

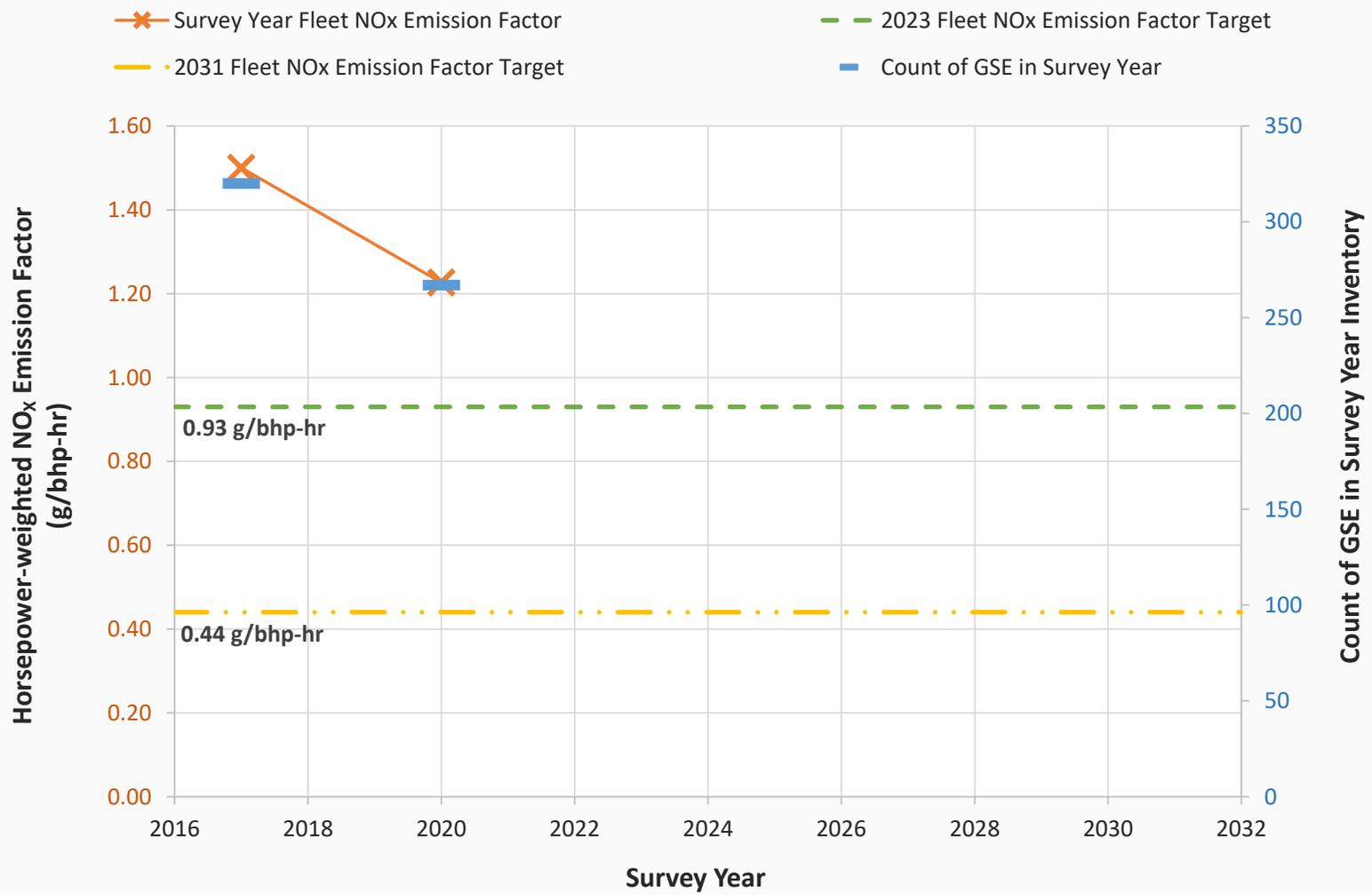
**Long Beach Airport**

<b>Survey Year</b>	<b>Count of Equipment <sup>[1]</sup></b>	<b>Percent Electric <sup>[1]</sup></b>	<i>OFFROAD Method</i> <b>NO<sub>x</sub> <sup>[2][3]</sup></b> <b>(short tons)</b>	<i>CARB Factors Method</i> <b>NO<sub>x</sub> <sup>[2][4][5]</sup></b> <b>(short tons)</b>	<i>MOU Fleet Performance</i> <b>NO<sub>x</sub> <sup>[1][3][6]</sup></b> <b>(g/bhp-hr)</b>
2017	320	48.4%	16.78	23.71	1.50
2018					
2019					
2020	267	40.8%	16.02	16.24	1.23
2021					
2022					
2023					
<b>2023</b>				<b>Performance Target: 0.93</b>	
2024					
2025					
2026					
2027					
2028					
2029					
2030					
2031					
<b>2031</b>				<b>Performance Target: 0.44</b>	
2032					

**Notes:**

- [1] Low-use and <25 horsepower non-electric equipment **excluded**
- [2] All reported equipment, including low-use and <25 hp equipment **included**
- [3] Emission factors back-calculated from OFFROAD2017 annual emissions outputs.
- [4] Emission factors provided by CARB July 2021 based on certified engine standards (LSI) and 2017 ORDAS model (ORD).
- [5] Reporting year 2020 emission calculations include factors to prorate JetBlue and FedEx Express equipment activity at LGB. JetBlue ceased operations at LGB in October 2020. Therefore only 9 months of activity is assumed for JetBlue equipment. FedEx Express cease operations in April 2020. Therefore only 3 month of activity is assumed for FedEx Express equipment.
- [6] Calculated as a fully-loaded horsepower-weighted factor consistent with the methodology employed throughout the development of the **SCAQMD and City of Long Beach 2019 MOU**.

# Long Beach Airport GSE Program Progress



## GSE Program Inventory by Fuel

LGB 2020 Calendar Year	Fleet Inventory Equipment Count <i>(including &lt;25hp non-electric and low-use equipment)</i>			Fleet Inventory Annual Emissions <i>(including &lt;25hp non-electric and low-use equipment)</i>						
	In-Use (any fuel)	Low-Use (any fuel)	Total (any fuel)	ROG (short tons)	CO (short tons)	NO <sub>x</sub> (short tons)	PM <sub>10</sub> (short tons)	PM <sub>2.5</sub> (short tons)	CO <sub>2e</sub> (metric tons)	SO <sub>x</sub> (short tons)
<b>Overall Fleet</b>	<b>279</b>	<b>26</b>	<b>305</b>	<b>3.2</b>	<b>43.4</b>	<b>16.2</b>	<b>0.455</b>	<b>0.401</b>	<b>2,551</b>	<b>0.0090</b>
<b>Overall Fleet Percent</b>	<b>91.5%</b>	<b>8.5%</b>	--	--	--	--	--	--	--	--
<b>Diesel</b>	92	13	105	0.8	6.0	7.2	0.327	0.301	961	0.0047
<i>Tier 4</i>	22	2	24	0.0	1.1	0.5	0.021	0.020	230	0.0011
<i>Tier 4i</i>	10	0	10	0.0	0.3	0.3	0.010	0.009	72	0.0003
<i>Tier 3</i>	16	0	16	0.1	1.2	1.3	0.073	0.067	237	0.0011
<i>Tier 2</i>	8	0	8	0.1	0.5	0.6	0.026	0.024	80	0.0004
<i>≤ Tier 1</i>	24	3	27	0.6	2.9	4.1	0.190	0.175	277	0.0013
<i>On-Road</i>	12	8	20	0.0	0.0	0.4	0.006	0.006	65	0.0003
<b>Gasoline</b>	63	13	76	1.9	32.4	7.0	0.111	0.084	1,397	0.0044
<i>Pre-2010</i>	33	11	44	1.7	27.1	6.7	0.054	0.041	689	0.0022
<i>2010 and Newer</i>	30	2	32	0.2	5.3	0.3	0.056	0.043	709	0.0022
<b>LPG</b>	15	0	15	0.5	5.0	2.0	0.017	0.017	193	0.0000
<i>Pre-2010</i>	12	0	12	0.5	4.5	2.0	0.014	0.014	165	0.0000
<i>2010 and Newer</i>	3	0	3	0.0	0.5	0.0	0.002	0.002	28	0.0000
<b>Electric</b>	109	0	109	0.0	0.0	0.0	0.000	0.000	0	0.0000