



Gavin Newsom, Governor  
Jared Blumenfeld, CalEPA Secretary  
Liane M. Randolph, Chair

Date: March 16, 2021

Mail-Out #MSC 21-2105

To: All Interested Parties

Subject: Revised Table 8-1 through Table 8-5 for Light Duty Emission Benefits Calculations

This Mail-Out provides updates to Emissions Benefits tables for the Carl Moyer Program Light Duty Vehicles Chapter (Attachment 1). As part of the Carl Moyer Memorial Air Quality Standards Attainment Program, the California Air Resources Board provides tables for districts to calculate emissions benefits from light duty projects. These calculations are used to determine the project grant amounts for eligible Voluntary Accelerated Vehicle Retirement (VAVR) light duty projects. As the current tables listed in the Carl Moyer guidelines only provide values up to Calendar Year (CY) 2020, new tables are needed for the following years.

This Mail-Out is being issued to allow air districts to calculate the emission reductions for Carl Moyer VAVR eligible projects for CY 2021 – 2023. The modifications update Table 8-1 through Table 8-5 with new Table 8-1A through Table 8-3A using Emission FACTor (EMFAC) 2017 Light Duty Vehicle for CY 2021 – 2023. These changes will allow districts to calculate the emission benefits for the next 3 years using the latest version of EMFAC.

## Contact

If you have questions regarding the new emission reductions tables, please contact Mr. Khoa Duong, Air Resources Engineer of the Incentives and Technology Advancement Branch, by email at [Khoa.Duong@arb.ca.gov](mailto:Khoa.Duong@arb.ca.gov).

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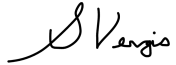
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Sincerely,



Sydney Vergis, PhD, Chief  
Mobile Source Control Division

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**Attachment 1**

**Table 8-1A  
 Retired Vehicle Emission Reductions, CY 2021  
 (lbs/3 yr)**

MY	ROG Total	NOx Exhaust	PM10 Exhaust
pre 1978	210.6	177.7	1.52
1978	128.0	89.9	1.51
1979	125.5	87.9	1.56
1980	124.7	84.3	1.49
1981	110.5	61.8	0.61
1982	119.9	62.1	0.63
1983	134.1	66.5	0.62
1984	136.3	72.5	0.66
1985	136.9	71.2	0.68
1986	159.9	77.7	0.72
1987	145.5	75.4	0.74
1988	145.4	73.7	0.77
1989	138.4	68.0	0.79
1990	128.2	61.8	0.79
1991	96.9	64.6	0.43
1992	97.4	68.1	0.45
1993	96.6	71.8	0.47
1994	96.1	72.3	0.49
1995	88.2	63.6	0.49
1996	79.9	65.2	0.10
1997	62.5	55.5	0.11
1998	36.1	44.2	0.11
1999	28.7	34.7	0.11
2000	21.4	23.5	0.11
2001	20.5	21.8	0.12
2002	19.6	21.5	0.12
2003	17.3	19.8	0.12

Source: EMFAC2017 V1.0.2

**Table 8-2A**  
**Retired Vehicle Emission Reductions, CY 2022**  
**(lbs/3 yr)**

MY	ROG Total	NOx Exhaust	PM10 Exhaust
pre 1979	126.0	86.6	1.45
1979	123.7	84.8	1.49
1980	123.4	81.6	1.42
1981	109.5	59.9	0.58
1982	119.0	60.0	0.60
1983	133.5	63.7	0.59
1984	135.6	69.2	0.63
1985	136.9	67.7	0.65
1986	162.1	74.3	0.69
1987	146.9	72.3	0.71
1988	147.4	71.0	0.74
1989	140.9	65.6	0.76
1990	130.0	59.6	0.76
1991	97.7	62.4	0.41
1992	98.6	65.9	0.43
1993	98.0	69.8	0.45
1994	97.8	70.4	0.47
1995	90.2	61.9	0.47
1996	81.6	63.3	0.10
1997	64.2	54.1	0.11
1998	37.1	43.4	0.11
1999	29.9	34.4	0.11
2000	22.8	23.7	0.11
2001	22.0	22.0	0.12
2002	21.1	21.8	0.12
2003	18.8	20.1	0.12

Source: EMFAC2017 V1.0.2

**Table 8-3A**  
**Retired Vehicle Emission Reductions, CY 2023**  
**(lbs/3 yr)**

MY	ROG Total	NOx Exhaust	PM10 Exhaust
pre 1980	121.9	81.9	1.43
1980	122.0	78.8	1.36
1981	108.6	57.9	0.56
1982	117.9	57.9	0.57
1983	132.7	61.0	0.57
1984	135.7	66.4	0.60
1985	136.9	64.5	0.62
1986	163.3	70.7	0.66
1987	148.3	69.0	0.68
1988	149.2	68.1	0.71
1989	143.1	63.2	0.73
1990	132.0	57.4	0.73
1991	98.2	60.1	0.40
1992	99.4	63.6	0.41
1993	99.2	67.6	0.43
1994	99.2	68.3	0.45
1995	91.8	60.1	0.46
1996	83.1	61.4	0.10
1997	65.7	52.7	0.11
1998	37.8	42.4	0.11
1999	31.0	34.0	0.11
2000	24.2	23.8	0.11
2001	23.4	22.2	0.12
2002	22.5	22.0	0.12
2003	20.3	20.3	0.12

Source: EMFAC2017 V1.0.2