	68415.6	5.8939
Statewide	2020	OFF - Military - Test Stand	Aggregated	300	Diesel	0.000452392	0.000538384	0.000651444	0.003425869	0.006798324	1.890164507	0.000199135	0.000183204	0.000199135	2.12676E-05	1.5698E-05	62400.4	921.95	3.11	182854.0	6.7228
Statewide	2020	OFF - Military - Test Stand	Aggregated	600	Diesel	0.000289705	0.000344773	0.000417175	0.002265196	0.004140899	1.273934344	0.000129562	0.000119197	0.000129562	1.25041E-05	1.05679E-05	42007.85	3500.35	11.62	120620.05	12.0101
Statewide	2020	OFF - Military - Welder	Aggregated	50	Diesel	0.000181629	0.000216153	0.000261546	0.001636787	0.001636787	2.22748827	7.67893E-05	7.06462E-05	7.67893E-05	2.94086E-06	1.89981E-06	7551.85	6206.9	20.85	21941.5	1.2128
Statewide	2020	OFF - Military - Welder	Aggregated	100	Diesel	0.000477219	0.000567931	0.000687196	0.00656667	0.006221769	1.112990521	0.000346594	0.000318866	0.000346594	1.80555E-05	9.3035E-06	36989.1	17406.85	57.91	107924.27	2.1250
Statewide	2020	OFF - Oil Drilling - Compressors (Workover)	Aggregated	25	Diesel	5.72952E-05	6.8186E-05	8.25051E-05	0.000280893	0.000541204	2.34589E-05	5.15821E-05	2.34589E-05	1.81852E-07	4.80232E-07						

Output from OFFROAD2017 Model Run

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Source: California Air Resources Board. 2017. OFFROAD2017-ORION computer program, Version 1.0.1 (web-based). Sacramento, CA. Available: <https://www.arb.ca.gov/orion/?bay>. Accessed January 14, 2020.

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO2_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activity_hpy	Total_Population	Horsepower_Hours_hpy	Fuel_Use_gwh
Statewide	2020	Portable Equipment - Non-Rental Other Portable Equipment Aggregated	300		Diesel	0.005618573	0.006798473	0.008090745	0.002700073	0.081255215	25.2521814	0.002912593	0.002679585	0.002912593	0.00023233	0.000206105	819279.2152	21995.14369	717.1466855	54090537.25	3.7248
Statewide	2020	Portable Equipment - Non-Rental Other Portable Equipment Aggregated	600		Diesel	0.009009882	0.010901958	0.012974231	0.079642315	0.146556219	41.30891237	0.005025284	0.004623261	0.005025284	0.000381651	0.000337158	1340222.168	188130.1639	613.3941444	88484286.88	7.1239
Statewide	2020	Portable Equipment - Non-Rental Other Portable Equipment Aggregated	750		Diesel	0.004191512	0.00507173	0.006035778	0.036764386	0.075030996	19.57069123	0.002623517	0.002413636	0.002623517	0.000180815	0.000159733	634949.5239	58746.96566	191.5431529	634949.5239	10.8082
Statewide	2020	Portable Equipment - Non-Rental Other Portable Equipment Aggregated	9999		Diesel	0.085905911	0.103946152	0.123704512	0.771185129	1.319038774	126.9051676	0.047442841	0.043647414	0.047442841	0.001170724	0.001035783	4117298.402	109451.192	356.863136	271832770.8	37.6177
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	50		Diesel	3.61605E-05	4.37542E-05	5.20711E-05	0.000680481	0.000683855	0.106114647	2.32394E-05	2.13802E-05	2.32394E-05	9.79998E-07	8.66093E-07	3442.772852	4205.182469	13.68165378	204457.7743	0.8187
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	75		Diesel	0.001272583	0.002090376	0.00248772	0.039062474	0.033989567	6.211601506	0.001142734	0.001051315	0.001142734	5.73775E-05	5.06983E-05	201528.57	186079.3243	605.4131797	13305340.13	1.0830
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	100		Diesel	0.002388731	0.002890364	0.003439772	0.064591223	0.047984982	10.19248676	0.002902803	0.002670578	0.002902803	9.41629E-05	8.31897E-05	330684.0079	234789.3545	763.8923359	21832453.84	1.4084
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	175		Diesel	0.003977645	0.004812951	0.005727809	0.104010949	0.074524022	18.71137333	0.003086637	0.002839837	0.003086637	0.000172877	0.00015272	670769.9007	282448.0892	918.9510787	40080031.9	2.1493
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	300		Diesel	0.003603947	0.004360776	0.005189684	0.034519921	0.054015097	17.41420758	0.001973087	0.001815204	0.001973087	0.000160895	0.000142132	564984.7868	148583.1139	483.4184335	37301484.14	3.8025
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	600		Diesel	0.009608396	0.01162657	0.01383658	0.090746253	0.171658525	49.07627721	0.006395923	0.005884249	0.006395923	0.000453446	0.000400554	1592225.766	225327.694	733.1086149	105122094.5	7.0663
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	750		Diesel	0.004409491	0.00335484	0.006349667	0.043803844	0.085610072	17.523499717	0.003442824	0.003167398	0.003442824	0.000219444	0.000193844	770526.2803	71838.53384	233.728252	50871765.93	10.7258
Statewide	2020	Portable Equipment - Non-Rental Pump Aggregated	9999		Diesel	0.013012245	0.015744817	0.018737633	0.103580264	0.369007781	56.1703256	0.009576213	0.008810116	0.009576213	0.000518932	0.000458445	1822384.354	61325.57767	199.5241176	12031768.64	29.7165
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	50		Diesel	7.38828E-05	8.93982E-05	0.000106391	0.001524154	0.001313631	0.235993636	3.39026E-05	3.11903E-05	3.39026E-05	2.17966E-06	1.92615E-06	7656.553622	8823.655742	17.10206722	454703.808	0.7667
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	75		Diesel	0.000566558	0.000685536	0.000815844	0.011443739	0.009577718	1.752316136	0.00030443	0.000280076	0.00030443	1.6184E-05	1.43022E-05	56851.9672	55883.15304	108.3130924	3753486.47	1.0173
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	100		Diesel	0.000443753	0.000536941	0.000639004	0.01283264	0.007275286	1.9302812	0.00048262	0.00044401	0.00048262	1.78331E-05	1.57547E-05	62625.8477	45883.00986	88.93074956	4134690.207	1.3649
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	175		Diesel	0.00256856	0.005150796	0.006129873	0.135198491	0.076105212	24.52370212	0.002510238	0.002309319	0.002510238	0.000226606	0.000200159	795644.5074	375299.4909	727.4079259	5253012.12	2.1200
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	300		Diesel	0.003080514	0.003727423	0.004435994	0.037303011	0.036521998	19.68026078	0.001284054	0.001181329	0.001284054	0.000181861	0.000160628	638504.387	147649.1728	286.1745915	12155402.81	4.3245
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	600		Diesel	0.023982743	0.029019119	0.03453515	0.268073727	0.26324913	141.7724368	0.010996422	0.010116708	0.010996422	0.001310037	0.001157128	4599650.578	538831.244	1044.366238	303678607.1	8.5363
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	750		Diesel	0.002381541	0.002881664	0.003429418	0.023906739	0.022852226	12.24614826	0.001168418	0.001074995	0.001168418	0.00011315	9.99514E-05	397312.7937	38235.84155	74.10895796	26231426.44	10.3911
Statewide	2020	Portable Equipment - Rental Compressor Aggregated	9999		Diesel	0.001478152	0.001788564	0.002128539	0.013186763	0.03480069	6.969135166	0.000834641	0.00076787	0.000834641	6.43888E-05	5.68811E-05	226105.9153	14117.84919	27.36330756	14927988.18	16.0156
Statewide	2020	Portable Equipment - Rental Generator Aggregated	50		Diesel	0.000152296	0.000184278	0.000219306	0.002325295	0.002020356	0.2503595	9.09877E-05	8.37087E-05	9.09877E-05	2.31013E-06	2.0434E-06	8122.638247	11228.54904	7.980644704	482383.4185	0.7234
Statewide	2020	Portable Equipment - Rental Generator Aggregated	75		Diesel	0.019004612	0.02299558	0.027366641	0.294442867	0.236840381	41.06901797	0.009406843	0.008654295	0.009406843	0.000379133	0.0003352	1332439.059	1270234.198	904.1292871	87970429.61	1.0475
Statewide	2020	Portable Equipment - Rental Generator Aggregated	100		Diesel	0.032970304	0.039894068	0.047477238	0.64660258	0.428091177	88.89802547	0.031698004	0.029162164	0.031698004	0.000820917	0.000725574	2884198.533	1902437.023	1352.203448	190420854.4	1.5161
Statewide	2020	Portable Equipment - Rental Generator Aggregated	175		Diesel	0.049258565	0.059602864	0.070932334	0.987186813	0.550107935	157.7817241	0.02250152	0.020710398	0.02250152	0.001457293	0.001287793	5119054.275	3205022.043	1599.613354	337970731.8	2.2746
Statewide	2020	Portable Equipment - Rental Generator Aggregated	300		Diesel	0.076454302	0.092509705	0.110094195	0.490385739	0.676469518	222.5618515	0.027110745	0.024941885	0.027110745	0.002055401	0.00181652	7220774.163	1865543.219	47673070.1	47673070.1	3.8706
Statewide	2020	Portable Equipment - Rental Generator Aggregated	600		Diesel	0.132607793	0.161045543	0.190055222	0.898913123	1.170971791	439.3969411	0.049750537	0.045770944	0.049750537	0.004058464	0.003586299	14255749.85	2160693.651	1535.765637	941194593.7	6.5978
Statewide	2020	Portable Equipment - Rental Generator Aggregated	750		Diesel	0.025742767	0.031148748	0.037069584	0.168039637	0.273499703	81.55362394	0.011111023	0.010222142	0.011111023	0.000753231	0.000665663	2645917.513	248632.1573	176.7213613	176489004.3	10.6419
Statewide	2020	Portable Equipment - Rental Generator Aggregated	9999		Diesel	0.288500583	0.349194606	0.41557044	1.755141757	4.763137489	855.8931787	0.14114734	0.129855553	0.14114734	0.007904499	0.006985685	2768511.58	1310532.081	931.4925947	183333550.2	21.3887
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	50		Diesel	0.000237189	0.000286998	0.000341552	0.002288833	0.001542155	0.243975643	6.02171E-05	5.53997E-05	6.02171E-05	2.24856E-06	1.9913E-06	7915.521022	11098.55259	9.121102519	470083.2387	0.7132
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	75		Diesel	0.005763117	0.006973371	0.008298888	0.107981174	0.08149049	15.75506161	0.001830282	0.001683859	0.001830282	0.00014549	0.000128591	511155.6229	46475.18895	381.9461688	33747569.51	1.0998
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	100		Diesel	0.003262602	0.004687478	0.004841246	0.075082657	0.040219361	10.08548888	0.003149994	0.002897995	0.003149994	9.31445E-05	8.23164E-05	327212.5796	235844.2425	193.8234285	21603262.84	1.3874
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	175		Diesel	0.011769697	0.014241333	0.016948363	0.254417323	0.127995513	41.42269034	0.00552216	0.005108039	0.00552216	0.000382659	0.000338121	1344050.257	621518.9448	510.781741	88737025.37	2.1625
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	300		Diesel	0.010393499	0.012576134	0.014966399	0.064452265	0.089131308	28.29711388	0.0036494	0.003357448	0.0036494	0.000261309	0.000230957	918068.6962	241393.5188	198.8339798	60612826.6	3.8032
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	600		Diesel	0.009121249	0.011036711	0.013134598	0.057461306	0.083963999	27.84036592	0.003483179	0.003204424	0.003483179	0.000257124	0.000227229	903250.0114	138731.9073	114.0137815	59634465.86	6.5108
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	750		Diesel	0.004501518	0.005446716	0.006482042	0.031040245	0.041778855	15.15840886	0.002150201	0.001978185	0.002150201	0.000140012	0.000123721	491797.8816	45781.52942	37.62454789	32469530.71	10.7423
Statewide	2020	Portable Equipment - Rental Other Portable Equipment Aggregated	9999		Diesel	0.091010247	0.110122399	0.131054756	0.845518432	1.145650043	114.1074379	0.046149662	0.042457689	0.046149662	0.0010						

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/hpy

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM10_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_Pop	Housepower_Hours_hhpy
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	50	Diesel	1.174894	1.421621	1.691847	3.661714	3.297612	45.01836	0.31589	0.290619	0.31589	0.000384	0.00037	10430250	9311653	25996.44	3.79E+08
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	75	Diesel	1.079249	1.305891	1.554118	4.211774	7.997859	80.1763	0.626582	0.576455	0.626582	0.000714	0.000659	18575950	10514434	28229.09	6.63E+08
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	100	Diesel	1.552987	1.879114	2.236301	9.749911	13.09971	214.0656	1.04975	0.96577	1.04975	0.001946	0.001759	49596587	20709268	34749.81	1.78E+09
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	175	Diesel	1.214507	1.469553	1.74889	7.095778	11.50062	150.5683	0.659165	0.606432	0.659165	0.001365	0.001237	34884985	11107977	17144.88	1.35E+09
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	300	Diesel	1.000149	1.21018	1.440214	3.665666	10.92255	161.5721	0.465995	0.428715	0.465995	0.001474	0.001328	37434448	6783003	8568.806	1.47E+09
Statewide	2020	Agricultural - Agricultural Tractors	Aggregated	600	Diesel	0.443597	0.536752	0.63878	1.881082	4.445914	113.2787	0.196122	0.180432	0.196122	0.001041	0.000931	26245404	2864401	2568.188	1.05E+09
Statewide	2020	Agricultural - Bale Wagons (Self Prop	Aggregated	50	Diesel	0.001281	0.00155	0.001844	0.007552	0.008085	0.129773	0.000477	0.000439	0.000477	1.17E-06	1.07E-06	30067.03	29477.48	45.99841	1031712
Statewide	2020	Agricultural - Bale Wagons (Self Prop	Aggregated	100	Diesel	0.006561	0.007939	0.009448	0.057291	0.061316	1.3225	0.005042	0.004639	0.005042	1.21E-05	1.09E-05	306408.4	125841.9	202.1137	10512139
Statewide	2020	Agricultural - Bale Wagons (Self Prop	Aggregated	175	Diesel	0.013975	0.016909	0.020124	0.134192	0.142509	3.223286	0.008549	0.007865	0.008549	2.96E-05	2.65E-05	746799.3	223195.3	357.2413	28767297
Statewide	2020	Agricultural - Bale Wagons (Self Prop	Aggregated	300	Diesel	0.00316	0.003823	0.00455	0.013324	0.038043	0.884978	0.001489	0.00137	0.001489	8.14E-06	7.27E-06	205039.5	40430.11	64.99637	7821671
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	50	Diesel	0.012136	0.014684	0.017475	0.052391	0.059444	0.937897	0.004014	0.003693	0.004014	8.37E-06	7.71E-06	217300.2	161225.9	495.0187	7405268
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	75	Diesel	0.00542	0.006558	0.007805	0.035755	0.051386	0.831646	0.003381	0.00311	0.003381	7.58E-06	6.83E-06	192683	102365	131.6241	6634926
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	100	Diesel	0.001114	0.001348	0.001604	0.007394	0.010284	0.171983	0.000752	0.000692	0.000752	1.57E-06	1.41E-06	39846.43	17276.77	52.92957	1370139
Statewide	2020	Agricultural - Balers (Self Propelled)	Aggregated	175	Diesel	0.000753	0.000912	0.001085	0.005944	0.008532	0.145369	0.000438	0.000403	0.000438	1.33E-06	1.19E-06	33680.41	12233.94	37.53436	1294386
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	75	Diesel	0.000943	0.001141	0.001358	0.005276	0.007967	0.118305	0.0006	0.000552	0.0006	1.07E-06	9.72E-07	27410.05	17201.93	47.5859	1059812
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	100	Diesel	0.006154	0.007446	0.008861	0.034434	0.051721	0.771033	0.004133	0.003803	0.004133	6.99E-06	6.34E-06	178639.8	79702.18	219.5106	6803397
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	175	Diesel	0.011475	0.013885	0.016524	0.077027	0.121267	1.853103	0.006435	0.00592	0.006435	1.69E-05	1.52E-05	429343.2	134334.9	375.7215	18960379
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	300	Diesel	0.073751	0.089239	0.106201	0.309101	0.989568	17.6437	0.036368	0.033459	0.036368	0.000162	0.000145	4087847	752536.5	1991.546	1.74E+08
Statewide	2020	Agricultural - Combine Harvesters	Aggregated	600	Diesel	0.013794	0.016691	0.019863	0.092097	0.196623	5.808809	0.008049	0.007405	0.008049	5.37E-05	4.77E-05	1345836	168489	371.6784	5519637
Statewide	2020	Agricultural - Construction Equipmen	Aggregated	50	Diesel	0.086377	0.104516	0.124382	0.29401	0.276093	3.933342	0.024323	0.022377	0.024323	3.4E-05	3.23E-05	911311.2	880706.3	2240.909	3903805
Statewide	2020	Agricultural - Construction Equipmen	Aggregated	75	Diesel	0.066867	0.080909	0.096289	0.330538	0.544563	6.976564	0.040016	0.036815	0.040016	6.29E-05	5.73E-05	1616392	1094030	2961.909	68917836
Statewide	2020	Agricultural - Construction Equipmen	Aggregated	100	Diesel	0.136194	0.164795	0.196119	0.785567	1.124541	17.0677	0.090797	0.083533	0.090797	0.000155	0.00014	3954395	2008315	4133.845	1.69E+08
Statewide	2020	Agricultural - Construction Equipmen	Aggregated	175	Diesel	0.276514	0.334582	0.39818	1.807885	2.617043	39.81744	0.152887	0.140656	0.152887	0.000362	0.000327	9225255	3588936	5656.754	4.4E+08
Statewide	2020	Agricultural - Construction Equipmen	Aggregated	300	Diesel	0.149054	0.180355	0.214637	0.564714	1.688359	26.16422	0.071292	0.065588	0.071292	0.000239	0.000215	6061956	1463040	2592.486	2.88E+08
Statewide	2020	Agricultural - Construction Equipmen	Aggregated	600	Diesel	0.016139	0.019529	0.023241	0.077557	0.164771	2.467394	0.007074	0.006508	0.007074	2.25E-05	2.03E-05	571667.6	77922.84	88.23845	27583416
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	100	Diesel	0.0026	0.003146	0.003744	0.028157	0.02897	0.69059	0.002147	0.001975	0.002147	6.35E-06	5.67E-06	160001.9	68738.73	151.3886	6186486
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	175	Diesel	0.006092	0.007371	0.008772	0.072431	0.073465	1.841408	0.004061	0.003736	0.004061	1.7E-05	1.51E-05	426633.5	148222.1	323.4112	18059012
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	300	Diesel	0.005751	0.006959	0.008282	0.029182	0.082216	2.112642	0.003051	0.002807	0.003051	1.95E-05	1.74E-05	489475.4	85211.59	184.4274	21041047
Statewide	2020	Agricultural - Cotton Pickers	Aggregated	600	Diesel	0.010984	0.01329	0.015817	0.056786	0.153504	4.194095	0.005939	0.005464	0.005939	3.87E-05	3.45E-05	971724.8	128515.7	279.057	41667094
Statewide	2020	Agricultural - Forage & Silage Harvest	Aggregated	100	Diesel	0.000511	0.000619	0.000736	0.002864	0.004303	0.064218	0.000344	0.000316	0.000344	5.82E-07	5.28E-07	14878.57	7191.012	19.63545	575280.9
Statewide	2020	Agricultural - Forage & Silage Harvest	Aggregated	300	Diesel	0.000486	0.000588	0.0007	0.001906	0.006454	0.102686	0.000233	0.000214	0.000233	9.41E-07	8.44E-07	23791.3	6468.453	13.0364	1022660
Statewide	2020	Agricultural - Forage & Silage Harvest	Aggregated	600	Diesel	0.004588	0.005552	0.006607	0.024675	0.062223	1.358698	0.002386	0.002195	0.002386	1.25E-05	1.12E-05	314795	32280.23	80.02856	13654964
Statewide	2020	Agricultural - Forage & Silage Harvest	Aggregated	750	Diesel	0.007015	0.008488	0.010102	0.045717	0.099749	2.85556	0.00404	0.003717	0.00404	2.64E-05	2.35E-05	661601.1	46769.9	102.7194	28296192
Statewide	2020	Agricultural - Forage & Silage Harvest	Aggregated	9999	Diesel	0.004453	0.005461	0.006499	0.02847	0.099466	1.748996	0.002555	0.00235	0.002555	1.61E-05	1.44E-05	405222.7	20253.88	44.20985	17418336
Statewide	2020	Agricultural - Forklifts	Aggregated	50	Diesel	0.00833	0.010079	0.011995	0.031868	0.030535	0.452965	0.002431	0.002237	0.002431	3.97E-06	3.72E-06	104946.9	135899.1	225.4048	4501398
Statewide	2020	Agricultural - Forklifts	Aggregated	75	Diesel	0.000667	0.000807	0.00096	0.003549	0.005395	0.07305	0.000399	0.000367	0.000399	6.6E-07	6E-07	16925.96	11169.09	13.27532	725991.1
Statewide	2020	Agricultural - Forklifts	Aggregated	100	Diesel	0.000263	0.000319	0.000379	0.001411	0.002075	0.029035	0.000169	0.000155	0.000169	2.62E-07	2.39E-07	6726.985	3723.031	4.425108	288534.9
Statewide	2020	Agricultural - Hay Squeeze/Stack retr	Aggregated	75	Diesel	0.000532	0.000643	0.000766	0.0022	0.00382	0.041843	0.000322	0.000296	0.000322	3.73E-07	3.44E-07	9694.513	6368.003	10.74299	396017.7
Statewide	2020	Agricultural - Hay Squeeze/Stack retr	Aggregated	100	Diesel	0.001004	0.001215	0.001446	0.004158	0.007169	0.079088	0.000628	0.000578	0.000628	7.06E-07	6.5E-07	18323.86	9658.368	16.77279	748523.5
Statewide	2020	Agricultural - Hay Squeeze/Stack retr	Aggregated	175	Diesel	0.015199	0.018391	0.021887	0.075545	0.13826	1.543675	0.00803	0.007388	0.00803	1.39E-05	1.27E-05	357652.1	124287.8	209.3339	15074360
Statewide	2020	Agricultural - Hay Squeeze/Stack retr	Aggregated	300	Diesel	0.024397	0.029521	0.035132	0.084261	0.258802	2.98441	0.011285	0.010382	0.011285	2.7E-05	2.45E-05	691454.4	132445.4	222.355	31340565
Statewide	2020	Agricultural - Hay Squeeze/Stack retr	Aggregated	600	Diesel	0.007667	0.009277	0.011041	0.042595	0.081584	1.026576	0.003481	0.003203	0.003481	9.32E-06	8.43E-06	237846.1	33226.44	56.11435	10553091
Statewide	2020	Agricultural - Nut Harvester	Aggregated	50	Diesel	0.017305	0.020939	0.024919	0.157761	0.209074	3.717352	0.008638	0.007947	0.008638	3.41E-05	3.05E-05	861268.7	832557.5	2163.104	33509011
Statewide	2020	Agricultural - Nut Harvester	Aggregated	75	Diesel	0.010313	0.012479	0.01485	0.149441	0.153348	3.820402	0.007558	0.006954	0.007558	3.14E-05	2.				

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM10_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_Pop	Horsepower	Hours_hhpy
Statewide	2020	Agricultural - Sprayers/Spray rigs	Aggregated	100	Diesel	0.011571	0.014001	0.016662	0.065787	0.096219	1.424514	0.007593	0.006986	0.007593	1.29E-05	1.17E-05	330043.8	152082.1	271.0195	13583843	
Statewide	2020	Agricultural - Sprayers/Spray rigs	Aggregated	175	Diesel	0.020506	0.024813	0.029529	0.138982	0.210374	3.164819	0.011611	0.010682	0.011611	2.88E-05	2.6E-05	733253	272895.6	487.7741	32488666	
Statewide	2020	Agricultural - Sprayers/Spray rigs	Aggregated	300	Diesel	0.007967	0.00964	0.011472	0.032125	0.093112	1.435969	0.003989	0.00367	0.003989	1.31E-05	1.18E-05	332697.8	69197.91	124.3553	15073452	
Statewide	2020	Agricultural - Sprayers/Spray rigs	Aggregated	600	Diesel	0.00034	0.000412	0.00049	0.002187	0.004052	0.0067108	0.000169	0.000156	0.000169	6.14E-07	5.51E-07	15548.1	2139.667	3.9924	706090	
Statewide	2020	Agricultural - Swathers/Windrowers	Aggregated	50	Diesel	0.0028	0.003387	0.004031	0.018071	0.021413	0.359424	0.001121	0.001031	0.001121	3.26E-06	2.95E-06	83274.61	68258.25	155.678	3068370	
Statewide	2020	Agricultural - Swathers/Windrowers	Aggregated	75	Diesel	0.007343	0.008885	0.010574	0.079953	0.087273	1.957237	0.005039	0.004636	0.005039	1.8E-05	1.61E-05	453469.9	251507.6	542.4677	16257667	
Statewide	2020	Agricultural - Swathers/Windrowers	Aggregated	100	Diesel	0.019484	0.023576	0.028057	0.21868	0.218527	5.358986	0.016003	0.014722	0.016003	4.93E-05	4.4E-05	1241617	524383.8	1125.107	45111845	
Statewide	2020	Agricultural - Swathers/Windrowers	Aggregated	175	Diesel	0.010846	0.013124	0.015619	0.139765	0.132596	3.554092	0.007378	0.006788	0.007378	3.28E-05	2.92E-05	823443.3	268213.8	559.6251	31729200	
Statewide	2020	Agricultural - Swathers/Windrowers	Aggregated	300	Diesel	0.004021	0.004865	0.00579	0.02146	0.055526	1.522165	0.002178	0.002003	0.002178	1.4E-05	1.25E-05	352668.5	67932.13	140.9577	13960123	
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	50	Diesel	0.000642	0.000777	0.000925	0.002713	0.002358	0.235702	0.000248	0.000228	0.000248	2.16E-06	1.92E-06	7647.083	5757.098	18.36037	248356.1	
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	75	Diesel	9.42E-06	1.14E-05	1.36E-05	0.000246	0.000213	0.039439	1.44E-05	1.32E-05	1.44E-05	3.64E-07	3.22E-07	1279.554	803.5643	2.44805	46204.95	
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	100	Diesel	0.00178	0.002154	0.002563	0.015029	0.019601	2.17901	0.001346	0.001238	0.001346	2.01E-05	1.78E-05	70695.57	29060.46	89.35381	2552901	
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	175	Diesel	0.003682	0.004455	0.005302	0.042123	0.048299	6.969571	0.00299	0.002751	0.00299	6.43E-05	5.69E-05	226120.1	62138.74	190.9479	8165022	
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	300	Diesel	0.001289	0.001559	0.001856	0.007808	0.024277	3.609181	0.000731	0.000673	0.000731	3.33E-05	2.95E-05	117095.9	18883.76	57.52917	4228355	
Statewide	2020	AirGrSupp - A/C Tug Narrow Body	Aggregated	750	Diesel	0.000286	0.000346	0.000411	0.001425	0.003921	0.240063	0.000178	0.000164	0.000178	2.21E-06	1.96E-06	7788.59	401.7821	1.224025	281247.5	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	50	Diesel	1.31E-05	1.59E-05	1.89E-05	0.000303	0.000253	0.051198	9.87E-07	9.08E-07	9.87E-07	4.73E-07	4.18E-07	1661.047	1110.519	2.789968	53860.17	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	75	Diesel	0.000123	0.000149	0.000177	0.000756	0.001295	0.090206	9.08E-05	8.36E-05	9.08E-05	8.3E-07	7.36E-07	2926.642	1665.779	4.184952	105499.3	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	100	Diesel	0.000186	0.000225	0.000268	0.001706	0.002623	0.244981	0.000166	0.000153	0.000166	2.26E-06	2E-06	7948.144	3331.557	8.369904	286513.9	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	175	Diesel	0.000702	0.00085	0.001011	0.005607	0.008896	0.923427	0.000515	0.000473	0.000515	8.52E-06	7.54E-06	29959.57	7218.374	18.13479	1079980	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	300	Diesel	0.002272	0.002749	0.003272	0.016904	0.036316	4.869873	0.001189	0.001094	0.001189	7.82E-05	6.91E-05	274795.7	40838.2	103.2288	9905838	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	600	Diesel	0.001726	0.002088	0.002485	0.010528	0.033622	3.771082	0.001039	0.000956	0.001039	3.48E-05	3.08E-05	122348.6	11713.69	30.68965	4410510	
Statewide	2020	AirGrSupp - A/C Tug Wide Body	Aggregated	750	Diesel	0.000182	0.000221	0.000262	0.00066	0.004157	0.327667	0.000105	9.7E-05	0.000105	3.02E-06	2.67E-06	10630.8	608.5036	2.789968	383357.3	
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	50	Diesel	0.001854	0.002244	0.00267	0.007384	0.005545	0.517252	0.000706	0.000665	0.000706	4.73E-06	4.22E-06	16781.66	17613.47	24.58457	795095.3	
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	75	Diesel	0.002874	0.003478	0.004139	0.02205	0.028636	2.948584	0.00257	0.002365	0.00257	2.72E-05	2.41E-05	95663.55	80941.39	110.9457	5014227	
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	100	Diesel	0.003517	0.004255	0.005064	0.033749	0.041187	4.476143	0.002233	0.002055	0.002233	4.13E-05	3.65E-05	145223.5	84573.11	117.2495	7168183	
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	175	Diesel	4.88E-05	5.9E-05	7.02E-05	0.000228	0.000535	0.033805	3.64E-05	3.35E-05	3.64E-05	3.11E-07	2.76E-07	1096.757	459.8943	0.630374	57486.78	
Statewide	2020	AirGrSupp - Baggage Tug	Aggregated	300	Diesel	0.000132	0.00016	0.00019	0.000447	0.002793	0.194715	7.24E-05	6.66E-05	7.24E-05	1.8E-06	1.59E-06	6317.322	1839.577	2.521494	331123.9	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	25	Diesel	1.05E-05	1.28E-05	1.52E-05	8.35E-05	7.91E-05	0.011167	5.39E-06	4.96E-06	5.39E-06	1.03E-07	9.11E-08	362.309	751.4415	1.472365	18786.04	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	50	Diesel	0.000695	0.00084	0.001	0.003372	0.002699	0.320947	0.000252	0.000231	0.000252	2.95E-06	2.62E-06	10412.76	11647.34	22.82166	539910.8	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	75	Diesel	0.00156	0.001888	0.002246	0.012775	0.017722	1.796657	0.001305	0.001201	0.001305	1.66E-05	1.47E-05	58290.56	54479.51	106.7465	3360071	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	100	Diesel	0.00152	0.001839	0.002189	0.013707	0.016138	1.927703	0.001404	0.001292	0.001404	1.78E-05	1.57E-05	62542.19	42026.13	83.18862	3605176	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	175	Diesel	0.000125	0.000151	0.00018	0.000794	0.001414	1.120249	6.61E-05	6.08E-05	6.61E-05	1.11E-06	9.81E-07	3901.347	1663.448	3.680912	224902.6	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	300	Diesel	2.26E-05	2.73E-05	3.25E-05	0.000198	0.00029	0.105875	1.29E-05	1.18E-05	1.29E-05	9.78E-07	8.64E-07	3434.991	751.4415	1.472365	198004.8	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	600	Diesel	3.29E-05	3.98E-05	4.74E-05	0.000436	0.00041	0.09141	2.03E-05	1.87E-05	2.03E-05	8.44E-07	7.46E-07	2965.694	375.7208	0.736182	170953	
Statewide	2020	AirGrSupp - Belt Loader	Aggregated	750	Diesel	9.33E-05	0.000113	0.000134	0.00144	0.001246	0.053609	6.34E-05	5.83E-05	6.34E-05	4.93E-07	4.38E-07	1739.288	160.5644	0.736182	100352.8	
Statewide	2020	AirGrSupp - Bobtail	Aggregated	25	Diesel	3.51E-06	4.25E-06	5.06E-06	7.3E-05	9.51E-05	0.011373	3.39E-06	3.12E-06	3.39E-06	1.05E-07	9.28E-08	368.9828	695.8579	1.51567	17396.45	
Statewide	2020	AirGrSupp - Bobtail	Aggregated	50	Diesel	5E-05	6.05E-05	7.21E-05	0.000462	0.000405	0.071757	1.51E-05	1.39E-05	1.51E-05	6.62E-07	5.86E-07	2328.07	2418.148	6.062679	109773.7	
Statewide	2020	AirGrSupp - Bobtail	Aggregated	75	Diesel	1.49E-05	1.8E-05	2.15E-05	0.000207	0.000298	0.030281	1.61E-05	1.48E-05	1.61E-05	2.8E-07	2.47E-07	982.4347	695.8579	1.51567	51493.49	
Statewide	2020	AirGrSupp - Bobtail	Aggregated	100	Diesel	3.64E-05	4.4E-05	5.24E-05	0.000889	0.000694	1.139538	3.13E-05	2.88E-05	3.13E-05	1.29E-06	1.14E-06	4527.165	2783.432	6.062679	237287.6	
Statewide	2020	AirGrSupp - Bobtail	Aggregated	175	Diesel	0.00012	0.000145	0.000173	0.001413	0.001362	0.222815	8.65E-05	7.96E-05	8.65E-05	2.06E-06	1.82E-06	7228.999	3114.006	7.578349	378935.1	
Statewide	2020	AirGrSupp - Bobtail	Aggregated	300	Diesel	0.000517	0.000626	0.000745	0.003303	0.007442	1.218418	0.000294	0.00027	0.000294	1.12E-05	9.94E-06					

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM10_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_Pop	Horsepower	Hours_hphy
Statewide	2020	AirGrSupp - Forklift	Aggregated	175	Diesel	0.000864	0.001046	0.001245	0.007827	0.01157	1.242295	0.000604	0.000556	0.000604	1.15E-05	1.01E-05	40304.89	30322.45	80.37575	3872935	
Statewide	2020	AirGrSupp - Forklift	Aggregated	300	Diesel	0.000453	0.000548	0.000653	0.003182	0.008029	0.940056	0.000251	0.000231	0.000251	8.68E-06	7.67E-06	30499.07	12393.42	32.82953	2930162	
Statewide	2020	AirGrSupp - Forklift	Aggregated	600	Diesel	8.84E-05	0.000107	0.000127	0.000318	0.001998	0.155821	5.16E-05	4.74E-05	5.16E-05	1.44E-06	1.27E-06	5055.44	1322.178	3.396158	485680.2	
Statewide	2020	AirGrSupp - Lift	Aggregated	25	Diesel	4.89E-06	5.91E-06	7.04E-06	9.84E-05	0.000126	0.014901	4.4E-06	4.05E-06	4.4E-06	1.38E-07	1.22E-07	483.4313	1002.469	2.419098	25061.73	
Statewide	2020	AirGrSupp - Lift	Aggregated	50	Diesel	0.000216	0.000261	0.000311	0.002397	0.002449	0.354251	0.000112	0.000103	0.000112	3.27E-06	2.89E-06	11493.29	13295.91	32.65783	595836	
Statewide	2020	AirGrSupp - Lift	Aggregated	75	Diesel	3.42E-05	4.14E-05	4.92E-05	0.001061	0.00067	0.171561	1.88E-05	1.73E-05	1.88E-05	1.59E-06	1.4E-06	5566.095	4511.111	10.88594	320790.2	
Statewide	2020	AirGrSupp - Lift	Aggregated	100	Diesel	0.001275	0.001543	0.001836	0.015084	0.015013	2.283296	0.001033	0.000951	0.001033	2.11E-05	1.86E-05	74079.02	50651.08	123.374	4265978	
Statewide	2020	AirGrSupp - Lift	Aggregated	175	Diesel	0.000235	0.000285	0.000339	0.003178	0.002415	0.528889	0.000176	0.000162	0.000176	4.88E-06	4.32E-06	17159.23	8019.754	19.35279	988935.9	
Statewide	2020	AirGrSupp - Lift	Aggregated	300	Diesel	0.000256	0.00031	0.000369	0.002996	0.003793	1.050733	0.000112	0.000103	0.000112	9.71E-06	8.58E-06	34089.88	8784.796	21.77189	1964787	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	25	Diesel	1.08E-05	1.31E-05	1.55E-05	0.000229	0.000183	0.036358	7.52E-07	6.92E-07	7.52E-07	3.36E-07	2.97E-07	1179.603	2446.458	5.064075	61161.45	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	50	Diesel	0.00516	0.006243	0.00743	0.035751	0.033412	4.350949	0.002282	0.0021	0.002282	4.01E-05	3.55E-05	141161.8	212366.9	450.7027	7317563	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	75	Diesel	0.001373	0.001661	0.001977	0.018756	0.020777	2.79348	0.001201	0.001105	0.001201	2.58E-05	2.28E-05	90631.39	76825.96	164.5824	5224284	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	100	Diesel	0.001138	0.001378	0.001639	0.017356	0.013304	2.687062	0.000837	0.00077	0.000837	2.48E-05	2.19E-05	87178.78	56820.78	119.0058	5015103	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	175	Diesel	0.002462	0.002979	0.003545	0.044826	0.030779	7.930722	0.001465	0.001348	0.001465	7.32E-05	6.47E-05	257303.6	92175.69	194.9669	14831645	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	300	Diesel	0.002494	0.003017	0.003591	0.018088	0.039811	8.454257	0.001289	0.001186	0.001289	7.81E-05	6.9E-05	274289.1	70157.56	149.3902	15810795	
Statewide	2020	AirGrSupp - Other GSE	Aggregated	600	Diesel	0.001596	0.001931	0.002299	0.012553	0.024715	5.273516	0.000882	0.000812	0.000882	4.87E-05	4.3E-05	171093.4	27463.28	58.23686	9862282	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	50	Diesel	2.65E-05	3.21E-05	3.82E-05	0.000242	0.000307	0.044165	1.62E-05	1.49E-05	1.62E-05	4.08E-07	3.6E-07	1432.882	1465.514	26.10783	6338.74	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	75	Diesel	5.42E-06	6.56E-06	7.81E-06	0.000274	0.000167	0.047192	1.93E-06	1.78E-06	1.93E-06	4.36E-07	3.85E-07	1531.093	1375.605	37.1006	75607.32	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	100	Diesel	6.59E-06	7.98E-06	9.5E-06	2.98E-05	7.49E-05	0.00318	3.96E-06	3.65E-06	3.96E-06	2.92E-08	2.6E-08	103.1734	50.94833	1.374096	5094.833	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	175	Diesel	1.36E-05	1.64E-05	1.95E-05	0.000129	0.000213	0.020781	1.28E-05	1.18E-05	1.28E-05	1.92E-07	1.7E-07	674.2142	299.6961	1.374096	32966.57	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	300	Diesel	4.75E-06	5.75E-06	6.84E-06	3.05E-05	0.000119	0.017331	2.17E-06	2E-06	2.17E-06	1.6E-07	1.41E-07	562.2951	101.8967	2.748192	27766.84	
Statewide	2020	AirGrSupp - Passenger Stand	Aggregated	600	Diesel	1.39E-06	1.68E-06	2E-06	3.42E-05	9.5E-06	0.019557	3.18E-07	2.92E-07	3.18E-07	1.81E-07	1.6E-07	634.5165	101.8967	2.748192	31333.22	
Statewide	2020	CHC - AE Barge and Dredge	Aggregated		Diesel	0.022575	0.027315	0.032507	0.266567	0.705649	19.69614	0.018248	0.016788	0.018248	0.000181	0.00114	4532969	0	0	0	
Statewide	2020	CHC - AE Charter Fishing	Aggregated		Diesel	0.076949	0.093108	0.110807	0.322445	0.45403	5.750193	0.02499	0.02299	0.02499	5.09E-05	0.000333	1323379	0	0	0	
Statewide	2020	CHC - AE Commercial Fishing	Aggregated		Diesel	0.201445	0.243748	0.290081	0.938854	1.852903	16.47007	0.102198	0.094022	0.102198	0.000954	0.000954	3790506	0	0	0	
Statewide	2020	CHC - AE Crew and Supply	Aggregated		Diesel	0.013074	0.01582	0.018827	0.062915	0.078483	1.319857	0.002834	0.002607	0.002834	1.18E-05	7.64E-05	303758.5	0	0	0	
Statewide	2020	CHC - AE Ferry and Excursion	Aggregated		Diesel	0.063577	0.076928	0.091551	0.366476	0.434021	7.640104	0.014911	0.013718	0.014911	6.87E-05	0.000442	1758548	0	0	0	
Statewide	2020	CHC - AE Others	Aggregated		Diesel	0.005015	0.006068	0.007221	0.021152	0.03152	0.361586	0.001778	0.001636	0.001778	3.19E-06	2.09E-05	83217.35	0	0	0	
Statewide	2020	CHC - AE Pilot Vessels	Aggregated		Diesel	0.000251	0.000303	0.000361	0.000825	0.000895	0.012714	5.68E-05	5.23E-05	5.68E-05	1.1E-07	7.36E-07	2926.159	0	0	0	
Statewide	2020	CHC - AE Tow Boats	Aggregated		Diesel	0.013487	0.016319	0.019422	0.078308	0.101883	1.664656	0.004044	0.00372	0.004044	1.5E-05	9.64E-05	383112.4	0	0	0	
Statewide	2020	CHC - AE Tug Boats	Aggregated		Diesel	0.029875	0.036148	0.043019	0.180263	0.225616	3.829415	0.008174	0.00752	0.008174	3.45E-05	0.000222	881321.1	0	0	0	
Statewide	2020	CHC - AE Work Boats	Aggregated		Diesel	0.002791	0.003377	0.004019	0.016432	0.026673	0.313646	0.001052	0.000968	0.001052	2.82E-06	1.82E-05	72183.99	0	0	0	
Statewide	2020	CHC - ME Barge and Dredge	Aggregated		Diesel	0.003303	0.003997	0.004757	0.030579	0.12487	2.354635	0.003377	0.003107	0.003377	2.17E-05	0.000136	541907.7	0	0	0	
Statewide	2020	CHC - ME Charter Fishing	Aggregated		Diesel	0.648573	0.784773	0.933945	4.004485	9.078222	96.1842	0.383272	0.35261	0.383272	0.00087	0.005569	22135682	0	0	0	
Statewide	2020	CHC - ME Commercial Fishing	Aggregated		Diesel	0.571785	0.69186	0.82337	2.669593	10.3594	64.7279	0.449496	0.413536	0.449496	0.000581	0.003748	14896809	0	0	0	
Statewide	2020	CHC - ME Crew and Supply	Aggregated		Diesel	0.106146	0.128437	0.152851	0.769353	0.912684	16.1887	0.024885	0.022895	0.024885	0.000146	0.000937	3725749	0	0	0	
Statewide	2020	CHC - ME Ferry and Excursion	Aggregated		Diesel	1.011382	1.223772	1.45639	9.184966	9.983174	191.9488	0.250148	0.230136	0.250148	0.001744	0.011113	44176066	0	0	0	
Statewide	2020	CHC - ME Others	Aggregated		Diesel	0.08554	0.103504	0.123178	0.479783	1.277275	11.80802	0.057405	0.052813	0.057405	0.000684	0.000684	2717559	0	0	0	
Statewide	2020	CHC - ME Pilot Vessels	Aggregated		Diesel	0.018811	0.022761	0.027087	0.119595	0.247204	3.007577	0.010447	0.009612	0.010447	2.72E-05	0.000174	692179	0	0	0	
Statewide	2020	CHC - ME Tow Boats	Aggregated		Diesel	0.11877	0.143712	0.171029	0.709342	1.190579	23.02507	0.028111	0.025862	0.028111	0.000209	0.001333	5299107	0	0	0	
Statewide	2020	CHC - ME Tug Boats	Aggregated		Diesel	0.510995	0.618304	0.735832	4.559303	5.545478	95.75924	0.162092	0.149124	0.162092	0.00087	0.005544	22038519	0	0	0	
Statewide	2020	CHC - ME Work Boats	Aggregated		Diesel	0.018448	0.022322	0.026565	0.120368	0.236202	2.754128	0.009676	0.008902	0.009676	2.49E-05	0.000159	633849.1	0	0	0	
Statewide	2020	CHE - Port Construction Equipment	Aggregated	50	Diesel	0.000542	0.000656	0.000781	0.005114	0.003818	0.514079	6.56E-05	6.04E-05	6.56E-05	4.74E-06	4.2E-06	16678.73	12619.49	7.066599	527240.5	
Statewide	2020	CHE - Port Construction Equipment	Aggregated	75	Diesel	0.001849	0.002237	0.002663	0.018352	0.019995	2.691731	0.000395	0.000363	0.000395	2.48E-05	2.2E-05	87330.25	42130.37	15.08132	2759810	
Statewide	2020	CHE - Port Construction Equipment	Aggregated	100	Diesel	0.001392	0.001685	0.002005	0.020669	0.009383	3.118666	0.000188	0.000173	0.000188	2.88E-05	2.55E-05	101181.7	36898.09	17.24836	31	

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM10_tpd	PM2_5_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_PopH	Horsepower_Hours_hpy
Statewide	2020	CHE - Port Other General Industrial E	Aggregated	175	Diesel	0.002684	0.003247	0.003864	0.033301	0.028681	5.23798	0.000417	0.000384	0.000417	4.83E-05	4.28E-05	169940.5	47684.47	30.83578	6349967	
Statewide	2020	CHE - Port Other General Industrial E	Aggregated	300	Diesel	0.001907	0.002308	0.002747	0.011788	0.0119991	4.458841	0.000228	0.000209	0.000228	4.12E-05	3.64E-05	144662.2	24799.65	13.62292	5610744	
Statewide	2020	CHE - Port Other General Industrial E	Aggregated	600	Diesel	0.006373	0.007711	0.009177	0.057453	0.069355	12.89765	0.000875	0.000805	0.000875	0.000119	0.000105	418450.2	36164.91	22.96896	15808798	
Statewide	2020	CHE - Port RTG Crane	Aggregated	100	Diesel	1.14E-06	1.38E-06	1.64E-06	1.54E-05	1.23E-05	0.002764	1.47E-07	1.35E-07	1.47E-07	2.55E-08	2.26E-08	89.66925	77.95107	0.666285	7795.107	
Statewide	2020	CHE - Port RTG Crane	Aggregated	300	Diesel	0.000983	0.00119	0.001416	0.006452	0.009289	2.188214	0.000115	0.000106	0.000115	2.02E-05	1.79E-05	70994.2	29218.23	17.89212	6859879	
Statewide	2020	CHE - Port RTG Crane	Aggregated	600	Diesel	0.011843	0.01433	0.017053	0.078327	0.105578	34.7056	0.001081	0.000995	0.001081	0.000321	0.000283	1125985	219871.9	122.0495	1.09E+08	
Statewide	2020	CHE - Port RTG Crane	Aggregated	750	Diesel	0.011204	0.013556	0.016133	0.071784	0.09172	34.73082	0.000927	0.000853	0.000927	0.000321	0.000283	1126803	165398.3	88.58768	1.09E+08	
Statewide	2020	CHE - Port RTG Crane	Aggregated	9999	Diesel	0.00887	0.010732	0.012772	0.047112	0.141927	22.85171	0.001884	0.001733	0.001884	0.000211	0.000187	741398.7	74065.33	42.43194	71651361	
Statewide	2020	CHE - Port Yard Tractor	Aggregated	175	Diesel	0.027182	0.03289	0.039142	1.896485	0.174866	303.0082	0.005982	0.005504	0.005982	0.002801	0.002473	9830768	2815124	1340.279	4.87E+08	
Statewide	2020	CHE - Port Yard Tractor	Aggregated	300	Diesel	0.022918	0.027731	0.033002	0.595407	0.11778	276.3307	0.004063	0.003738	0.004063	0.002554	0.002255	8965246	2023445	930.9952	4.44E+08	
Statewide	2020	CHE - Port Yard Tractor	Aggregated	600	Diesel	0.000156	0.000189	0.000225	0.003971	0.001083	1.950406	2.84E-05	2.62E-05	2.84E-05	1.8E-05	1.59E-05	63278.76	9800.45	4.569734	3136144	
Statewide	2020	CHE - Rail Construction Equipment	Aggregated	75	Diesel	1.59E-05	1.93E-05	2.29E-05	0.000159	0.000226	0.026608	5.59E-06	5.15E-06	5.59E-06	2.46E-07	2.17E-07	863.2762	440.4772	2.426302	27289.5	
Statewide	2020	CHE - Rail Container Handling Equipm	Aggregated	175	Diesel	0.0024	0.002904	0.003455	0.030235	0.02486	4.746638	0.00031	0.000285	0.00031	4.38E-05	3.87E-05	153999.5	33740.48	20.01051	5058269	
Statewide	2020	CHE - Rail Container Handling Equipm	Aggregated	300	Diesel	0.005658	0.006846	0.008147	0.033045	0.057218	13.13805	0.000617	0.000568	0.000617	0.000121	0.000107	426249.7	61824.38	19.46667	13966035	
Statewide	2020	CHE - Rail Container Handling Equipm	Aggregated	600	Diesel	0.001687	0.002041	0.002429	0.010794	0.015876	3.996691	0.000193	0.000178	0.000193	3.69E-05	3.26E-05	129668.2	12446.55	5.319778	4231590	
Statewide	2020	CHE - Rail Forklift	Aggregated	75	Diesel	4.01E-05	4.85E-05	5.77E-05	0.000536	0.000574	0.086265	1.84E-05	1.7E-05	1.84E-05	7.96E-07	7.04E-07	2798.788	2555.452	2.990779	16220.4	
Statewide	2020	CHE - Rail Forklift	Aggregated	100	Diesel	0.000395	0.000478	0.000569	0.008167	0.001358	1.234446	4.35E-05	4E-05	4.35E-05	1.14E-05	1.01E-05	40050.23	25633.42	9.615962	2308929	
Statewide	2020	CHE - Rail Forklift	Aggregated	175	Diesel	0.000489	0.000592	0.000704	0.009442	0.003559	1.454081	4.7E-05	4.33E-05	4.7E-05	1.34E-05	1.19E-05	47176.04	18731.55	7.748147	3026139	
Statewide	2020	CHE - Rail Forklift	Aggregated	300	Diesel	9E-05	0.000109	0.00013	0.000641	0.000776	0.290355	1.14E-05	1.05E-05	1.14E-05	2.68E-06	2.37E-06	9420.239	2636.377	1.565959	606936.5	
Statewide	2020	CHE - Rail Other General Industrial Eq	Aggregated	50	Diesel	0.000626	0.000757	0.000901	0.004398	0.003211	0.386327	8.6E-05	7.91E-05	8.6E-05	3.55E-06	3.15E-06	12533.95	9156.291	2.531898	427293.6	
Statewide	2020	CHE - Rail Other General Industrial Eq	Aggregated	175	Diesel	5.14E-05	6.21E-05	7.39E-05	0.00068	0.000673	0.118334	1.12E-05	1.03E-05	1.12E-05	1.09E-06	9.66E-07	3839.209	1066.187	1.673043	145503.8	
Statewide	2020	CHE - Rail Other General Industrial Eq	Aggregated	300	Diesel	0.000447	0.000541	0.000643	0.002812	0.005463	1.138261	5.16E-05	4.75E-05	5.16E-05	1.05E-05	9.29E-06	36929.62	6645.763	8.218435	1484434	
Statewide	2020	CHE - Rail RTG Crane	Aggregated	300	Diesel	0.009265	0.01121	0.013341	0.054376	0.091507	22.01373	0.000821	0.000755	0.000821	0.000203	0.00018	714211.2	257751.6	61.72068	69007236	
Statewide	2020	CHE - Rail RTG Crane	Aggregated	600	Diesel	0.003368	0.004075	0.00485	0.019385	0.030943	9.02511	0.00027	0.000248	0.00027	8.33E-05	7.37E-05	292809.7	84865.04	23.66773	28334508	
Statewide	2020	CHE - Rail Yard Tractor	Aggregated	175	Diesel	0.015953	0.019303	0.022972	1.030842	0.073398	165.3786	0.002853	0.002624	0.002853	0.001529	0.00135	5365525	1670647	436.2745	2.65E+08	
Statewide	2020	CHE - Rail Yard Tractor	Aggregated	300	Diesel	0.005775	0.006987	0.008316	0.138977	0.026882	66.86426	0.001008	0.000928	0.001008	0.000546	0.000546	2169337	539423.9	156.2472	1.08E+08	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	50	Diesel	0.001496	0.00181	0.002154	0.011405	0.011746	1.514136	0.000744	0.000684	0.000744	1.4E-05	1.24E-05	49124.49	42522.52	122.3305	1668165	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	75	Diesel	0.001175	0.001422	0.001692	0.017391	0.02087	2.637725	0.001097	0.001009	0.001097	2.44E-05	2.15E-05	85578.08	45392.3	103.0151	3332730	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	100	Diesel	0.002486	0.003008	0.00358	0.042931	0.034516	6.778657	0.001757	0.001617	0.001757	6.26E-05	5.53E-05	219926	100341.9	270.4147	8597536	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	175	Diesel	0.002287	0.003614	0.004301	0.060884	0.03869	10.94696	0.001714	0.001577	0.001714	0.000101	8.93E-05	355162	91149.44	294.8808	13626504	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	300	Diesel	0.003537	0.00428	0.005093	0.031824	0.054235	15.45866	0.001576	0.00145	0.001576	0.000143	0.000126	501539.1	93993.37	294.8808	19431674	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	600	Diesel	0.005395	0.006529	0.007769	0.055806	0.074612	29.57645	0.00235	0.002162	0.00235	0.000273	0.000241	959575.4	89020.8	254.9625	37287363	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	750	Diesel	0.001932	0.002338	0.002783	0.020618	0.025771	11.16299	0.000903	0.000803	0.000903	0.000203	9.11E-05	362171	21361.08	48.93219	13799364	
Statewide	2020	ConstMin - Bore/Drill Rigs	Aggregated	9999	Diesel	0.002318	0.002805	0.003338	0.015466	0.062368	8.186127	0.001514	0.001393	0.001514	7.56E-05	6.68E-05	265589.9	5502.576	7.726135	10236953	
Statewide	2020	ConstMin - Cranes	Aggregated	25	Diesel	4.5E-05	5.44E-05	6.47E-05	0.000255	0.000233	0.028956	1.75E-05	1.61E-05	1.75E-05	2.66E-07	2.36E-07	939.4434	2269.319	4.851694	56732.96	
Statewide	2020	ConstMin - Cranes	Aggregated	50	Diesel	0.001436	0.001737	0.002067	0.006088	0.004913	0.469186	0.000519	0.000477	0.000519	4.29E-06	3.83E-06	15222.21	22074.45	51.7514	910142.1	
Statewide	2020	ConstMin - Cranes	Aggregated	75	Diesel	0.000434	0.000525	0.000624	0.001811	0.003964	0.210938	0.000368	0.000339	0.000368	1.94E-06	1.72E-06	6843.65	6513.921	17.78954	456156.7	
Statewide	2020	ConstMin - Cranes	Aggregated	100	Diesel	0.012598	0.015243	0.018141	0.086843	0.133634	10.88903	0.009424	0.00867	0.009424	0.0001	8.89E-05	353282.6	269506	624.2513	23791639	
Statewide	2020	ConstMin - Cranes	Aggregated	175	Diesel	0.026865	0.032506	0.038685	0.216158	0.33579	32.15111	0.018048	0.016604	0.018048	0.000296	0.000262	1043107	475979.8	1064.138	69919132	
Statewide	2020	ConstMin - Cranes	Aggregated	300	Diesel	0.034024	0.041169	0.048995	0.193263	0.494115	57.90678	0.020202	0.018586	0.020202	0.000534	0.000473	1878722	567252.3	1224.244	1.26E+08	
Statewide	2020	ConstMin - Cranes	Aggregated	600	Diesel	0.045033	0.054489	0.064847	0.438378	0.662717	96.14364	0.026118	0.024029	0.026118	0.000888	0.000785	3119274	566718.3	1177.344	2.1E+08	
Statewide	2020	ConstMin - Cranes	Aggregated	750	Diesel	0.001543	0.001867	0.002222	0.015197	0.019899	1.540246	0.001026	0.000944	0.001026	1.42E-05	1.26E-05	49971.58	5220.517	12.93785	3341532	
Statewide	2020	ConstMin - Cranes	Aggregated	9999	Diesel	0.006455	0.00781	0.009295	0.06667	0.08934	5.391575	0.004263	0.003922	0.004263	4.97E-05	4.4E-05	174923.7	12520.94	25.85757	11747745	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	50	Diesel	0.004465	0.005403	0.006429	0.019212	0.01485	1.518042	0.001556	0.001431	0.001556	1.39E-05	1.24E-05	49251.19	47825.65	143.5337	2009940	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	75	Diesel	0.00153	0.001851	0.002203	0.006001	0.01466	0.501601	0.001075	0.000989	0.001075	4.59E-06	4.09E-06	16256.39	10064.01	48.80145	726705.6	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	100	Diesel	0.072674	0.087936	0.104651	0.50287	0.740328	66.60048	0.061834	0.056888	0.061834	0.000614	0.000544	2160779	1110693	2412.801	97212254	
Statewide	2020	ConstMin - Crawler Tractors	Aggregated	175	Diesel	0.054882	0.066407	0.07903	0.464454	0.678748	73.17609	0.037971	0.034933	0.037971	0.0006						

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/hpy

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Acti	Total_Popi	Horsepower	Hours_hhpy
Statewide	2020	ConstMin - Graders	Aggregated	25	Diesel	0.001444	0.001747	0.002079	0.005618	0.004029	0.377838	0.000495	0.000455	0.000495	3.45E-06	3.08E-06	12258.52	14410.44	41.91248	521715.7	
Statewide	2020	ConstMin - Graders	Aggregated	50	Diesel	0.0015101	0.018272	0.021745	0.076668	0.141994	8.388855	0.011737	0.010798	0.011737	7.71E-05	6.85E-05	272167.2	144663.8	401.7817	12994841	
Statewide	2020	ConstMin - Graders	Aggregated	75	Diesel	0.0088388	0.106949	0.127278	0.688809	1.043941	101.6533	0.058275	0.053613	0.058275	0.000937	0.00083	3298031	1048195	2273.391	1.56E+08	
Statewide	2020	ConstMin - Graders	Aggregated	100	Diesel	0.005009	0.006061	0.007213	0.021702	0.080172	9.360578	0.002481	0.002282	0.002481	8.64E-05	7.64E-05	303693.6	40748.7	56.36506	14294847	
Statewide	2020	ConstMin - Graders	Aggregated	9999	Diesel	0.005667	0.006857	0.00816	0.028964	0.094893	7.276128	0.002976	0.002738	0.002976	6.71E-05	5.94E-05	236066	6171.066	8.671548	11165444	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	25	Diesel	0.035939	0.043486	0.051751	0.237249	0.20051	25.19652	0.014935	0.01374	0.014935	0.000232	0.000206	817473.5	866657.1	1346.692	32698705	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	50	Diesel	0.00909	0.010999	0.01309	0.118195	0.105457	17.30682	0.006355	0.005847	0.006355	0.00016	0.000141	561500.7	351483.9	559.1113	24924681	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	75	Diesel	0.01325	0.016033	0.019081	0.110405	0.146992	14.70001	0.012173	0.011199	0.012173	0.000136	0.00012	476925.5	264684.2	420.043	21096187	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	100	Diesel	0.011588	0.014021	0.016686	0.166349	0.149545	27.36975	0.007255	0.006675	0.007255	0.000253	0.000223	887981.3	249070.7	371.7948	39435717	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	300	Diesel	0.009283	0.011233	0.013368	0.059749	0.134593	24.48263	0.004559	0.004194	0.004559	0.000226	0.0002	794312	162851.9	259.6888	35337861	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	600	Diesel	0.01882	0.022773	0.027102	0.151371	0.22333	74.89357	0.007557	0.006952	0.007557	0.000692	0.000611	2429839	302636.6	447.0052	1.08E+08	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	750	Diesel	0.001623	0.001964	0.002338	0.008804	0.019575	4.360699	0.000794	0.000731	0.000794	4.03E-05	3.56E-05	141478.1	9975.239	14.19064	6360560	
Statewide	2020	ConstMin - Off-Highway Tractors	Aggregated	9999	Diesel	0.001584	0.001916	0.002281	0.010218	0.028875	4.256811	0.00076	0.000699	0.00076	3.93E-05	3.47E-05	138107.5	3752.982	7.095321	6134448	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	25	Diesel	0.000328	0.000397	0.000473	0.001488	0.000977	10.106878	0.000101	9.29E-05	0.000101	9.78E-07	8.72E-07	3467.53	6318.774	4.218072	157969.4	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	50	Diesel	0.002656	0.003214	0.003824	0.025227	0.018664	2.315836	0.001299	0.001195	0.001299	2.13E-05	1.89E-05	75134.75	119589.3	75.92529	3442295	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	75	Diesel	0.000346	0.000418	0.000498	0.002411	0.003175	0.729464	0.000128	0.000118	0.000128	6.73E-06	5.95E-06	23666.65	16864.18	11.24819	1199626	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	100	Diesel	0.001248	0.001511	0.001798	0.012753	0.012836	1.688954	0.001036	0.000953	0.001036	1.56E-05	1.38E-05	54796.25	31549.96	25.30843	2777074	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	175	Diesel	0.028477	0.034457	0.041007	0.367193	0.291878	57.64659	0.015297	0.014074	0.015297	0.000532	0.000471	1870280	601262.2	438.6795	94855263	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	300	Diesel	0.050707	0.061355	0.073017	0.310613	0.559852	117.4323	0.021813	0.020068	0.021813	0.001084	0.000958	3809961	918146.6	736.7565	1.94E+08	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	600	Diesel	0.194658	0.235536	0.280307	1.364376	2.259521	503.8763	0.082495	0.075895	0.082495	0.004653	0.004113	16347713	2200801	1656.296	8.28E+08	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	750	Diesel	0.082022	0.099247	0.118112	0.637077	0.95955	169.965	0.037534	0.034531	0.037534	0.001566	0.001385	5505567	421206.1	354.318	2.79E+08	
Statewide	2020	ConstMin - Off-Highway Trucks	Aggregated	9999	Diesel	0.133106	0.161059	0.191673	0.794673	2.452902	301.3983	0.061998	0.057038	0.061998	0.002783	0.00246	9778535	390385.4	282.6108	4.93E+08	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	25	Diesel	0.0020392	0.024674	0.029364	0.124367	0.115894	13.58995	0.009325	0.008579	0.009325	0.000125	0.000111	440911.1	482844.2	1039.671	18398451	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	50	Diesel	0.002632	0.003185	0.00379	0.014006	0.026838	1.523929	0.001998	0.001838	0.001998	1.4E-05	1.24E-05	49442.2	31803.5	103.5473	2323012	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	75	Diesel	0.031961	0.038673	0.046024	0.28726	0.357997	41.13313	0.026532	0.02441	0.026532	0.000379	0.000336	1334519	757944.7	1729.52	62159658	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	100	Diesel	0.014213	0.017197	0.020466	0.143046	0.182145	23.22136	0.009625	0.008855	0.009625	0.000214	0.000193	753391.3	231062.2	572.3087	31938343	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	175	Diesel	0.015027	0.018182	0.021639	0.096749	0.227524	31.03156	0.008659	0.007966	0.008659	0.000286	0.000253	1006785	212490.2	538.7258	46629610	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	300	Diesel	0.040032	0.048439	0.057646	0.339639	0.585639	118.2682	0.020691	0.019035	0.020691	0.001092	0.000965	3837081	467000.4	1071.854	1.79E+08	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	600	Diesel	0.066137	0.07426	0.088838	0.046049	0.088632	21.63002	0.002897	0.002665	0.002897	0.0002	0.000177	701762.2	52928.61	102.148	32768275	
Statewide	2020	ConstMin - Other Construction Equip	Aggregated	9999	Diesel	0.002296	0.002778	0.003306	0.015629	0.053503	7.463849	0.001253	0.001153	0.001253	6.89E-05	6.09E-05	242156.4	12364.73	26.58647	11280213	
Statewide	2020	ConstMin - Pavers	Aggregated	25	Diesel	0.00308	0.003727	0.004436	0.015618	0.013471	1.664335	0.001137	0.001046	0.001137	1.53E-05	1.36E-05	53997.5	58350.5	168.4226	2258429	
Statewide	2020	ConstMin - Pavers	Aggregated	50	Diesel	0.004304	0.005207	0.006197	0.021044	0.039124	2.725893	0.003736	0.003438	0.003736	2.51E-05	2.22E-05	88441.52	57160.7	162.8085	4134183	
Statewide	2020	ConstMin - Pavers	Aggregated	75	Diesel	0.007337	0.008877	0.010565	0.088448	0.094117	13.28065	0.00602	0.005538	0.00602	0.000123	0.000108	430876	248553.2	648.4269	20134078	
Statewide	2020	ConstMin - Pavers	Aggregated	100	Diesel	0.009626	0.011648	0.013862	0.125985	0.123717	22.06304	0.006102	0.005614	0.006102	0.000204	0.00018	715811.1	210825.5	560.0051	33254619	
Statewide	2020	ConstMin - Pavers	Aggregated	175	Diesel	0.004785	0.00579	0.006891	0.033386	0.089246	17.2093	0.002566	0.002361	0.002566	0.000159	0.00014	558336.8	117501	268.0726	26019209	
Statewide	2020	ConstMin - Pavers	Aggregated	300	Diesel	0.000718	0.000868	0.001033	0.005839	0.011019	3.114077	0.000378	0.000347	0.000378	2.88E-05	2.54E-05	101032.8	12777.87	29.47395	4691494	
Statewide	2020	ConstMin - Pavers	Aggregated	600	Diesel	0.000117	0.000141	0.000168	0.001181	0.00145	0.644546	6.36E-05	5.86E-05	6.36E-05	5.96E-06	5.26E-06	20911.59	1297.826	2.807043	973369.4	
Statewide	2020	ConstMin - Pavers	Aggregated	750	Diesel	0.000117	0.000141	0.000168	0.001181	0.00145	0.644546	6.36E-05	5.86E-05	6.36E-05	5.96E-06	5.26E-06	20911.59	1297.826	2.807043	973369.4	
Statewide	2020	ConstMin - Paving Equipment	Aggregated	25	Diesel	0.00183	0.002214	0.002635	0.015046	0.014079	2.07275	0.000773	0.000711	0.000773	1.91E-05	1.69E-05	67248.1	95418.89	207.3871	3309862	
Statewide	2020	ConstMin - Paving Equipment	Aggregated	50	Diesel	0.000334	0.000405	0.000481	0.002116	0.003476	0.252783	0.000267	0.000246	0.000267	2.33E-06	2.06E-06	8201.258	6666.256	18.21644	447477.4	
Statewide	2020	ConstMin - Paving Equipment	Aggregated	75	Diesel	0.004896	0.005924	0.00705	0.057662	0.057861	8.663176	0.003796	0.003493	0.003796	7.99E-05	7.07E-05	281067.2	171853.4	381.1439	15276974	
Statewide	2020	ConstMin - Paving Equipment	Aggregated	100	Diesel	0.004063	0.004916	0.00585	0.054945	0.049017	9.383804	0.002642	0.00243	0.002642	8.66E-05	7.66E-05	304447.2	114703.4	255.0301	16605985	
Statewide	2020	ConstMin - Paving Equipment	Aggregated	175	Diesel	0.002406	0.002911	0.003464	0.014906	0.038062	6.655836	0.001349	0.001241	0.001349	6.15E-05	5.43E-05	215941.3	50233.71	109.2986	11743411	
Statewide	2020	ConstMin - Paving Equipment	Aggregated	300	Diesel	0.002227	0.002695	0.003207	0.014734	0.035743	6.857099	0.001098	0.001001	0.001098	6.33E-05	5.6E-05					

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_Popu	Powerpower_Hours_hhpy
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	100	Diesel	0.031614	0.038253	0.045524	0.818763	0.567508	134.3206	0.018859	0.017351	0.018859	0.001241	0.001096	4357884	2177935	7873.788	2.09E+08
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	175	Diesel	0.015442	0.018685	0.022237	0.182748	0.1722	31.67373	0.011553	0.010629	0.011553	0.000292	0.000259	1027619	398643.3	1507.782	49413312
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	300	Diesel	0.000377	0.000456	0.000543	0.004064	0.006486	2.197243	0.000148	0.000136	0.000148	2.03E-05	1.79E-05	71287.14	16307.22	66.6423	3428952
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	600	Diesel	0.000118	0.000143	0.00017	0.001474	0.002197	0.815342	4.69E-05	4.31E-05	4.69E-05	7.53E-06	6.65E-06	26452.86	3330.204	13.32846	1280233
Statewide	2020	ConstMin - Rough Terrain Forklifts	Aggregated	750	Diesel	2.25E-05	2.72E-05	3.24E-05	0.000257	0.000355	0.140558	2.49E-06	2.29E-06	2.49E-06	1.3E-06	1.15E-06	4560.239	351.2325	1.666058	219520.3
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	50	Diesel	0.002637	0.003191	0.003798	0.015472	0.011668	1.517736	0.000965	0.000888	0.000965	1.4E-05	1.24E-05	49241.27	52215.14	56.31514	2165434
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	75	Diesel	0.00244	0.002952	0.003513	0.0115	0.023226	1.182615	0.001853	0.001705	0.001853	1.09E-05	9.65E-06	38368.64	26518.94	39.83266	1863020
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	100	Diesel	0.007704	0.009322	0.011093	0.047019	0.073076	5.779817	0.006415	0.005902	0.006415	5.32E-05	4.72E-05	187519.8	108105.8	123.6186	9084258
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	175	Diesel	0.007098	0.008588	0.010221	0.046102	0.084375	6.217326	0.004861	0.004472	0.004861	5.73E-05	5.07E-05	201714.3	66699.51	90.65363	9868829
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	300	Diesel	0.007329	0.008868	0.010554	0.046608	0.094462	6.945497	0.0046	0.004232	0.0046	6.4E-05	5.67E-05	225339	50470.09	75.54469	11027704
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	600	Diesel	0.062915	0.076127	0.090597	0.607357	0.817804	77.19727	0.036801	0.033857	0.036801	0.000712	0.000663	2504580	329652	462.8829	122E+08
Statewide	2020	ConstMin - Rubber Tired Dozers	Aggregated	750	Diesel	0.000824	0.000997	0.001187	0.004445	0.015006	2.19295	0.00042	0.000386	0.00042	2.03E-05	1.79E-05	71147.86	5350.056	5.49416	3479957
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	50	Diesel	0.009911	0.011992	0.014272	0.054822	0.042556	4.754065	0.003841	0.003533	0.003841	4.37E-05	3.88E-05	154240.4	177805.4	211.8834	7398727
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	100	Diesel	0.101777	0.12315	0.146559	0.875575	1.038951	115.5202	0.081363	0.074854	0.081363	0.001065	0.000943	3747925	2356215	2632.795	2.02E+08
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	175	Diesel	0.163093	0.197343	0.234854	1.754681	1.832763	274.5782	0.100881	0.092811	0.100881	0.002534	0.002241	8908384	3178707	3453.127	4.77E+08
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	300	Diesel	0.178275	0.215713	0.256716	0.989675	2.508088	410.4822	0.083264	0.076603	0.083264	0.00379	0.00335	13317642	3388732	3221.201	7.13E+08
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	600	Diesel	0.242112	0.292956	0.348641	1.568446	3.056901	509.9835	0.114985	0.105786	0.114985	0.004708	0.004162	16545854	2669471	2833.225	8.89E+08
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	750	Diesel	0.016381	0.019821	0.023588	0.13035	0.212409	37.76895	0.007537	0.006934	0.007537	0.000349	0.000308	1225372	99348.03	115.9632	6594434
Statewide	2020	ConstMin - Rubber Tired Loaders	Aggregated	9999	Diesel	0.015864	0.019196	0.022845	0.07834	0.33224	35.42701	0.0084	0.007728	0.0084	0.000327	0.000289	1149390	64296.04	55.83414	61451252
Statewide	2020	ConstMin - Scrapers	Aggregated	25	Diesel	6.8E-05	8.22E-05	9.79E-05	0.000231	0.000157	0.012152	2.19E-05	2.01E-05	2.19E-05	1.1E-07	9.92E-08	394.2453	568.4133	1.415529	14210.33
Statewide	2020	ConstMin - Scrapers	Aggregated	50	Diesel	0.000456	0.000552	0.000657	0.001557	0.001119	0.096717	0.000154	0.000142	0.000154	8.81E-07	7.89E-07	3137.89	2969.959	4.893176	115026.3
Statewide	2020	ConstMin - Scrapers	Aggregated	75	Diesel	0.001508	0.001824	0.002171	0.007121	0.01395	0.822652	0.001219	0.001122	0.001219	7.56E-06	6.71E-06	26690.03	15786.1	38.21929	1067751
Statewide	2020	ConstMin - Scrapers	Aggregated	100	Diesel	0.003791	0.004587	0.005459	0.03077	0.046994	4.013448	0.003457	0.003181	0.003457	3.73E-05	3.3E-05	131117.1	57815.52	101.9181	5237588
Statewide	2020	ConstMin - Scrapers	Aggregated	175	Diesel	0.038683	0.046807	0.055704	0.343556	0.477184	52.53749	0.025665	0.023611	0.025665	0.000485	0.000429	1704521	9215.096	68072984	29824
Statewide	2020	ConstMin - Scrapers	Aggregated	300	Diesel	0.042397	0.0513	0.061051	0.237372	0.585068	60.31098	0.025663	0.02361	0.025663	0.000556	0.000492	1956723	350924.1	891.7834	78702795
Statewide	2020	ConstMin - Scrapers	Aggregated	600	Diesel	0.349696	0.423132	0.503562	3.036356	4.988938	756.4652	0.190228	0.17501	0.190228	0.006983	0.006174	24542680	2328560	4969.923	9.82E+08
Statewide	2020	ConstMin - Scrapers	Aggregated	750	Diesel	0.013105	0.015857	0.018871	0.149427	0.217448	12.21045	0.008855	0.008147	0.008855	0.000112	9.97E-05	396154.6	25398.6	66.52988	15803508
Statewide	2020	ConstMin - Scrapers	Aggregated	9999	Diesel	0.019139	0.023159	0.027561	0.231997	0.293127	17.51522	0.012249	0.011269	0.012249	0.000161	0.000143	568262.1	14265.59	36.80376	22785161
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	50	Diesel	0.01592	0.019263	0.022925	0.165061	0.161867	25.88769	0.006346	0.005838	0.006346	0.000239	0.000211	839897.5	906264.7	2947.821	39493188
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	75	Diesel	0.039622	0.047942	0.057055	0.834213	0.635046	134.4792	0.027136	0.024965	0.027136	0.001242	0.001098	4363029	3249224	9324.293	2.29E+08
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	100	Diesel	0.00087	0.001053	0.001253	0.018146	0.016388	2.814431	0.001063	0.000978	0.001063	2.6E-05	2.3E-05	91308.19	63474.69	188.5319	4844953
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	175	Diesel	0.000225	0.000272	0.000324	0.005004	0.00301	0.927973	0.000127	0.000116	0.000127	8.57E-06	7.57E-06	30107.07	10407.13	39.46018	1584227
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	300	Diesel	0.000131	0.000158	0.000189	0.001584	0.002001	0.861923	5.68E-05	5.22E-05	5.68E-05	7.96E-06	7.03E-06	27964.16	7159.792	24.8453	1467622
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	600	Diesel	5.99E-05	7.24E-05	8.62E-05	0.000465	0.000977	0.249346	4.19E-05	3.86E-05	4.19E-05	2.3E-06	2.04E-06	8089.756	896.6042	1.922976	423914.5
Statewide	2020	ConstMin - Skid Steer Loaders	Aggregated	9999	Diesel	0.000153	0.000185	0.00022	0.001059	0.002814	0.337524	9.23E-05	8.49E-05	9.23E-05	3.12E-06	2.75E-06	10950.6	575.4569	2.922976	575456.9
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	50	Diesel	0.000177	0.000214	0.000255	0.001573	0.001695	0.239582	8.66E-05	7.96E-05	8.66E-05	2.21E-06	1.96E-06	7772.978	12312	51.709	443326
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	75	Diesel	0.00015	0.000182	0.000216	0.00128	0.002133	0.182555	0.000133	0.000123	0.000133	1.68E-06	1.49E-06	5922.8	5695.317	22.53982	378713.7
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	100	Diesel	0.000667	0.000807	0.00096	0.008908	0.008766	1.375635	0.000495	0.000455	0.000495	1.27E-05	1.12E-05	44630.96	31855.91	120.6543	2860734
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	175	Diesel	0.000617	0.000747	0.000889	0.007405	0.008672	1.287696	0.000425	0.000391	0.000425	1.19E-05	1.05E-05	41777.88	19776.1	78.22643	2682800
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	300	Diesel	0.000904	0.001094	0.001301	0.006883	0.016519	2.544719	0.000533	0.000491	0.000533	2.35E-05	2.08E-05	82560.6	23213.11	96.78863	5293091
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	600	Diesel	0.001619	0.001959	0.002332	0.016583	0.024508	8.067858	0.000882	0.000811	0.000882	7.45E-05	6.58E-05	261752.8	41338.74	147.1718	16796739
Statewide	2020	ConstMin - Surfacing Equipment	Aggregated	750	Diesel	0.000982	0.001188	0.001414	0.007706	0.018082	3.978241									

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/hpy

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_Pop	Horsepower	Hours_hpy
Statewide	2020	ConstMin - Tractors/Loaders/Backho	Aggregated	750	Diesel	0.000852	0.01003	0.001226	0.007958	0.009484	3.958852	0.000262	0.000241	0.000262	3.66E-05	3.23E-05	128440.6	10739.64	15.81228	6821630	
Statewide	2020	ConstMin - Tractors/Loaders/Backho	Aggregated	9999	Diesel	0.010999	0.013309	0.015838	0.078464	0.257716	40.00297	0.005231	0.004812	0.005231	0.000037	0.0000326	1297852	36783.83	60.37415	68063277	
Statewide	2020	ConstMin - Trenchers	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Statewide	2020	ConstMin - Trenchers	Aggregated	50	Diesel	0.022975	0.0278	0.033084	0.148479	0.143668	18.11297	0.010939	0.010064	0.010939	0.000167	0.000148	587655.4	508954.7	1352.812	20305231	
Statewide	2020	ConstMin - Trenchers	Aggregated	75	Diesel	0.001793	0.00217	0.002582	0.010292	0.018143	1.208869	0.001245	0.001145	0.001245	1.11E-05	9.87E-06	39220.42	21300.47	81.47619	1503731	
Statewide	2020	ConstMin - Trenchers	Aggregated	100	Diesel	0.010662	0.012901	0.015353	0.084364	0.118171	11.91643	0.008961	0.008244	0.008961	0.000011	9.73E-05	386615.6	177033	545.7368	14852158	
Statewide	2020	ConstMin - Trenchers	Aggregated	175	Diesel	0.001781	0.002155	0.002565	0.017057	0.022849	2.680105	0.001168	0.001075	0.001168	2.47E-05	2.19E-05	86953.06	23462.76	83.01348	3357366	
Statewide	2020	ConstMin - Trenchers	Aggregated	300	Diesel	0.003553	0.004299	0.005116	0.020265	0.052688	6.506928	0.002123	0.001953	0.002123	6.01E-05	5.31E-05	211110.1	35399.05	115.2965	8100461	
Statewide	2020	ConstMin - Trenchers	Aggregated	600	Diesel	0.003	0.00363	0.00432	0.030621	0.042562	8.734461	0.0016	0.001472	0.0016	8.07E-05	7.13E-05	283380	27962.23	78.40162	10862906	
Statewide	2020	ConstMin - Trenchers	Aggregated	750	Diesel	0.00033	0.000399	0.000475	0.005141	0.003362	2.851121	4.9E-05	4.51E-05	4.9E-05	2.64E-05	2.33E-05	92501.48	5499.164	12.29829	3556382	
Statewide	2020	ConstMin - Trenchers	Aggregated	9999	Diesel	0.000429	0.000519	0.000617	0.006156	0.005951	0.236334	0.000275	0.000253	0.000275	2.17E-06	1.93E-06	7667.603	342.9476	1.537287	294934.9	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	50	Diesel	0.006631	0.008024	0.009549	0.148397	0.141476	28.12072	0.001479	0.00136	0.001479	0.000026	0.000023	912345.9	1115896	3776.22	51474842	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	75	Diesel	0.005933	0.007179	0.008544	0.195412	0.110951	32.47155	0.003046	0.002802	0.003046	0.00003	0.0000265	1053504	914847.7	3106.159	66076940	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	100	Diesel	0.002892	0.003499	0.004165	0.09976	0.062669	16.59579	0.000817	0.000752	0.000817	0.000153	0.000135	538432.2	433976.9	1468.431	33772335	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	175	Diesel	0.000458	0.000554	0.000659	0.016132	0.005592	2.998798	0.000182	0.000167	0.000182	2.77E-05	2.45E-05	97292.71	46796.41	158.6048	6105216	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	300	Diesel	1.9E-05	2.3E-05	2.74E-05	0.000321	0.000229	0.179202	3.03E-06	2.78E-06	3.03E-06	1.66E-06	1.46E-06	5813.997	1586.251	5.346229	364837.8	
Statewide	2020	Industrial - Aerial Lifts	Aggregated	600	Diesel	1.08E-05	1.31E-05	1.56E-05	0.000226	6.26E-05	0.127259	2.14E-06	1.96E-06	2.14E-06	1.18E-06	1.04E-06	4128.78	528.7505	1.782651	259087.7	
Statewide	2020	Industrial - Forklifts	Aggregated	25	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Statewide	2020	Industrial - Forklifts	Aggregated	50	Diesel	0.029905	0.036185	0.043063	0.183718	0.150878	18.92638	0.011596	0.010668	0.011596	0.000174	0.000154	614045.5	1251643	1750.571	53069677	
Statewide	2020	Industrial - Forklifts	Aggregated	75	Diesel	0.004325	0.005234	0.006229	0.017534	0.040923	1.792115	0.003384	0.003113	0.003384	1.64E-05	1.46E-05	58143.18	76265.99	150.4623	5609781	
Statewide	2020	Industrial - Forklifts	Aggregated	100	Diesel	0.159534	0.193036	0.229728	1.607609	1.745472	226.2103	0.129702	0.119326	0.129702	0.002087	0.001846	7339144	8575793	11536.41	7.07E+08	
Statewide	2020	Industrial - Forklifts	Aggregated	175	Diesel	0.038128	0.046135	0.054905	0.443073	0.452908	72.00843	0.024522	0.022561	0.024522	0.000665	0.000588	2336234	1591161	2170.129	2.25E+08	
Statewide	2020	Industrial - Forklifts	Aggregated	300	Diesel	0.007381	0.008931	0.010629	0.044757	0.098686	15.70674	0.003881	0.00357	0.003881	0.000145	0.000128	509587.9	233106.7	318.2856	48924441	
Statewide	2020	Industrial - Forklifts	Aggregated	600	Diesel	0.001315	0.001591	0.001894	0.009073	0.014925	3.951566	0.000546	0.000503	0.000546	3.65E-05	3.23E-05	128204.2	34695.7	49.1896	12256786	
Statewide	2020	Industrial - Forklifts	Aggregated	9999	Diesel	3.87E-05	4.68E-05	5.57E-05	0.000584	0.001388	0.313844	1.19E-05	1.09E-05	1.19E-05	2.9E-06	2.56E-06	10182.33	1113.49	1.446753	979871.1	
Statewide	2020	Industrial - Other General Industrial	Aggregated	25	Diesel	2.47E-05	2.99E-05	3.56E-05	8.21E-05	5.66E-05	0.004322	7.78E-06	7.15E-06	7.78E-06	3.92E-08	3.53E-08	140.2356	285.4184	1.279408	7135.46	
Statewide	2020	Industrial - Other General Industrial	Aggregated	50	Diesel	0.054045	0.065395	0.077825	0.380551	0.319597	40.69836	0.023089	0.021242	0.023089	0.000375	0.000332	1320414	1908290	2333.64	66996559	
Statewide	2020	Industrial - Other General Industrial	Aggregated	75	Diesel	0.014029	0.016976	0.020202	0.184314	0.171678	26.51625	0.010992	0.010113	0.010992	0.000245	0.000216	860290.5	679472.7	822.6594	48607289	
Statewide	2020	Industrial - Other General Industrial	Aggregated	100	Diesel	0.008595	0.0104	0.012377	0.050012	0.078238	6.253838	0.007214	0.006637	0.007214	5.76E-05	5.1E-05	202898.9	146773.6	194.47	11493118	
Statewide	2020	Industrial - Other General Industrial	Aggregated	175	Diesel	0.006829	0.008264	0.009834	0.094629	0.078392	15.32388	0.0042	0.003864	0.0042	0.000141	0.000125	497166.3	189260.9	232.8523	28104282	
Statewide	2020	Industrial - Other General Industrial	Aggregated	300	Diesel	0.006922	0.008376	0.009968	0.042059	0.105437	16.47658	0.003428	0.003154	0.003428	0.000152	0.000134	534564.6	138168.2	173.9995	30185562	
Statewide	2020	Industrial - Other General Industrial	Aggregated	600	Diesel	0.01417	0.017146	0.020405	0.114342	0.159533	47.63169	0.005622	0.005173	0.005622	0.000044	0.0000389	1545358	228565.9	275.0728	87334202	
Statewide	2020	Industrial - Other General Industrial	Aggregated	750	Diesel	0.002122	0.002568	0.003056	0.027467	0.020574	8.004956	0.00098	0.000902	0.00098	7.39E-05	6.53E-05	259712	23241.62	28.14698	14654062	
Statewide	2020	Industrial - Other General Industrial	Aggregated	9999	Diesel	0.000781	0.000945	0.001124	0.00539	0.0197	2.773617	0.000397	0.000365	0.000397	2.56E-05	2.26E-05	89986.95	4372.61	5.117633	5088625	
Statewide	2020	Industrial - Other Material Handling	Aggregated	25	Diesel	3.19E-05	3.86E-05	4.6E-05	0.00108	7.37E-05	0.005706	1.03E-05	9.44E-06	1.03E-05	5.18E-08	4.66E-08	185.1245	325.6908	1.459932	8142.271	
Statewide	2020	Industrial - Other Material Handling	Aggregated	50	Diesel	0.003312	0.004007	0.004769	0.019931	0.016626	1.897764	0.001417	0.001304	0.001417	1.74E-05	1.55E-05	61570.85	75846.88	102.1953	2692013	
Statewide	2020	Industrial - Other Material Handling	Aggregated	75	Diesel	0.000461	0.000558	0.000664	0.003943	0.004973	0.516399	0.0004	0.000368	0.0004	4.76E-06	4.21E-06	16754	11368.24	17.51919	832166.6	
Statewide	2020	Industrial - Other Material Handling	Aggregated	100	Diesel	0.007706	0.009324	0.011097	0.137932	0.10613	20.82314	0.004868	0.004479	0.004868	0.000192	0.00017	675583.9	354218.1	465.7184	33008647	
Statewide	2020	Industrial - Other Material Handling	Aggregated	175	Diesel	0.00784	0.009487	0.01129	0.090243	0.080556	14.37213	0.005483	0.005044	0.005483	0.000133	0.000117	466287.9	164187.3	230.6693	22773224	
Statewide	2020	Industrial - Other Material Handling	Aggregated	300	Diesel	0.011719	0.01418	0.016876	0.063578	0.162421	25.24625	0.005938	0.005463	0.005938	0.000233	0.000206	819086.9	167028.9	224.8296	40054927	
Statewide	2020	Industrial - Other Material Handling	Aggregated	600	Diesel	0.012115	0.014659	0.017445	0.08562	0.173785	29.54699	0.005979	0.005501	0.005979	0.000273	0.000241	958619.6	127122	172.272	46764698	
Statewide	2020	Industrial - Other Material Handling	Aggregated	750	Diesel	0.00059	0.000714	0.00085	0.002779	0.006662	1.360424	0.000327	0.0003	0.000327	1.26E-05	1.11E-05	44137.47	3463.722	4.379797	2159053	
Statewide	2020	Industrial - Other Material Handling	Aggregated	9999	Diesel	0.00057	0.00069	0.000822	0.004303	0.013456	2.199231	0.000253	0.000233	0.000253	2.03E-05	1.79E-05	71351.64	3463.722	4.379797	3490277	
Statewide	2020	Locomotive - Line haul	Aggregated	9999	Diesel	1.515022	1.833176	2.181631	17.68582	52.33907	6782.161	0.775796	0.708637	0.775796	0.068994	0.055335	2.2E+08	0	0	0	
Statewide	2020	Locomotive - Passenger	Aggregated	9999	Diesel	0.244261	0.000251	0.000299	1.395552												

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM10_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Acti	Total_Popi	Horsepower	Hours_hhpy
Statewide	2020	OFF - Agricultural - Hydro Power Unit	Aggregated	100	Gasoline	3.24E-05	2.98E-05	3.57E-05	0.001599	8.16E-05	0.07519	5.24E-06	3.96E-06	5.82E-06	7.26E-07	1.01E-06	2883.5	817.6	1.64	53961.6	
Statewide	2020	OFF - Agricultural - Other Agricultura	Aggregated	25	Gasoline	0.005699	0.005242	0.006272	0.201702	0.003936	0.35688	0.002127	0.001607	0.002364	1.03E-05	9.12E-06	26039.1	56936.35	393.78	493644.3	
Statewide	2020	OFF - Agricultural - Other Agricultura	Aggregated	25	Diesel	0.004722	0.005619	0.006799	0.025093	0.043008	5.643502	0.001691	0.001556	0.001691	7.43E-05	4.72E-05	187599	332956.6	745.32	6444922	
Statewide	2020	OFF - Agricultural - Other Agricultura	Aggregated	50	Gasoline	0.000347	0.000319	0.000382	0.020343	0.000603	0.239635	1.65E-05	1.25E-05	1.84E-05	2.91E-06	3.52E-06	10037.5	6095.5	50.7	176769.5	
Statewide	2020	OFF - Agricultural - Other Agricultura	Aggregated	100	Gasoline	0.002201	0.002024	0.002422	0.076176	0.007125	3.170905	0.000221	0.000167	0.000246	3.06E-05	4.37E-05	124713.2	36602.2	295.81	2452347	
Statewide	2020	OFF - Agricultural - Other Agricultura	Aggregated	175	Gasoline	0.000328	0.000302	0.000361	0.023308	0.001801	0.713666	5.12E-05	3.87E-05	5.68E-05	7.09E-06	9.93E-06	28345.9	3836.15	32.91	521716.4	
Statewide	2020	OFF - Agricultural - Other Agricultura	Aggregated	300	Gasoline	0.000178	0.000164	0.000196	0.01566	0.001805	0.465949	3.44E-05	2.6E-05	3.82E-05	4.76E-06	6.46E-06	18436.15	1208.15	11.49	297204.9	
Statewide	2020	OFF - Agricultural - Sprayers	Aggregated	25	Gasoline	0.096299	0.088576	0.105971	3.355576	0.058708	5.660279	0.034364	0.025964	0.038183	0.000156	0.00015	428513.7	929629.5	9474.69	8725602	
Statewide	2020	OFF - Agricultural - Sprayers	Aggregated	25	Diesel	0.000493	0.000586	0.00071	0.00227	0.004141	0.517747	0.000197	0.000181	0.000197	6.57E-06	4.28E-06	16998.05	31495.85	287.88	598421.1	
Statewide	2020	OFF - Agricultural - Sprayers	Aggregated	50	Gasoline	0.001534	0.001411	0.001689	0.078457	0.0029	0.96866	6.68E-05	5.05E-05	7.42E-05	1.18E-05	1.45E-05	41409.25	24604.65	309.35	811953.4	
Statewide	2020	OFF - Agricultural - Sprayers	Aggregated	100	Gasoline	0.002719	0.002501	0.002992	0.080414	0.010336	3.326226	0.000232	0.000175	0.000258	3.21E-05	4.59E-05	130907.2	41635.55	521.76	2831217	
Statewide	2020	OFF - Agricultural - Sprayers	Aggregated	175	Gasoline	0.000779	0.000716	0.000857	0.048552	0.005276	1.501935	0.000108	8.14E-05	0.00012	1.49E-05	2.09E-05	59714	9154.2	117.16	1281588	
Statewide	2020	OFF - Agricultural - Swathers	Aggregated	100	Gasoline	0.014437	0.013279	0.015887	0.432892	0.053889	17.17658	0.001198	0.000905	0.001331	0.000166	0.000237	677611.6	160402.9	1686.23	14115455	
Statewide	2020	OFF - Agricultural - Swathers	Aggregated	175	Gasoline	0.010016	0.009212	0.011022	0.610095	0.066633	18.77262	0.001346	0.001017	0.001495	0.000186	0.000262	747844.9	122924.7	1292.89	15857286	
Statewide	2020	OFF - Agricultural - Tillers	Aggregated	25	Gasoline	0.785988	0.722952	0.864932	42.52275	0.555864	69.84142	0.031957	0.024145	0.035507	0.001991	0.001854	5293456	10835313	152386.4	75847193	
Statewide	2020	OFF - AirGrSupp - A/C Tug Narrow B	Aggregated	175	Gasoline	0.009429	0.008673	0.010376	0.476131	0.059992	11.82107	0.000847	0.00064	0.000942	0.000117	0.000167	476799.5	49822.5	68.22	6476925	
Statewide	2020	OFF - AirGrSupp - A/C Tug Wide Bod	Aggregated	600	Gasoline	0.004216	0.003878	0.004639	0.447497	0.039569	12.52332	0.000924	0.000698	0.001027	0.000128	0.000175	500951.6	14107.25	27.24	7035623	
Statewide	2020	OFF - AirGrSupp - Air Conditioner	Aggregated	175	Gasoline	2.48E-06	2.28E-06	2.73E-06	0.000218	2.67E-05	0.006728	4.82E-07	3.64E-07	5.36E-07	6.68E-08	5.11E-08	146	0	1.23	0	
Statewide	2020	OFF - AirGrSupp - Air Conditioner	Aggregated	175	Nat Gas	0	0	1.19E-06	0.000892	0.000121	0.036157	0	0	3.22E-06	0	0	1821.35	58.4	7.97	7592	
Statewide	2020	OFF - AirGrSupp - Air Start Unit	Aggregated	175	Gasoline	0.000255	0.000235	0.000281	0.021016	0.002576	0.636439	4.56E-05	3.45E-05	5.07E-05	6.32E-06	8.82E-06	25163.1	2248.4	31.13	292292	
Statewide	2020	OFF - AirGrSupp - Baggage Tug	Aggregated	100	Gasoline	0.064395	0.059231	0.070863	4.825277	0.376913	114.3932	0.007976	0.006026	0.008862	0.001105	0.00162	4623561	889202	1013.18	88920205	
Statewide	2020	OFF - AirGrSupp - Baggage Tug	Aggregated	100	Nat Gas	0	0	0.002578	0.841745	0.105746	18.79024	0	0	0.001671	0	0	1046378	167673.7	201.67	1676730	
Statewide	2020	OFF - AirGrSupp - Belt Loader	Aggregated	100	Gasoline	0.015629	0.014376	0.017199	1.190069	0.090684	27.20611	0.001897	0.001433	0.002108	0.000263	0.000386	1102201	387721.2	477.63	23263275	
Statewide	2020	OFF - AirGrSupp - Belt Loader	Aggregated	100	Nat Gas	0	0	0.000186	0.071494	0.008774	1.806683	0	0	0.000161	0	0	99593.9	29393.45	53.12	1763607	
Statewide	2020	OFF - AirGrSupp - Bobtail	Aggregated	100	Gasoline	0.009265	0.008522	0.010196	0.694431	0.054198	16.4371	0.001146	0.000866	0.001273	0.000159	0.000233	664424.1	127746.4	145.61	12774635	
Statewide	2020	OFF - AirGrSupp - Bobtail	Aggregated	100	Nat Gas	0	0	2.16E-05	0.014607	0.001328	0.405232	0	0	3.6E-05	0	0	22159.15	3577	4.02	357700	
Statewide	2020	OFF - AirGrSupp - Cargo Loader	Aggregated	100	Gasoline	0.004935	0.004539	0.005431	0.373977	0.028591	8.57823	0.000598	0.000452	0.000665	8.29E-05	0.000122	347396	104765.9	145.35	733617	
Statewide	2020	OFF - AirGrSupp - Cargo Loader	Aggregated	100	Nat Gas	0	0	0.000296	0.088577	0.011288	1.820759	0	0	0.000162	0	0	101875.1	25356.55	24.44	1774959	
Statewide	2020	OFF - AirGrSupp - Cargo Tractor	Aggregated	100	Gasoline	0.159662	0.146857	0.175698	13.1627	0.695119	145.7475	0.010162	0.007678	0.011291	0.002123	0.002214	6320099	1214614	898.74	1.15E+08	
Statewide	2020	OFF - AirGrSupp - Cargo Tractor	Aggregated	175	Nat Gas	0	0	0.000107	0.068379	0.009201	2.600338	0	0	0.000231	0	0	140320.6	15019.75	96.99	2330703	
Statewide	2020	OFF - AirGrSupp - Cart	Aggregated	25	Gasoline	0.000325	0.000299	0.000358	0.020579	0.000253	0.033773	1.53E-05	1.16E-05	1.7E-05	9.63E-07	8.75E-07	2496.6	4277.8	28.72	51333.6	
Statewide	2020	OFF - AirGrSupp - Catering Truck	Aggregated	300	Gasoline	0.022991	0.021147	0.0253	1.029474	0.129642	22.89373	0.001689	0.001276	0.001877	0.0002	0.000326	930669.7	97520.7	95.6	19884471	
Statewide	2020	OFF - AirGrSupp - Catering Truck	Aggregated	300	Nat Gas	0	0	0.000103	0.052383	0.0069	1.753258	0	0	0.000156	0	0	95053.3	7967.95	17.48	1633430	
Statewide	2020	OFF - AirGrSupp - Deicer	Aggregated	100	Gasoline	0.00012	0.000111	0.000132	0.003902	0.000746	0.206614	1.44E-05	1.09E-05	1.6E-05	2E-06	2.79E-06	7960.65	934.4	44.92	86899.2	
Statewide	2020	OFF - AirGrSupp - Forklift	Aggregated	50	Gasoline	0.005125	0.004714	0.00564	0.481939	0.011332	3.541867	0.000244	0.000184	0.000271	4.31E-05	5.72E-05	163370.3	99765.45	137.09	4988273	
Statewide	2020	OFF - AirGrSupp - Forklift	Aggregated	50	Nat Gas	0	0	0.000332	0.088601	0.02395	7.138466	0	0	0.000635	0	0	377446.5	233545.2	321.06	11677263	
Statewide	2020	OFF - AirGrSupp - Fuel Truck	Aggregated	175	Gasoline	5.26E-05	4.84E-05	5.79E-05	0.004484	0.000569	0.140876	1.01E-05	7.63E-06	1.12E-05	1.4E-06	1.93E-06	5500.55	1806.75	86	234877.5	
Statewide	2020	OFF - AirGrSupp - Fuel Truck	Aggregated	175	Nat Gas	0	0	2.91E-05	0.01383	0.00181	0.442593	0	0	3.94E-05	0	0	23936.7	6117.4	10.59	856436	
Statewide	2020	OFF - AirGrSupp - Generator	Aggregated	100	Gasoline	0.001988	0.001829	0.002188	0.100081	0.006615	1.207823	8.42E-05	6.36E-05	9.36E-05	9.97E-06	1.81E-05	51771.6	6069.95	6.54	694984.7	
Statewide	2020	OFF - AirGrSupp - Ground Power Unit	Aggregated	175	Gasoline	0.007925	0.007289	0.008721	0.809301	0.071273	22.96374	0.001646	0.001244	0.001829	0.000228	0.000322	917894.7	89691.45	112.5	13453718	
Statewide	2020	OFF - AirGrSupp - Hydrant Truck	Aggregated	175	Gasoline	0.026278	0.024171	0.028917	1.019872	0.127584	20.32562	0.001457	0.001101	0.001619	0.000173	0.000292	833532.3	104944.8	68.26	12750793	
Statewide	2020	OFF - AirGrSupp - Lav Cart	Aggregated	25	Gasoline	7.62E-05	7E-05	8.38E-05	0.004792	5.97E-05	0.008015	3.64E-06	2.75E-06	4.05E-06	2.29E-07	2.08E-07	594.95	978.2	6.77	11738.4	
Statewide	2020	OFF - AirGrSupp - Lav Truck	Aggregated	175	Gasoline	0.005765	0.005303	0.006344	0.411522	0.036002	10.10743	0.000725	0.000547	0.000805	0.0001	0.000143	407610.1	136641.4	112.28	17763382	
Statewide	2020	OFF - AirGrSupp - Lav Truck	Aggregated	175	Nat Gas	0	0	1.16E-05	0.006138	0.000812	0.211128	0	0	1.88E-05	0	0	11355.15	3044.1	7.88	395733	
Statewide	2020	OFF - AirGrSupp - Lift	Aggregated	100	Gasoline	0.009793	0.009008	0.010777	0.429891	0.042277	9.676115	0.000675	0.00051	0.00075	9.35E-05	0.000138	392948.1	82570.3	219.18	8257030	
Statewide	2020	OFF - AirGrSupp - Lift	Aggregated	100	Nat Gas	0	0	2.22E-05	0.010205	0.001224	0.286405	0	0	2.55E-05	0						

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Acti	Total_Popi	Horsepower_Hours_hhpy
Statewide	2020	OFF - ConstMin - Bore/Drill Rigs	Aggregated	100	Gasoline	0.001492	0.001372	0.001642	0.045366	0.005446	1.744864	0.000122	9.19E-05	0.000135	1.69E-05	2.41E-05	68671.1	10449.95	99.5	919595.6
Statewide	2020	OFF - ConstMin - Bore/Drill Rigs	Aggregated	175	Gasoline	0.000327	0.000301	0.00036	0.019682	0.000125	0.601431	4.31E-05	3.26E-05	4.79E-05	5.97E-06	8.29E-06	23659.3	2273.95	23.79	366521.7
Statewide	2020	OFF - ConstMin - Cement and Mortar	Aggregated	25	Gasoline	0.265198	0.243929	0.291834	9.029593	0.173922	16.04608	0.08994	0.067954	0.099933	0.000483	0.000415	1185221	3023664	32841.64	20960523
Statewide	2020	OFF - ConstMin - Cement and Mortar	Aggregated	25	Diesel	0.001898	0.002259	0.002733	0.013203	0.017044	2.304714	0.000677	0.000623	0.000677	3.45E-05	1.92E-05	76379.9	231921	772.75	238851.6
Statewide	2020	OFF - ConstMin - Concrete/Industrial	Aggregated	25	Gasoline	0.202805	0.18654	0.223174	8.426982	0.154228	13.88494	0.102202	0.077219	0.113558	0.000382	0.000371	1058069	1313675	4622.58	13726161
Statewide	2020	OFF - ConstMin - Concrete/Industrial	Aggregated	25	Diesel	6.22E-05	7.4E-05	8.96E-05	0.000306	0.000566	0.074249	2.11E-05	1.95E-05	2.11E-05	9.42E-07	5.91E-07	2350.6	3160.9	5.21	56896.2
Statewide	2020	OFF - ConstMin - Concrete/Industrial	Aggregated	50	Gasoline	0.003616	0.003326	0.003979	0.269384	0.005802	3.207449	0.000221	0.000167	0.000246	3.9E-05	4.83E-05	137904.3	49661.9	81.27	1738167
Statewide	2020	OFF - ConstMin - Concrete/Industrial	Aggregated	50	Diesel	0.001138	0.001355	0.001639	0.009348	0.008617	1.16694	0.000435	0.000401	0.000435	1.51E-05	9.76E-06	38781.25	27838.55	47.72	918672.1
Statewide	2020	OFF - ConstMin - Concrete/Industrial	Aggregated	100	Gasoline	0.001486	0.001367	0.001635	0.073423	0.003714	3.42778	0.000239	0.000181	0.000266	3.31E-05	4.7E-05	134210.5	28437.15	46.55	1876852
Statewide	2020	OFF - ConstMin - Cranes	Aggregated	50	Gasoline	0.001051	0.000967	0.001156	0.064717	0.001604	0.423781	2.92E-05	2.21E-05	3.25E-05	5.15E-06	6.93E-06	19775.7	9906.1	23.79	366525.7
Statewide	2020	OFF - ConstMin - Cranes	Aggregated	100	Gasoline	0.002228	0.002049	0.002452	0.079045	0.006259	1.676709	0.000117	8.83E-05	0.00013	1.62E-05	2.39E-05	68163.75	20330.5	48.77	1504457
Statewide	2020	OFF - ConstMin - Cranes	Aggregated	175	Gasoline	9.42E-05	8.67E-05	0.000104	0.004	0.000472	0.110141	7.9E-06	5.97E-06	8.77E-06	1.09E-06	1.46E-06	4164.65	569.4	1.35	71175
Statewide	2020	OFF - ConstMin - Crushing/Proc. Equi	Aggregated	25	Gasoline	0.002977	0.002738	0.003276	0.126967	0.002245	0.205481	0.00155	0.001171	0.001723	5.51E-06	5.49E-06	15673.1	15727.85	54.49	185036.7
Statewide	2020	OFF - ConstMin - Crushing/Proc. Equi	Aggregated	100	Gasoline	0.001405	0.001292	0.001546	0.046595	0.004486	1.3245	9.23E-05	6.98E-05	0.000103	1.28E-05	1.85E-05	52837.4	6599.2	27.83	633523.2
Statewide	2020	OFF - ConstMin - Dumpers/Tenders	Aggregated	25	Gasoline	0.024378	0.022423	0.026827	0.881816	0.016897	1.510491	0.009969	0.007532	0.011077	4.31E-05	3.96E-05	113014.9	326145.8	2188.01	2837255
Statewide	2020	OFF - ConstMin - Dumpers/Tenders	Aggregated	25	Diesel	0.000193	0.00023	0.000278	0.000949	0.001759	0.230509	6.7E-05	6.17E-05	6.7E-05	2.92E-06	1.88E-06	7467.9	21936.5	32.66	350984
Statewide	2020	OFF - ConstMin - Dumpers/Tenders	Aggregated	100	Gasoline	0.000127	0.000117	0.00014	0.003932	0.000454	0.143665	1E-05	7.57E-06	1.11E-05	1.39E-06	1.85E-06	5281.55	1919.9	16.91	126713.4
Statewide	2020	OFF - ConstMin - Excavators	Aggregated	25	Diesel	0.001354	0.001611	0.001949	0.006653	0.012318	1.615866	0.00046	0.000423	2.05E-05	1.35E-05	53673.25	71722.5	51.16	1649617	
Statewide	2020	OFF - ConstMin - Other Construction	Aggregated	25	Diesel	0.004365	0.005195	0.006286	0.030823	0.03943	5.364497	0.001528	0.001406	0.001528	8.07E-05	4.49E-05	178641.9	371121.1	537.26	5038931
Statewide	2020	OFF - ConstMin - Other Construction	Aggregated	175	Gasoline	0.001387	0.001275	0.001526	0.118385	0.004553	3.54771	0.000254	0.000192	0.000283	3.52E-05	4.95E-05	141408.3	25652.2	69.1	3232177
Statewide	2020	OFF - ConstMin - Pavers	Aggregated	25	Diesel	0.000367	0.000437	0.000528	0.0018	0.003344	0.437273	0.000129	0.000119	0.000129	5.55E-06	3.6E-06	14311.65	16881.25	20.14	405150
Statewide	2020	OFF - ConstMin - Paving Equipment	Aggregated	25	Gasoline	0.428308	0.393958	0.471327	15.65725	0.313352	27.70661	0.176731	0.13353	0.196368	0.000813	0.000717	2046274	4416931	23349.27	36207299
Statewide	2020	OFF - ConstMin - Paving Equipment	Aggregated	25	Diesel	0.000434	0.000516	0.000625	0.002133	0.003948	0.517932	0.000147	0.000136	0.000147	6.57E-06	4.3E-06	17111.2	29864.3	35.82	567421.9
Statewide	2020	OFF - ConstMin - Paving Equipment	Aggregated	50	Gasoline	0.002223	0.002045	0.002446	0.155528	0.003645	1.740792	0.00012	9.07E-05	0.000133	2.12E-05	2.64E-05	75273.95	33503.35	192.09	1239624
Statewide	2020	OFF - ConstMin - Paving Equipment	Aggregated	100	Gasoline	0.000428	0.000394	0.000471	0.018847	0.001209	0.791317	5.52E-05	4.17E-05	6.13E-05	7.65E-06	1.08E-05	30889.95	8446.1	48.91	557442.6
Statewide	2020	OFF - ConstMin - Plate Compactors	Aggregated	25	Gasoline	0.180543	0.166064	0.198677	5.844922	0.123676	10.94543	0.059793	0.045177	0.066437	0.000333	0.000277	789914.8	2499254	12893.45	15344498
Statewide	2020	OFF - ConstMin - Plate Compactors	Aggregated	25	Diesel	0.001282	0.001526	0.001846	0.009684	0.011561	1.585919	0.000452	0.000416	0.000452	2.47E-05	1.33E-05	52804.55	268614.4	447.4	2148916
Statewide	2020	OFF - ConstMin - Rollers	Aggregated	25	Gasoline	0.092236	0.084839	0.1015	3.819205	0.067888	6.226301	0.045327	0.03427	0.050363	0.000168	0.000167	477084.2	629062.9	2526.13	7742453
Statewide	2020	OFF - ConstMin - Rollers	Aggregated	25	Diesel	0.007828	0.009316	0.011272	0.04926	0.027368	9.521316	0.000271	0.002495	0.002711	0.000135	7.97E-05	316980.6	829130.4	1191.72	9071162
Statewide	2020	OFF - ConstMin - Rollers	Aggregated	50	Gasoline	0.005078	0.00467	0.005588	0.329572	0.007177	1.673048	0.000115	8.71E-05	0.000128	2.03E-05	2.92E-05	83482.8	30532.25	48.77	1129693
Statewide	2020	OFF - ConstMin - Rollers	Aggregated	100	Gasoline	0.010388	0.009555	0.011432	0.386959	0.026135	6.304042	0.00044	0.000332	0.000488	6.09E-05	9.21E-05	262909.5	57746.65	92.41	303999
Statewide	2020	OFF - ConstMin - Rough Terrain Forkl	Aggregated	50	Gasoline	0.000711	0.000654	0.000782	0.043742	0.001086	0.287238	1.98E-05	1.5E-05	2.2E-05	3.49E-06	4.65E-06	13278.7	3792.35	8.99	178240.4
Statewide	2020	OFF - ConstMin - Rough Terrain Forkl	Aggregated	100	Gasoline	0.009673	0.008897	0.010645	0.342966	0.027206	7.293644	0.000509	0.000384	0.000565	7.05E-05	0.000104	297715.9	58009.45	140.16	4930803
Statewide	2020	OFF - ConstMin - Rough Terrain Forkl	Aggregated	175	Gasoline	0.000356	0.000328	0.000392	0.015144	0.001785	0.417266	2.99E-05	2.26E-05	3.32E-05	4.15E-06	5.75E-06	16403.8	1700.9	3.96	241527.8
Statewide	2020	OFF - ConstMin - Rubber Tired Load	Aggregated	25	Diesel	0.000362	0.00043	0.000521	0.001777	0.00329	0.431608	0.000123	0.000113	0.000123	5.48E-06	3.59E-06	14278.8	18545.65	19.1	463641.3
Statewide	2020	OFF - ConstMin - Rubber Tired Load	Aggregated	50	Gasoline	0.001675	0.00154	0.001843	0.107989	0.002364	0.649407	4.48E-05	3.38E-05	4.97E-05	7.9E-06	1.09E-05	30977.55	12402.7	23.9	496108
Statewide	2020	OFF - ConstMin - Rubber Tired Load	Aggregated	100	Gasoline	0.010511	0.009668	0.011567	0.392081	0.027368	7.674516	0.000535	0.000404	0.000595	7.41E-05	0.00011	315097.2	84194.55	164.33	6062008
Statewide	2020	OFF - ConstMin - Signal Boards	Aggregated	25	Gasoline	0.004608	0.004239	0.005071	0.19024	0.003647	0.321756	0.002337	0.001766	0.002597	9.25E-06	8.44E-06	24090	41642.85	157.18	325685.9
Statewide	2020	OFF - ConstMin - Signal Boards	Aggregated	25	Diesel	0.020037	0.023846	0.028853	0.151346	0.180689	24.78679	0.007061	0.006496	0.007061	0.000386	0.000208	826462.2	2935377	3910.37	17612265
Statewide	2020	OFF - ConstMin - Signal Boards	Aggregated	50	Diesel	0.000497	0.000592	0.000716	0.004037	0.00375	0.515815	0.000187	0.000172	0.000187	6.67E-06	4.24E-06	16866.65	10026.55	18.6	370982.3
Statewide	2020	OFF - ConstMin - Skid Steer Loaders	Aggregated	25	Gasoline	0.303309	0.278984	0.333773	12.72337	0.215249	20.05288	0.151293	0.11431	0.168103	0.000509	0.000547	1562685	1408495	4411.49	26658016
Statewide	2020	OFF - ConstMin - Skid Steer Loaders	Aggregated	25	Diesel	0.03622	0.043104	0.052156	0.175105	0.325966	42.03156	0.013258	0.012197	0.013258	0.000533	0.000352	1397578	2226237	2666.85	44524744
Statewide	2020	OFF - ConstMin - Skid Steer Loaders	Aggregated	50	Gasoline	0.011076	0.010188	0.012189	0.870551	0.017217	9.216741	0.000635	0.00048	0.000706	0.000112	0.000141	402032.9	209889.6	676.54	6716467
Statewide	2020	OFF - ConstMin - Skid Steer Loaders	Aggregated	100	Gasoline	0.006367	0.005856	0.007006	0.334993	0.015972	13.62971	0.00095	0.000718	0.001056	0.000132	0.000188	536400.4	125476	404.51	10038084
Statewide	2020	OFF - ConstMin - Surfacing Equipment																		

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/hpy

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Activ	Total_Pop	Horsepower_Hours_hpy
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	100	Nat Gas	0	0	0.172291	81.32941	8.156118	1801.474	0	0	0.160212	0	0	1E+08	42102987	23370.34	2.95E+09
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	175	Gasoline	0.046745	0.042996	0.05144	3.272768	0.27443	76.88677	0.005512	0.004165	0.006124	0.000764	0.001089	3109910	771666.1	428.09	1.13E+08
Statewide	2020	OFF - Industrial - Forklifts	Aggregated	175	Nat Gas	0	0	0.007904	4.764547	0.4058	137.5006	0	0	0.012228	0	0	7522405	1540702	855.01	2.25E+08
Statewide	2020	OFF - Industrial - Other General Indus	Aggregated	25	Gasoline	0.044685	0.041101	0.049173	2.744804	0.036019	4.493076	0.002166	0.001636	0.002406	0.000125	0.000119	340055.9	607349.1	1565.15	6415006
Statewide	2020	OFF - Industrial - Other General Indus	Aggregated	25	Diesel	0.007043	0.008382	0.010142	0.039911	0.06561	8.696762	0.002477	0.002279	0.002477	0.000116	7.28E-05	289200.5	551420.1	386.3	9935220
Statewide	2020	OFF - Industrial - Other General Indus	Aggregated	50	Gasoline	0.013165	0.012109	0.014487	1.270837	0.029269	8.74673	0.000603	0.000456	0.00067	0.000106	0.000143	408409.4	228165.1	319.63	6844955
Statewide	2020	OFF - Industrial - Other General Indus	Aggregated	100	Gasoline	0.004073	0.003746	0.004482	0.29824	0.024127	7.484131	0.000522	0.000394	0.00058	7.23E-05	0.000106	301336.7	74887.05	104.84	5916077
Statewide	2020	OFF - Industrial - Other General Indus	Aggregated	175	Gasoline	0.000572	0.000526	0.000629	0.055342	0.004857	1.551461	0.000111	8.4E-05	0.000124	1.54E-05	2.17E-05	61896.7	7146.7	9.59	1243526
Statewide	2020	OFF - Industrial - Other Material Hand	Aggregated	50	Gasoline	0.000197	0.000181	0.000217	0.013681	0.000383	0.089776	6.19E-06	4.68E-06	6.88E-06	1.09E-06	1.36E-06	3887.25	1423.5	3.7	58363.5
Statewide	2020	OFF - Industrial - Other Material Hand	Aggregated	100	Gasoline	0.00566	0.005206	0.006229	0.234277	0.023539	5.173426	0.000361	0.000273	0.000401	5E-05	7.36E-05	210214.4	77033.25	199.52	4159796
Statewide	2020	OFF - Industrial - Sweepers/Scrubber	Aggregated	25	Gasoline	0.034103	0.031368	0.037528	2.207465	0.027712	3.543975	0.001655	0.001251	0.001839	9.33E-05	9.48E-05	270578.1	297431.2	1100.79	3484064
Statewide	2020	OFF - Industrial - Sweepers/Scrubber	Aggregated	25	Diesel	0.001403	0.001669	0.002002	0.008611	0.013256	1.768207	0.000504	0.000463	0.000504	2.44E-05	1.48E-05	58666.45	81763.65	125.54	1512020
Statewide	2020	OFF - Industrial - Sweepers/Scrubber	Aggregated	50	Gasoline	0.036477	0.033552	0.040141	3.171484	0.079357	28.2721	0.001949	0.001473	0.002166	0.000344	0.000443	1263612	480913.1	931.26	16831957
Statewide	2020	OFF - Industrial - Sweepers/Scrubber	Aggregated	100	Gasoline	0.021289	0.019581	0.023427	1.35583	0.1349	45.34751	0.003162	0.002389	0.003513	0.000438	0.000663	1799103	401525.5	777.31	27303737
Statewide	2020	OFF - Industrial - Sweepers/Scrubber	Aggregated	175	Gasoline	0.000165	0.000152	0.000181	0.018017	0.001599	0.527912	3.78E-05	2.86E-05	4.21E-05	5.24E-06	7.34E-06	20958.3	2157.15	4.12	302001
Statewide	2020	OFF - Light Commercial - Air Compres	Aggregated	25	Gasoline	0.48249	0.443794	0.53095	11.17903	0.287808	24.16903	0.09205	0.069549	0.102278	0.000755	0.00058	1654936	5399270	11169.15	33271160
Statewide	2020	OFF - Light Commercial - Air Compres	Aggregated	25	Diesel	0.002176	0.00259	0.003134	0.011067	0.018678	2.338379	0.000886	0.000815	0.000886	3.1E-05	1.94E-05	77241.3	141572.5	172.7	2829173
Statewide	2020	OFF - Light Commercial - Air Compres	Aggregated	50	Gasoline	0.027246	0.025061	0.029982	1.755401	0.038725	10.37256	0.000715	0.00054	0.000795	0.000126	0.000176	500973.5	223507.7	462.12	7822771
Statewide	2020	OFF - Light Commercial - Air Compres	Aggregated	50	Diesel	0.032008	0.038093	0.046092	0.237693	0.20241	26.15721	0.011549	0.010625	0.011549	0.000338	0.000221	878299.5	858009.2	1053.83	31746339
Statewide	2020	OFF - Light Commercial - Air Compres	Aggregated	100	Gasoline	0.093099	0.085632	0.102449	3.461855	0.244706	66.51329	0.004637	0.003504	0.005153	0.000643	0.000959	2736102	725273.3	1500.52	50769128
Statewide	2020	OFF - Light Commercial - Air Compres	Aggregated	175	Gasoline	0.007604	0.006994	0.008367	0.310112	0.034957	8.330359	0.000597	0.000451	0.000664	8.28E-05	0.000117	334537.1	48482.95	100.12	6496715
Statewide	2020	OFF - Light Commercial - Gas Compre	Aggregated	50	Nat Gas	0	0	0.001542	0.273206	0.056003	18.60702	0	0	0.001425	0	0	988657.3	289156.7	34.02	9253013
Statewide	2020	OFF - Light Commercial - Gas Compre	Aggregated	100	Nat Gas	0	0	0.00841	4.368996	0.331377	104.5619	0	0	0.0081	0	0	5785743	597647.3	70.32	25292967
Statewide	2020	OFF - Light Commercial - Gas Compre	Aggregated	175	Nat Gas	0	0	0.002346	0.888798	0.088675	27.21257	0	0	0.002168	0	0	1485853	96334.45	11.3	14064830
Statewide	2020	OFF - Light Commercial - Gas Compre	Aggregated	300	Nat Gas	0	0	0.001804	1.022726	0.0858	28.04605	0	0	0.002494	0	0	1538880	77091.65	9.04	16189247
Statewide	2020	OFF - Light Commercial - Gas Compre	Aggregated	600	Nat Gas	0	0	0.002541	1.440339	0.120836	39.49819	0	0	0.003513	0	0	2167250	67499.45	7.94	22814814
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	25	Gasoline	3.708143	3.41075	4.080586	193.2413	2.559672	318.8603	0.210877	0.159329	0.234308	0.008734	0.008454	24131234	33706472	293368	3.62E+08
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	25	Diesel	0.051406	0.061177	0.074025	0.31715	0.4873	61.14858	0.022478	0.02068	0.022478	0.000853	0.000512	2036215	3348207	9918	48145774
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	50	Gasoline	0.137865	0.126808	0.151712	8.06332	0.286998	90.03842	0.006207	0.00469	0.006897	0.001095	0.001369	3906613	1749168	15229.17	55973363
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	50	Diesel	0.061166	0.072793	0.088808	0.508999	0.519205	72.39693	0.024813	0.022828	0.024813	0.000936	0.000608	2418026	1727293	5116.86	57000674
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	100	Gasoline	0.03328	0.030611	0.036623	1.16584	0.17833	44.59695	0.003109	0.002349	0.003455	0.000431	0.000617	1761271	337723.6	2940.96	28031055
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	100	Nat Gas	0	0	0.000153	0.090811	0.011033	2.891502	0	0	0.000257	0	0	157117.9	24783.5	218.35	2057030
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	175	Gasoline	0.003281	0.003018	0.003611	0.23691	0.031482	7.208771	0.000517	0.000339	0.000574	7.16E-05	0.000101	287123.6	31605.35	277.1	4614381
Statewide	2020	OFF - Light Commercial - Generator S	Aggregated	175	Nat Gas	0	0	0.000173	0.108841	0.015403	4.216585	0	0	0.000375	0	0	227413.2	20458.25	181.1	2986904
Statewide	2020	OFF - Light Commercial - Pressure Wa	Aggregated	25	Gasoline	0.391627	0.360218	0.430961	14.09686	0.199663	26.85757	0.037159	0.028076	0.041288	0.000804	0.000671	1915243	3518330	30625.39	24357523
Statewide	2020	OFF - Light Commercial - Pressure Wa	Aggregated	25	Diesel	0.000281	0.000334	0.000404	0.00199	0.002749	0.345432	0.000128	0.000118	0.000128	5.12E-06	2.65E-06	10533.9	46668.9	326.12	657722.7
Statewide	2020	OFF - Light Commercial - Pressure Wa	Aggregated	50	Gasoline	0.001237	0.001138	0.001362	0.075754	0.002129	0.911634	6.28E-05	4.75E-05	6.98E-05	1.11E-05	1.37E-05	39069.6	15267.95	135.55	442770.6
Statewide	2020	OFF - Light Commercial - Pressure Wa	Aggregated	50	Diesel	0.000212	0.000253	0.000306	0.002077	0.002398	0.347868	9.86E-05	9.07E-05	9.86E-05	4.5E-06	2.81E-06	11158.05	17301	122.06	657438
Statewide	2020	OFF - Light Commercial - Pumps	Aggregated	25	Gasoline	1.198923	1.102769	1.319341	40.56345	0.816446	14.18608	0.461665	0.348814	0.512961	0.002262	0.001894	5406033	14939994	67694.1	82893701
Statewide	2020	OFF - Light Commercial - Pumps	Aggregated	25	Diesel	0.028698	0.034153	0.041325	0.169853	0.25083	31.39176	0.012196	0.01122	0.012196	0.000449	0.000263	1046054	2249006	5587.23	24715475
Statewide	2020	OFF - Light Commercial - Pumps	Aggregated	50	Gasoline	0.021285	0.019578	0.023423	1.421435	0.033934	13.59337	0.000937	0.000708	0.001041	0.000165	0.000211	601961.7	268563.3	1216.97	8325464
Statewide	2020	OFF - Light Commercial - Pumps	Aggregated	50	Diesel	0.039134	0.046573	0.056353	0.313005	0.307846	42.37291	0.015365	0.014136	0.015365	0.000548	0.000356	1416561	901648.6	2239.96	33360996
Statewide	2020	OFF - Light Commercial - Pumps	Aggregated	100	Gasoline	0.037416	0.034416	0.041174	1.509224	0.109535	51.10707	0.003563	0.002692	0.003959	0.000494	0.000711	2028593	340304.1	1542.64	31648281
Statewide	2020	OFF - Light Commercial - Pumps	Aggregated	175	Gasoline	0.001202	0.001106	0.001323	0.078606	0.005549	2.320188	0.000166	0.000126	0.000185	2.3E-05	3.24E-05	92483.7	9796.6	45.48	1410710
Statewide	2020	OFF - Light Commercial - Welders	Aggregated	25	Gasoline	1.171832	1.077851	1.28953	48.92145	0.843998	77.33857	0.583497	0.440864	0.64833	0.001997	0.002108	6018511	7447624	35850.19	1.17E+08
Statewide	2020	OFF - Light Commercial - Welders	Aggregated	25	Diesel	0.025449	0.030287	0.036647	1.410142	0.220462										

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/hpy

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_ActivTotol	Total_PopHorsepower	Hours_hhpy
Statewide	2020	OFF - Military - A/C unit	Aggregated	100	Diesel	0.001381	0.001643	0.001988	0.018997	0.018015	3.21981	0.001003	0.000922	0.001003	3.78E-05	2.69E-05	107072.8	30882.65	102.9	319148
Statewide	2020	OFF - Military - A/C unit	Aggregated	300	Diesel	0.000663	0.000788	0.000954	0.005017	0.009956	2.768238	0.000292	0.000268	0.000292	3.11E-05	2.3E-05	91363.15	12910.05	42.96	2685290
Statewide	2020	OFF - Military - A/C unit	Aggregated	600	Diesel	0.000377	0.000449	0.000543	0.002947	0.005387	1.657415	0.000169	0.000155	0.000169	1.63E-05	1.38E-05	54669.7	4996.85	16.75	1574008
Statewide	2020	OFF - Military - Aircraft Support	Aggregated	100	Diesel	0.000253	0.000301	0.000364	0.003477	0.003297	0.589303	0.000184	0.000169	0.000184	6.91E-06	4.92E-06	19545.75	8365.8	27.9	568874.4
Statewide	2020	OFF - Military - Aircraft Support	Aggregated	175	Diesel	0.000547	0.000651	0.000787	0.008868	0.007269	1.733244	0.000319	0.000293	0.000319	1.95E-05	1.45E-05	57498.45	12012.15	39.95	1681701
Statewide	2020	OFF - Military - Cart	Aggregated	100	Diesel	0.000129	0.000154	0.000186	0.001775	0.001683	0.300842	9.37E-05	8.62E-05	9.37E-05	3.53E-06	2.51E-06	9979.1	3500.35	11.62	283528.4
Statewide	2020	OFF - Military - Cart	Aggregated	175	Diesel	4.48E-05	5.33E-05	6.45E-05	0.000727	0.000596	0.142064	2.61E-05	2.4E-05	2.61E-05	1.6E-06	1.16E-06	4599	824.9	2.75	126209.7
Statewide	2020	OFF - Military - Cart	Aggregated	300	Diesel	0.000146	0.000174	0.00021	0.001105	0.002193	0.60973	6.42E-05	5.91E-05	6.42E-05	6.86E-06	5.05E-06	20085.95	2930.95	9.69	577397.2
Statewide	2020	OFF - Military - Communications	Aggregated	50	Diesel	3.95E-05	4.71E-05	5.69E-05	0.000339	0.000356	0.049521	1.67E-05	1.54E-05	1.67E-05	6.4E-07	3.9E-07	1551.25	1102.3	3.67	44092
Statewide	2020	OFF - Military - Communications	Aggregated	100	Diesel	6.37E-05	7.58E-05	9.17E-05	0.000877	0.000831	0.148564	4.63E-05	4.26E-05	4.63E-05	1.74E-06	1.21E-06	4821.65	1737.4	5.93	138992
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	50	Diesel	4.84E-05	5.76E-05	6.97E-05	0.000415	0.000436	0.060664	2.05E-05	1.88E-05	2.05E-05	7.84E-07	4.99E-07	1981.95	1102.3	3.67	54012.7
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	100	Diesel	0.001423	0.001693	0.002049	0.019578	0.018565	3.318234	0.001033	0.000951	0.001033	3.89E-05	2.78E-05	110310.3	45358.55	150.93	3220457
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	175	Diesel	6.52E-05	7.76E-05	9.39E-05	0.001058	0.000867	0.206751	3.8E-05	3.5E-05	3.8E-05	2.33E-06	1.71E-06	6785.35	1102.3	3.67	184084.1
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	300	Diesel	0.000132	0.000157	0.00019	0.001001	0.001986	0.552162	5.82E-05	5.35E-05	5.82E-05	6.21E-06	4.58E-06	18187.95	2376.15	7.79	529881.5
Statewide	2020	OFF - Military - Compressor (Military)	Aggregated	600	Diesel	0.000735	0.000875	0.001059	0.005748	0.010507	3.2325	0.000329	0.000302	0.000329	3.17E-05	2.68E-05	106649.3	8365.8	27.9	3120443
Statewide	2020	OFF - Military - Crane	Aggregated	100	Diesel	9.25E-05	0.00011	0.000133	0.002919	0.001736	0.519973	3.67E-05	3.37E-05	3.67E-05	6.1E-06	4.33E-06	17209.75	4785.15	15.95	502440.8
Statewide	2020	OFF - Military - Crane	Aggregated	175	Diesel	1.93E-05	2.29E-05	2.77E-05	0.00065	0.000247	0.130922	6.12E-06	5.63E-06	6.12E-06	1.47E-06	1.09E-06	4321.6	839.5	2.91	118369.5
Statewide	2020	OFF - Military - Crane	Aggregated	300	Diesel	1.69E-05	2.02E-05	2.44E-05	0.000224	0.000166	0.132469	4.17E-06	3.83E-06	4.17E-06	1.49E-06	1.09E-06	4343.5	551.15	1.82	117946.1
Statewide	2020	OFF - Military - Deicer	Aggregated	100	Diesel	5.84E-05	6.95E-05	8.41E-05	0.000803	0.000762	0.136183	4.24E-05	3.9E-05	4.24E-05	1.6E-06	1.11E-06	4398.25	1102.3	3.67	121253
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	50	Diesel	0.000254	0.000302	0.000365	0.002174	0.002285	0.317555	0.000107	9.86E-05	0.000107	4.11E-06	2.66E-06	10581.35	8062.85	26.91	306388.3
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	100	Diesel	0.007402	0.008809	0.010659	0.101853	0.096587	17.26311	0.005376	0.004946	0.005376	0.000203	0.000144	574134.1	201965.4	672.1	16763132
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	175	Diesel	0.007764	0.00924	0.01118	0.125941	0.103226	24.61423	0.004528	0.004166	0.004528	0.000277	0.000206	817052.5	162581.9	541.01	23899547
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	300	Diesel	0.002362	0.002811	0.003402	0.017889	0.035499	9.869896	0.00104	0.000957	0.00104	0.000111	8.2E-05	325842.8	42956.85	142.9	9579378
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	600	Diesel	0.001421	0.001691	0.002046	0.011108	0.020306	6.247107	0.000635	0.000585	0.000635	6.13E-05	5.19E-05	206148.4	17406.85	57.91	6057584
Statewide	2020	OFF - Military - Generator (Military)	Aggregated	750	Diesel	7.63E-05	9.07E-05	0.00011	0.000588	0.001098	0.330512	3.4E-05	3.12E-05	3.4E-05	3.32E-06	2.74E-06	10898.9	481.8	1.77	257763
Statewide	2020	OFF - Military - Hydraulic unit	Aggregated	100	Diesel	0.000845	0.001005	0.001216	0.011623	0.011022	1.970018	0.000613	0.000564	0.000613	2.31E-05	1.65E-05	65470.05	20096.9	66.9	1909206
Statewide	2020	OFF - Military - Lift (Military)	Aggregated	100	Diesel	2.52E-05	3E-05	3.63E-05	0.000347	0.000329	0.058006	1.83E-05	1.68E-05	1.83E-05	6.9E-07	4.78E-07	1901.65	481.8	1.77	45771
Statewide	2020	OFF - Military - Light	Aggregated	50	Diesel	6.18E-05	7.35E-05	8.9E-05	0.00053	0.000557	0.077377	2.61E-05	2.4E-05	2.61E-05	1E-06	6.43E-07	2555	1387	4.85	69350
Statewide	2020	OFF - Military - Other tactical support	Aggregated	50	Diesel	1.24E-05	1.47E-05	1.78E-05	0.000106	0.000111	0.015475	5.22E-06	4.81E-06	5.22E-06	2E-07	1.01E-07	401.5	189.8	0.78	9490
Statewide	2020	OFF - Military - Other tactical support	Aggregated	100	Diesel	0.000168	0.0002	0.000242	0.002308	0.002189	0.391218	0.000122	0.000112	0.000122	4.59E-06	3.27E-06	13004.95	4686.6	15.66	370241.4
Statewide	2020	OFF - Military - Other tactical support	Aggregated	175	Diesel	0.000231	0.000275	0.000333	0.00375	0.003074	0.732915	0.000135	0.000124	0.000135	8.25E-06	6.11E-06	24287.1	4686.6	15.66	693616.8
Statewide	2020	OFF - Military - Other tactical support	Aggregated	300	Diesel	9.69E-05	0.000115	0.00014	0.000734	0.001456	0.404836	4.27E-05	3.92E-05	4.27E-05	4.56E-06	3.36E-06	13355.35	1737.4	5.93	378753.2
Statewide	2020	OFF - Military - Other tactical support	Aggregated	600	Diesel	3.8E-05	4.52E-05	5.47E-05	0.000297	0.000543	0.167134	1.7E-05	1.56E-05	1.7E-05	1.64E-06	1.36E-06	5405.65	481.8	1.77	130086
Statewide	2020	OFF - Military - Other tactical support	Aggregated	750	Diesel	4.47E-05	5.32E-05	6.44E-05	0.000345	0.000644	0.193752	1.99E-05	1.83E-05	1.99E-05	1.95E-06	1.59E-06	6303.55	189.8	0.78	118814.8
Statewide	2020	OFF - Military - Pressure Washers	Aggregated	175	Diesel	4.45E-05	5.3E-05	6.41E-05	0.000722	0.000592	0.141136	2.6E-05	2.39E-05	2.6E-05	1.59E-06	1.15E-06	4555.2	824.9	2.75	125384.8
Statewide	2020	OFF - Military - Pump (Military)	Aggregated	50	Diesel	0.000559	0.000665	0.000805	0.004793	0.005037	0.700107	0.000236	0.000217	0.000236	9.05E-06	5.87E-06	23341.75	17406.85	57.91	678867.1
Statewide	2020	OFF - Military - Pump (Military)	Aggregated	100	Diesel	0.000597	0.000711	0.00086	0.008217	0.007793	1.392785	0.000434	0.000399	0.000434	1.63E-05	1.16E-05	46282	13519.6	44.92	1351960
Statewide	2020	OFF - Military - Start Cart	Aggregated	100	Diesel	1.33E-05	1.58E-05	1.91E-05	0.000183	0.000173	0.030951	9.64E-06	8.87E-06	9.64E-06	3.63E-07	2.36E-07	938.05	189.8	0.78	18980
Statewide	2020	OFF - Military - Start Cart	Aggregated	600	Diesel	1.99E-05	2.37E-05	2.87E-05	0.000156	0.000285	0.087591	8.1E-06	8.2E-06	8.1E-06	8.6E-07	7.08E-07	2814.15	189.8	0.78	53713.4
Statewide	2020	OFF - Military - Test Stand	Aggregated	100	Diesel	0.000403	0.000479	0.00058	0.005544	0.005257	0.939666	0.000293	0.000269	0.000293	1.1E-05	7.84E-06	31171	9906.1	32.99	911361.2
Statewide	2020	OFF - Military - Test Stand	Aggregated	175	Diesel	2.77E-05	3.3E-05	3.99E-05	0.00045	0.000369	0.0879	1.62E-05	1.49E-05	1.62E-05	9.89E-07	7.14E-07	2839.7	481.8	1.77	68415.6
Statewide	2020	OFF - Military - Test Stand	Aggregated	300	Diesel	0.000452	0.000538	0.000651	0.003426	0.006798	1.890165	0.000199	0.000183	0.000199	2.13E-05	1.57E-05	62400.4	9281.95	31	1828544
Statewide	2020	OFF - Military - Test Stand	Aggregated	600	Diesel	0.00029	0.000345	0.000417	0.002265	0.004141	1.273934	0.00013	0.000119	0.00013	1.25E-05	1.06E-05	42007.85	3500.35	11.62	1200620
Statewide	2020	OFF - Military - Welder	Aggregated	50	Diesel	0.000182	0.000216	0.000262	0.001557	0.001637	0.227488	7.68E-05	7.06E-05	7.68E-05	2.94E-06	1.9E-06	7551.85	6226.9	20.85	217941.5
Statewide	2020	OFF - Military - Welder	Aggregated	100	Diesel	0.000477	0.000568	0.000687	0.006567	0.006227	1.11299	0.000347	0.000319	0.000347	1.31E-05	9.31E-06	36989.1	17406.85	57.91	

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tp	PM10_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Acti	Total_Popi	horsepower_Hours_hhpy
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		50	Diesel	0.000298	0.000361	0.000429	0.00279	0.002676	0.366359	0.000121	0.000112	0.000121	3.38E-06	2.99E-06	11886.1	152626	38.76469	705886.2
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		75	Diesel	0.002355	0.00285	0.003392	0.041269	0.038773	6.275079	0.001645	0.001514	0.001645	5.79E-05	5.12E-05	203588	199765.2	507.3613	13441310
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		100	Diesel	0.003431	0.004152	0.004941	0.098679	0.053974	14.71449	0.003692	0.003397	0.003692	0.000136	0.00012	477395.5	365413.2	928.0722	31518652
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		175	Diesel	0.003959	0.00479	0.0057	0.111594	0.067053	19.89398	0.002601	0.002393	0.002601	0.000184	0.000162	645438.2	303014.6	769.5916	42613188
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		300	Diesel	0.003099	0.00375	0.004463	0.028091	0.046487	14.2143	0.001645	0.001514	0.001645	0.000131	0.000116	461167.2	106840.7	271.3528	30447226
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		600	Diesel	0.005449	0.006593	0.007847	0.046188	0.081986	24.14741	0.002986	0.002747	0.002986	0.000223	0.000197	783436.3	104596.2	265.6521	51724111
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		750	Diesel	0.001017	0.00123	0.001464	0.008343	0.018683	4.399457	0.000623	0.000573	0.000623	4.06E-05	3.59E-05	142735.5	13467.32	34.20413	9423700
Statewide	2020	Portable Equipment - Non-Rental CorAggregated		9999	Diesel	0.002806	0.003395	0.00404	0.029531	0.032852	2.451712	0.001448	0.001332	0.001448	2.26E-05	2E-05	79543.11	2693.463	6.840827	5251603
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		50	Diesel	0.001534	0.001857	0.00221	0.020202	0.01218	1.977028	0.000331	0.000304	0.000331	1.82E-05	1.61E-05	64142.48	74884.09	57.00689	3809263
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		75	Diesel	0.016727	0.020239	0.024087	0.242541	0.195499	33.13798	0.008089	0.007442	0.008089	0.000306	0.00027	1075125	1049875	799.2366	70982024
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		100	Diesel	0.019444	0.023527	0.028	0.361276	0.232785	48.80113	0.018258	0.016797	0.018258	0.000451	0.000398	1583299	1066349	811.7781	1.05E+08
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		175	Diesel	0.03865	0.046766	0.055656	0.672493	0.405986	104.8386	0.02074	0.019081	0.02074	0.000968	0.000856	3401372	1544110	1175.482	2.25E+08
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		300	Diesel	0.038197	0.046218	0.055003	0.231405	0.337418	101.3019	0.014479	0.013321	0.014479	0.000935	0.000827	3286627	855176.4	651.0187	2.17E+08
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		600	Diesel	0.085973	0.104027	0.123801	0.498534	0.383094	234.281	0.034336	0.031589	0.034336	0.002163	0.001912	7600988	1180173	898.4286	5.02E+08
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		750	Diesel	0.03361	0.040668	0.048399	0.172559	0.325191	80.93739	0.014849	0.013661	0.014849	0.000747	0.000661	2625925	245619.8	186.9826	1.73E+08
Statewide	2020	Portable Equipment - Non-Rental GeiAggregated		9999	Diesel	0.2148	0.259908	0.309312	1.052124	3.353595	490.7166	0.108005	0.099364	0.108005	0.00453	0.004005	15920759	718887.3	547.2662	1.05E+09
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		50	Diesel	0.000214	0.000259	0.000308	0.001862	0.001806	2.600012	8.65E-05	7.96E-05	8.65E-05	2.4E-06	2.12E-06	8435.817	10840.21	75.34427	500982.3
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		75	Diesel	0.00218	0.002638	0.003139	0.050399	0.043457	8.056974	0.001419	0.001305	0.001419	7.44E-05	6.58E-05	261399.7	243030.6	192.3958	17258155
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		100	Diesel	0.004374	0.005293	0.006299	0.122978	0.088059	19.37345	0.005532	0.00509	0.005532	0.000179	0.000158	628550.4	450393.4	1468.498	4.98E+08
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		175	Diesel	0.012104	0.014646	0.01743	0.328232	0.220105	59.06662	0.008867	0.008157	0.008867	0.000546	0.000482	1916351	890296.3	2902.791	11272109
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		300	Diesel	0.005619	0.006798	0.008091	0.0507	0.081255	25.25218	0.002913	0.00268	0.002913	0.000233	0.000206	819279.2	219955.4	717.1467	54090537
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		600	Diesel	0.00901	0.010902	0.012974	0.079642	0.146557	41.30891	0.005025	0.004623	0.005025	0.000382	0.000337	1340222	188130.2	613.3941	88484287
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		750	Diesel	0.004192	0.005072	0.006036	0.036764	0.075031	19.57069	0.002624	0.002414	0.002624	0.000181	0.000167	634949.5	58746.97	191.5432	41920203
Statewide	2020	Portable Equipment - Non-Rental OtI Aggregated		9999	Diesel	0.085906	0.103946	0.123705	0.771185	1.319039	126.9052	0.047443	0.043647	0.047443	0.001171	0.001036	4117298	109451.2	356.8631	2.72E+08
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		50	Diesel	3.62E-05	4.38E-05	5.21E-05	0.000668	0.000684	0.106115	2.32E-05	2.14E-05	2.32E-05	9.8E-07	8.66E-07	3442.773	4205.182	13.68165	204457.8
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		75	Diesel	0.001728	0.00209	0.002488	0.039062	0.03399	6.211602	0.001143	0.001051	0.001143	5.74E-05	5.07E-05	201528.6	186079.3	605.4132	13305340
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		100	Diesel	0.002389	0.00289	0.00344	0.064591	0.047985	10.19249	0.002903	0.002671	0.002903	9.42E-05	8.32E-05	330684	234789.4	763.8923	21832454
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		175	Diesel	0.003978	0.004813	0.005728	0.104011	0.074524	18.71137	0.003087	0.00284	0.003087	0.000173	0.000153	607069.9	282448.1	918.9511	40008032
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		300	Diesel	0.003604	0.004361	0.00519	0.03452	0.054015	17.41421	0.001973	0.001815	0.001973	0.000161	0.000142	564984.8	148583.1	483.4184	37301484
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		600	Diesel	0.009609	0.011627	0.013837	0.090746	0.171659	49.07628	0.006396	0.005884	0.006396	0.000453	0.000401	1592226	225327.7	733.1086	1.05E+08
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		750	Diesel	0.004409	0.005335	0.00635	0.043804	0.08561	23.7495	0.003443	0.003167	0.003443	0.000219	0.000194	770526.3	71838.53	233.7283	50871766
Statewide	2020	Portable Equipment - Non-Rental PurAggregated		9999	Diesel	0.013012	0.015745	0.018738	0.10358	0.369008	56.17033	0.009576	0.00881	0.009576	0.000519	0.000458	1822384	61325.58	199.5241	1.2E+08
Statewide	2020	Portable Equipment - Rental Compre Aggregated		50	Diesel	7.39E-05	8.94E-05	0.000106	0.001524	0.001314	0.235994	3.39E-05	3.12E-05	3.39E-05	2.18E-06	1.93E-06	7656.554	8823.656	17.10207	454703.8
Statewide	2020	Portable Equipment - Rental Compre Aggregated		75	Diesel	0.000567	0.000686	0.000816	0.011444	0.009578	1.752316	0.000304	0.000208	0.000304	1.62E-05	1.43E-05	56851.97	55883.15	108.3131	3753486
Statewide	2020	Portable Equipment - Rental Compre Aggregated		100	Diesel	0.000444	0.000537	0.000639	0.012833	0.007275	1.930281	0.000483	0.000444	0.000483	1.78E-05	1.58E-05	62625.85	45883.01	88.93075	4134690
Statewide	2020	Portable Equipment - Rental Compre Aggregated		175	Diesel	0.004257	0.005151	0.00613	0.135198	0.076105	24.5237	0.00251	0.002309	0.00251	0.000227	0.0002	795644.5	375299.5	727.4079	52530124
Statewide	2020	Portable Equipment - Rental Compre Aggregated		300	Diesel	0.003081	0.003727	0.004436	0.037303	0.036522	19.68026	0.001284	0.001181	0.001284	0.000182	0.000161	638504.4	147649.2	286.1746	42155403
Statewide	2020	Portable Equipment - Rental Compre Aggregated		600	Diesel	0.023983	0.029019	0.034535	0.268074	0.263249	141.7724	0.010996	0.010117	0.010996	0.000131	0.001157	4599651	538831.2	1044.366	3.04E+08
Statewide	2020	Portable Equipment - Rental Compre Aggregated		750	Diesel	0.002382	0.002882	0.003429	0.023907	0.022852	12.24652	0.001168	0.001075	0.001168	0.000113	1E-04	397312.8	82325.84	74.0896	26231426
Statewide	2020	Portable Equipment - Rental Compre Aggregated		9999	Diesel	0.001478	0.001789	0.002129	0.013187	0.034801	6.969135	0.000835	0.000768	0.000835	6.44E-05	5.69E-05	226105.9	14117.85	27.36331	14927988
Statewide	2020	Portable Equipment - Rental Generat Aggregated		50	Diesel	0.000152	0.000184	0.000219	0.002325	0.002202	0.250359	9.1E-05	8.37E-05	9.1E-05	2.31E-06	2.04E-06	8122.638	11228.55	7.980695	482383.4
Statewide	2020	Portable Equipment - Rental Generat Aggregated		75	Diesel	0.019005	0.022996	0.027367	0.294443	0.23684	41.06902	0.009407	0.008654	0.009407	0.000379	0.000335	1332439	1272034	904.1293	87970430
Statewide	2020	Portable Equipment - Rental Generat Aggregated		100	Diesel	0.03297	0.039894	0.047477	0.646603	0.429091	88.89803	0.031698	0.029162	0.031698	0.000821	0.000726	2884199	1902437	1352.203	1.9E+08
Statewide	2020	Portable Equipment - Rental Generat Aggregated		175	Diesel	0.049259	0.059603	0.070932	0.987187	0.550108	157.7817	0.022502	0.020701	0.022502	0.001457	0.001288	5119054	2205522	1599.613	3.38E+08
Statewide	2020	Portable Equipment - Rental Generat Aggregated		300	Diesel	0.076454	0.09251	0.110094	0.490386	0.67647	222.5619	0.027111	0.024942	0.027111	0.002055	0.001817	7220774	1865543	1325.98	4.77E+08
Statewide	2020	Portable Equipment - Rental Generat Aggregated		600	Diesel	0.132608	0.160455	0.190955	0.898913	1.170972	439.3969	0.049751	0.04577	0.049751	0.004058	0.003586	14255750	2160694	1535.766	9.41E+08
Statewide	2020	Portable Equipment - Rental Generat Aggregated		750	Diesel	0.025743	0.031149	0.03707	0.16804	0.2735	81.55362	0.011111	0.010222	0.011111	0.000753	0.000666	2645918	248632.2	176.7214	1.75E+08
Statewide	2020	Portable Equipment - Rental Generat Aggregated		9999	Diesel	0.288591	0.349195	0.41557	1.755142	4.763137	855.8932	0.141147	0.129856	0.141147	0.007904	0.006986	27768512	1310532	931.4926	1.83E+09
Statewide	2020	Portable Equipment - Rental Other PrAggregated		50	Diesel	0.000237	0.000287	0.00												

OFFROAD2017 (v1.0.1) Emissions Inventory

Region Type: Statewide

Region: California

Calendar Year: 2020

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2017 Equipment Types

Units: Emissions: tons/day, Fuel Consumption: gallons/year, Activity: hours/year, HP-Hours: HP-hours/year

Region	CalYr	VehClass	MdYr	HP_Bin	Fuel	HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	PM_tpd	SOx_tpd	NH3_tpd	Fuel_gpy	Total_Acti	Total_Popi	Horsepower	Hours_hhpy
Statewide	2020	Portable Equipment - Rental Pump	Aggregated	750	Diesel	0.001794	0.002171	0.002583	0.01118	0.023133	5.610706	0.001106	0.001018	0.001106	5.18E-05	4.58E-05	182033.2	17316.5	18.24221	12018213	
Statewide	2020	Portable Equipment - Rental Pump	Aggregated	9999	Diesel	0.000241	0.000292	0.000348	0.004362	0.013482	2.407569	0.000278	0.000256	0.000278	2.23E-05	1.97E-05	78110.93	1082.281	1.140138	5157048	
Statewide	2020	TRU - Instate Genset TRU	Aggregated	50	Diesel	0.027954	0.033824	0.040254	0.569463	0.442499	12.37507	0.001878	0.001728	0.001878	0.000114	0.000102	7855.245	4732231	6061.363	1.49E+08	
Statewide	2020	TRU - Instate Trailer TRU	Aggregated	50	Diesel	0.558933	0.676309	0.804864	8.663635	6.199067	147.5055	0.118947	0.109431	0.118947	0.001356	0.001212	93631.12	37489893	28296.76	1.27E+09	
Statewide	2020	TRU - Instate Truck TRU	Aggregated	25	Diesel	0.085734	0.103738	0.123457	0.835698	1.006759	20.03944	0.041798	0.038454	0.041798	0.000184	0.000165	12720.31	10088376	7412.473	1.42E+08	
Statewide	2020	TRU - Instate Van TRU	Aggregated	25	Diesel	0.001985	0.002402	0.002858	0.019347	0.023307	0.463927	0.000968	0.00089	0.000968	4.26E-06	3.81E-06	294.4841	365899.7	268.8462	3293097	
Statewide	2020	TRU - Out-of-State Genset TRU	Aggregated	50	Diesel	0.017533	0.021215	0.025248	0.357944	0.278677	7.797867	0.00119	0.001095	0.00119	7.21E-05	6.41E-05	4949.804	2981908	24116.9	93930095	
Statewide	2020	TRU - Out-of-State Trailer TRU	Aggregated	50	Diesel	0.292687	0.354152	0.42147	5.010861	3.586091	90.94567	0.036661	0.033728	0.036661	0.000838	0.000747	57729.01	23114693	110162.4	7.86E+08	
Statewide	2020	TRU - Railcar TRU	Aggregated	50	Diesel	0.030297	0.036659	0.043628	0.518689	0.371207	9.414048	0.003795	0.003491	0.003795	8.67E-05	7.74E-05	5975.697	2392669	7420.738	81350730	

Unit Conversion Rates

Global Warming Potential (rates)

	<u>CO₂</u>	<u>CH₄</u>	<u>N₂O</u>	<u>units</u>
global warming potential	1	25	298	unitless

Source: Intergovernmental Panel on Climate Change. *Climate Change 2007—The Physical Science Basis*. Working Group I Contribution to the Fourth Assessment Report. Accessed May 2, 2019. Available:

<https://www.ipcc.ch/report/ar4/wg1/>

Source: Table B-1—Global Warming Potential Factors for Required Greenhouse Gases (100-Year Time Horizon) from 40 CFR 98 (page 722-723), as required by ARB's Regulation for the Mandatory Reporting of GHGs. Available:

http://www.theclimateregistry.org/wp-content/uploads/2014/11/2014.06.30_GRP_2.0_Updates_and_Clarifications1.pdf

Mass Conversion Rates

<u>value</u>	<u>units</u>	<u>source</u>
1,000	kg/MT	onlineconversion.com/weight_common.htm
1,000,000	g/MT	onlineconversion.com/weight_common.htm
2,000	lb/ton	onlineconversion.com/weight_common.htm
2,204.62	lb/MT	onlineconversion.com/weight_common.htm
453.59	g/lb	onlineconversion.com/weight_common.htm
1.1023	ton/MT	onlineconversion.com/weight_common.htm
2,204.62	lb/MT	onlineconversion.com/weight_common.htm
1,000,000	MT/MMT	million

Distance/Length

5,280	ft/mile	onlineconversion.com/length.htm
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Area

43,560	sq ft/acre	onlineconversion.com/area.htm
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Power

1.341022092	hp/kW	onlineconversion.com/power.htm
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