

# Town of Gardiner Local Government Greenhouse Gas Inventories 2022 & 2023

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By  
Climate Smart Gardiner Task Force  
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# What Are Greenhouse Gases?

## Gases

## Global Warming Potential

Carbon Dioxide (CO<sub>2</sub>)

1

Methane (CH<sub>4</sub>)

28 \*

Nitrous Oxide (N<sub>2</sub>O)

265

\*IPCC, 2014

84 (for 20 Years) CLCPA

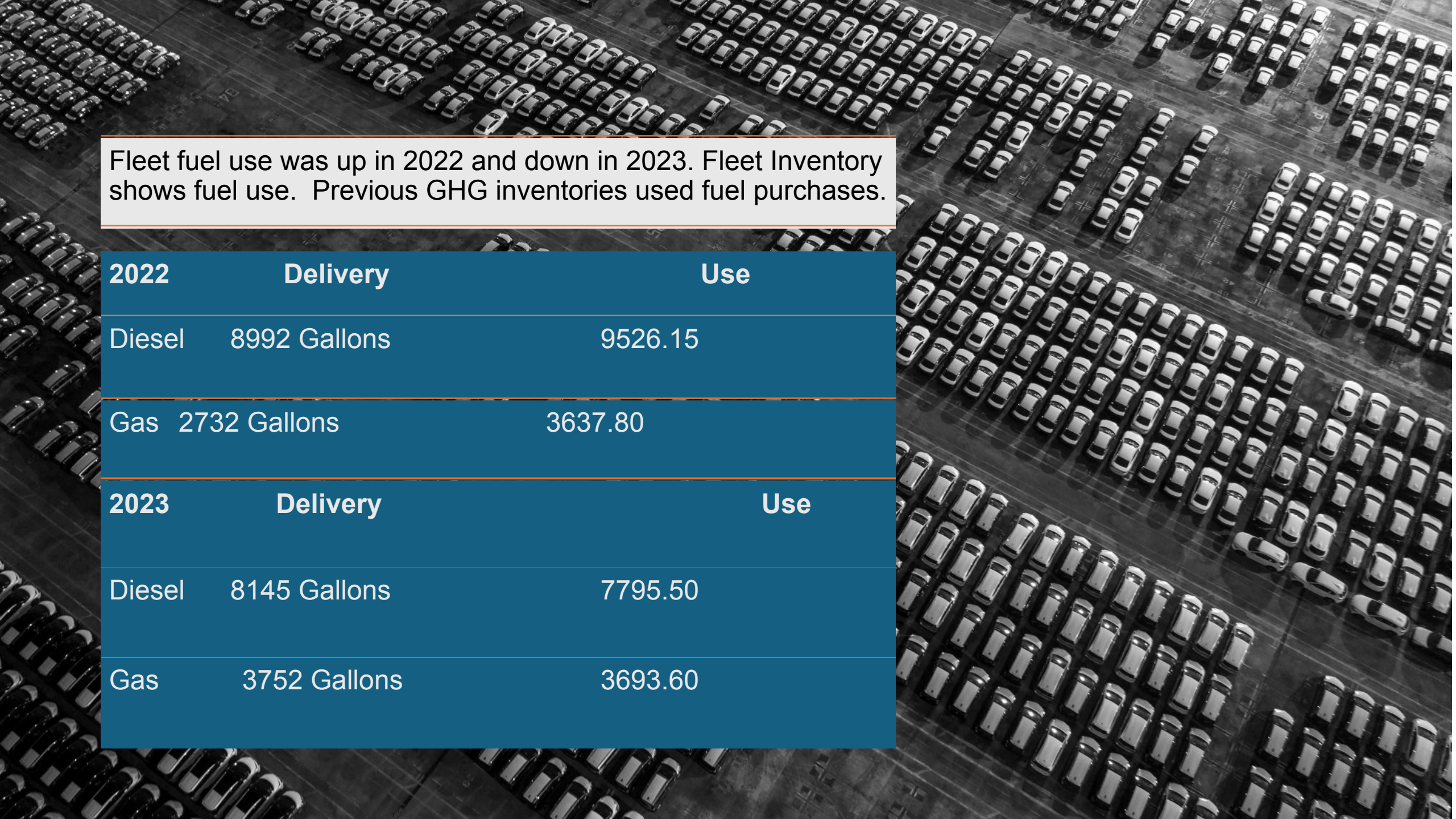
<b>Sector</b>	<b>Metric Tons CO2e 2022</b>	<b>Metric Tons CO2e 2023</b>
Buildings & Facilities	41.05	30.31
Streetlights	4.17	3.47
Vehicle Fleet	129.20	112.02
Solid Waste	.42	.30
Wastewater	1.28	1.01

<b>Year</b>	<b>Metric Tons CO2e</b>	<b>Average 2015 - 2017</b>
2015	195.6	
2016	150.4	
2017	167.8	171.3
2018	190.8	
2019	166.2	
2022	176.1	
2023	147.1	

<b>Sector</b>	<b>Electricity 2015 – 2017</b>	<b>Electricity 2022</b>	<b>Electricity 2023</b>
Buildings & Facilities	10.12 MT	10.31 MT	7.52 MT
Streetlights	5.36 MT	4.17 MT	3.47 MT
Vehicle Fleet	NA	NA	NA
Solid Waste	.63 MT	.42 MT	.30 MT
Wastewater	1.53 MT	1.28 MT	1.01 MT

Sector	Fuel Oil 2015 – 2017	Fuel Oil 2022	Fuel Oil 2023	Propane 2015 -2017	Propane 2022	Propane 2023
Buildings & Facilities	16.98 MT	20.67 MT	13.94 MT	9.04 MT	10.07 MT	8.85 MT

<b>Sector</b>	<b>Fleet Fuel 2015 -2017</b>	<b>Fleet Fuel 2022</b>	<b>Fleet Fuel 2023</b>
Vehicle Fleet	126.66 MT	129.20 MT	112.02 MT



Fleet fuel use was up in 2022 and down in 2023. Fleet Inventory shows fuel use. Previous GHG inventories used fuel purchases.

<b>2022</b>	<b>Delivery</b>	<b>Use</b>
Diesel	8992 Gallons	9526.15
Gas	2732 Gallons	3637.80
<b>2023</b>	<b>Delivery</b>	<b>Use</b>
Diesel	8145 Gallons	7795.50
Gas	3752 Gallons	3693.60

The emission factor used for the energy mix that produces electricity for the New York Upstate region for 2018 was 295.90. For 2022 it was 274.60 and in 2023 it was 241.7.

The EV Charging Station added 8,976 kWh.

Streetlight energy use was down in 2022 and again in 2023 - more LED streetlights.



Project	Date	Annual Fuel Savings	Emissions Reduction	Annual Cost Saving	Capital Expense Avoidance
LED Town Hall Lighting	2025	8,972 kWh	1.11 Metric Tons	\$1,794	\$20,000
LED Ornamental Lighting	2025	7,500 kWh	0.94 Metric Tons	\$1,500	\$15,000
Ground-Mounted Solar Array at Town Hall	2025	41,000 kWh	5.12 Metric Tons	\$8,200	
Replacement of Propane Heating System at Town Hall with Heat Pumps	2025 -2026	-15,000* kWh	-1.87* Metric Tons	(\$3,000)*	\$50,000
		up to 10,000 kWh from solar array	1.25 Metric Tons	\$2,000	
		1,600 Gallons (Propane)	9.04 Metric Tons	\$2,208	
Solar Arrays at Highway Garage, Sewage Facilities, and the Pole Barn	2025	18,600	2.32 Metric Tons	\$3,720	
Electric Vehicle Purchase and Charging Stations	2025	376 Gallons (Gas)	3.3 Metric Tons	\$1,504	\$45,000
		-2,871* kWh	-0.368* Metric Tons	(\$574)*	
<b>Totals</b>			19.6 to 20.85 Metric Tons	\$15,352 to \$17,352	\$130,000