

Attachment F: 1990 vs. 2021 Greenhouse Gas Emissions by Sector and Subsector

Sector and Subsector	1990 GHG emissions (MT CO ₂ e) ¹	2019 GHG emissions (MT CO ₂ e)	2020 GHG emissions (MT CO ₂ e)	2021 GHG emissions (MT CO ₂ e)	Percent Change in 2021 from 1990 (%)	Percent of Total 2021 Emissions (%)
Total Transportation & Mobile Sources	331,840	315,081	238,523	211,403	-36.3%	58.8%
- On-Road Transportation	331,840	293,413	217,279	185,925	-44.0%	51.7%
- Airport Emissions	Not Included	2,192	1,664	2,641	n/a	0.7%
- Off-road Vehicles	Not Included	14,634	15,029	18,961	n/a	5.3%
- Caltrain Commuter Rail	Not Included	4,842	4,552	3,876	n/a	1.1%
Total Natural Gas (Methane) Use	194,000	153,509	134,365	135,697	-30.1%	37.8%
- Commercial Energy	Not calculated	66,987	53,515	55,676	n/a	15.5%
- Industrial Energy	Not calculated	14,373	11,961	12,176	n/a	3.4%
- Residential Energy	Not calculated	72,149	68,889	67,846	n/a	18.9%
Natural Gas (Methane) Fugitive Emissions	4,718	5,009	4,384	4,427	-6.2%	1.2%
Total Wastewater-Related Emissions	8,504	2,197	3,355	1,262	-85.2%	0.4%
- Wastewater Biosolid Treatment ²	n/a	812	0	0	n/a	0%
- Wastewater Treatment and Effluent	8,504	1,385	1,388	1,262	-85.2%	0.4%
Total Solid Waste	55,057	6,531	6,660	6,522	-88.2%	1.8%
- Composting	Not Included	731	1,623	1,256	n/a	0.3%
- Palo Alto Landfill Gas Flaring ³	Not Included	281	316	237	n/a	0.1%
- Palo Alto Landfill Gas Fugitive	24,325	n/a ⁴	n/a	n/a	n/a	n/a
- Landfill Waste	30,732	5,519	4,721	5,029	-83.6%	1.4%
Brown Power Supply (Electricity)	186,000	n/a	n/a	n/a	-100.0%	n/a
Total GHG Emissions (MT CO₂e)	780,119	482,237	385,320	359,312	-53.9%	100%

¹ Source: 2016 S/CAP Framework and 2016 Earth Day Report

² Includes biosolid composting, anaerobic digestion, and incineration

³ 2016 Earth Day Report labeled these emissions as biogenic

⁴ Not included because the landfill was closed