

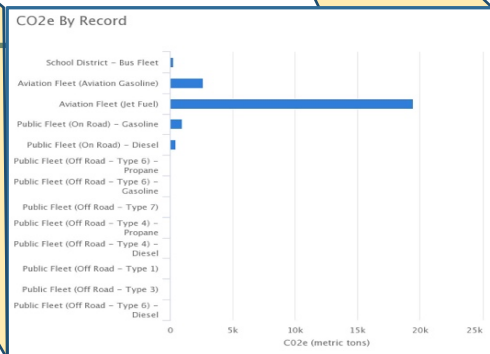
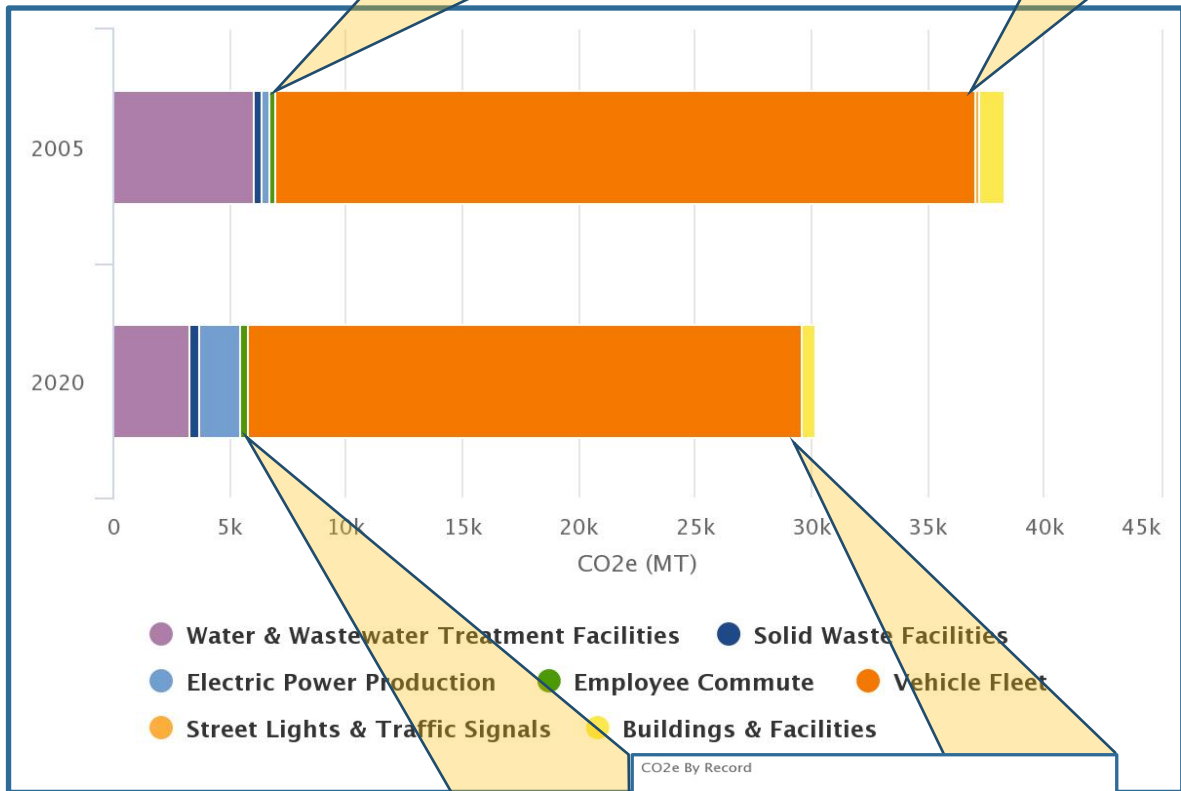
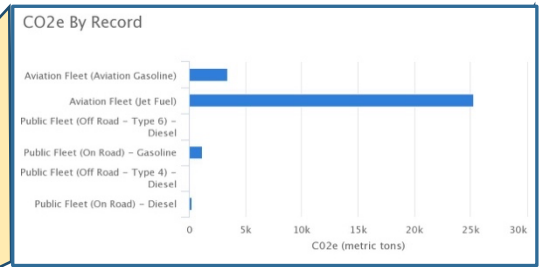
# LOCAL GOVERNMENT OPERATIONS (LGO) GREENHOUSE GAS INVENTORY SUMMARY

City of Manassas, Virginia

## EMISSIONS SUMMARY

The City of Manassas Local Government Operations (LGO) greenhouse gas (GHG) emissions decreased by 21.2% between 2005 and 2020.

- LGO GHG emissions were reduced from around 38,312 MTCO<sub>2e</sub> (metric tons of carbon dioxide equivalent) in 2005 to around 30,184 MTCO<sub>2e</sub> in 2020.
- In 2020, Manassas airport operations (19,449 MTCO<sub>2e</sub>) contributed not only the bulk of vehicle fleet emissions, but slightly more than 73% of *all* LGO GHG emissions. By comparison, aviation operations are equivalent to about 31% of all residential GHG emissions, but only about 2% more than all GHG emissions from solid waste (see Community GHG Inventory).



## INVENTORY BACKGROUND AND METHODOLOGY

Community GHG inventory reports typically focus on all (public and private sector) selected GHG emissions occurring within the jurisdictional boundary of the community (e.g., emissions from combustion of natural gas in furnaces throughout the community), as well as certain trans-boundary emission sources associated with community activities (e.g., emissions from electricity generation at a power plant located outside the community associated with electricity use occurring in the community). GHG removals may also occur, particularly in the land sector.

The LGO GHG inventory focuses specifically on local government-controlled sectors, including:

- Buildings and other facilities
- Streetlights and traffic signals
- Airport facilities and fuel services
- Municipal Vehicle fleet
- Power generation facilities

Other contributions to emissions through public sector water/wastewater and solid waste use was also estimated. GHG emissions are estimated from activity data (e.g. electricity and other energy use, travel by car and truck, and disposal of municipal solid waste) and average rates of emissions from the activities were input to ClearPath, an online greenhouse gas inventory tool that meets the Global Protocol for Community-Scale Greenhouse Gas Inventories (GPC ): An Accounting and Reporting Standard for Cities Version 1.1. Emissions of each type of greenhouse gas are converted into metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) to provide a standard. Detailed source information is captured in the Clearpath tool with associated comments for city officials to review.

LGO GHG inventory emissions should not be interpreted as complementary or additive to the Community GHG inventory emissions, rather they are a more refined assessment of GHG emissions resulting from the public sector and, therefore, a subset of the Community GHG inventory. There is, however, a subset of LGO GHG emissions that are unique to this inventory. They include all emissions that support activities or customers outside of Manassas' geographic boundaries. These include, 1) airport operations and 2) water and wastewater treatment. These public services are only captured in the LGO GHG inventory.

## SCHOOL DISTRICT EMISSIONS

Although not included in either the LGO or Community GHG inventory numbers, Manassas officials requested emissions data for the school district. Two sources of emissions (buildings and vehicle fleet – buses) were collected. Using the same methodology and GHG conversion/global warming potential factors, the following emissions were calculated.

Source	Energy Type	MTCO <sub>2e</sub>
School bldgs	Natural Gas	8.8
	Electricity	2605
Bus Fleet	Diesel	272
	<b>TOTAL</b>	<b>2885.8</b>

