Westford Clean Energy & Sustainability Committee

Green House Gas Inventory 2017

Net-Zero 2050 Roadmap Subcommittee
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Westford Green House Gas Inventory Overview

- **Purposes**
  - **Establish baseline of Westford's emissions to chart future reductions**
  - **Identify biggest contributors to prioritize efforts**
- **Tool**
  - **Metropolitan Area Planning Council (MAPC) Tool and Step-by-Step Guide: Community Greenhouse Gas Inventories**
  - **https://www.mapc.org/planning101/community-ghg-assessment/**
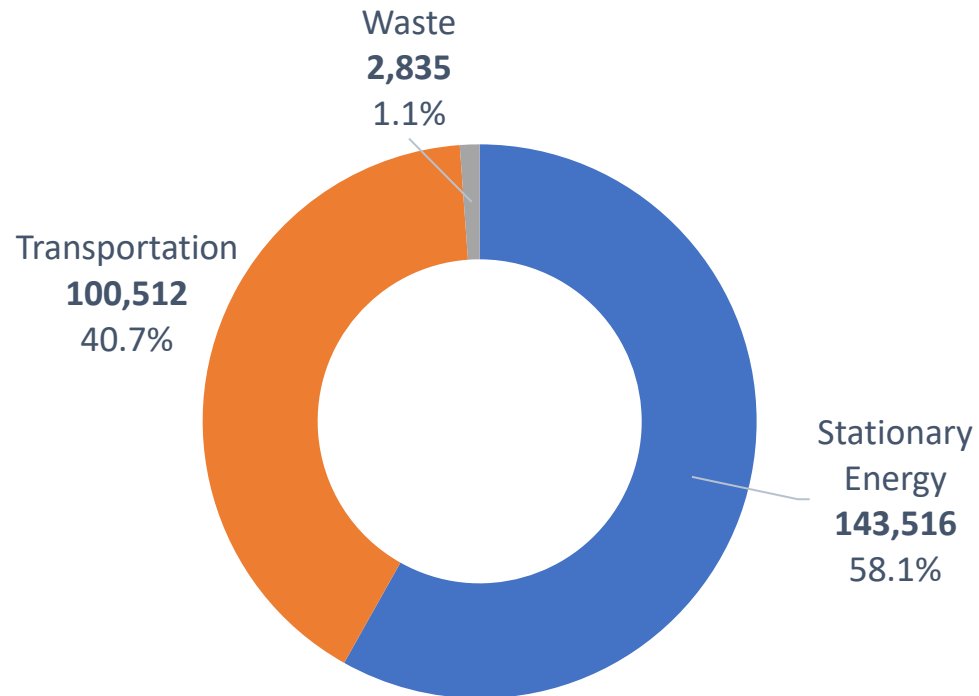- **GHG source categories**
  - **Stationary Energy (buildings, electricity, heating, residential, commercial, government)**
  - **Transportation (private, commercial, and municipal on-road vehicles)**
  - **Waste (transport, incineration, decomposition)**
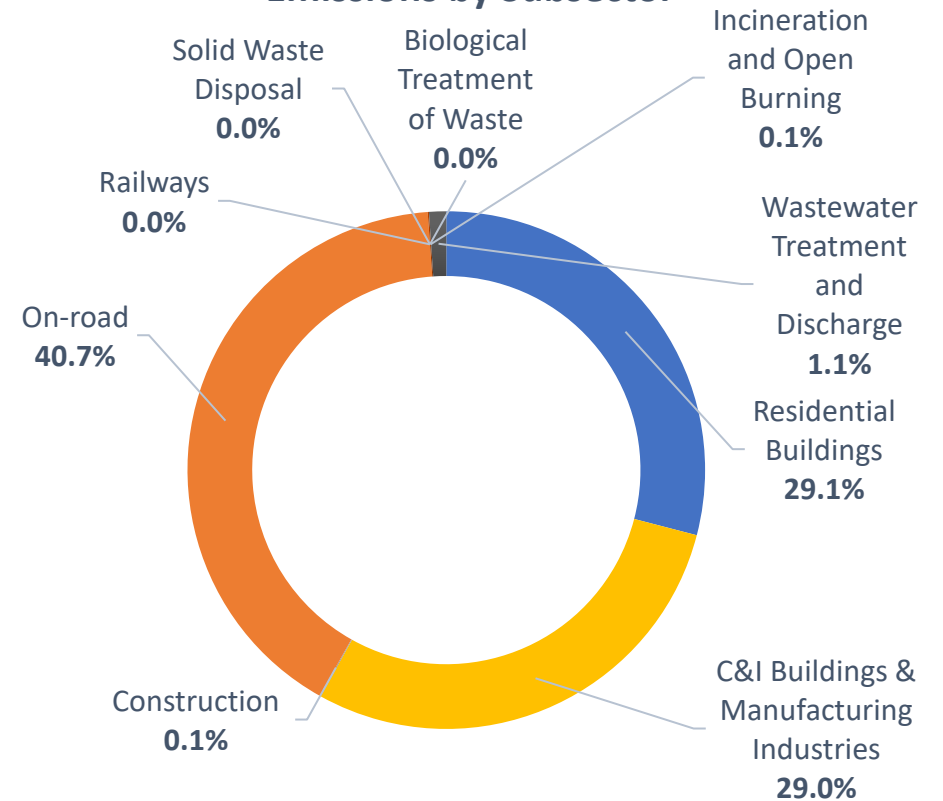
Westford GHG Data

- **Data sources**
  - **Stationary Energy**
    - **Electricity:** National Grid
    - **Natural gas:** National Grid
    - **Heating oil:** mass.gov, mapc.org
  - **Transportation**
    - **Vehicles:** mapc.org
  - **Waste**
    - **Residential:** mass.gov/orgs/massachusetts-department-of-environmental-protection
    - **Commercial:** not included yet
- **Most recent year data available (2017 recommended for comparison among towns)**
  - **Stationary:** 2017
  - **Transportation:** 2014 (for private passenger/commercial), 2017 (for municipal)
  - **Waste:** 2017 (2020 is available)

Westford Green House Gas Emissions 2017

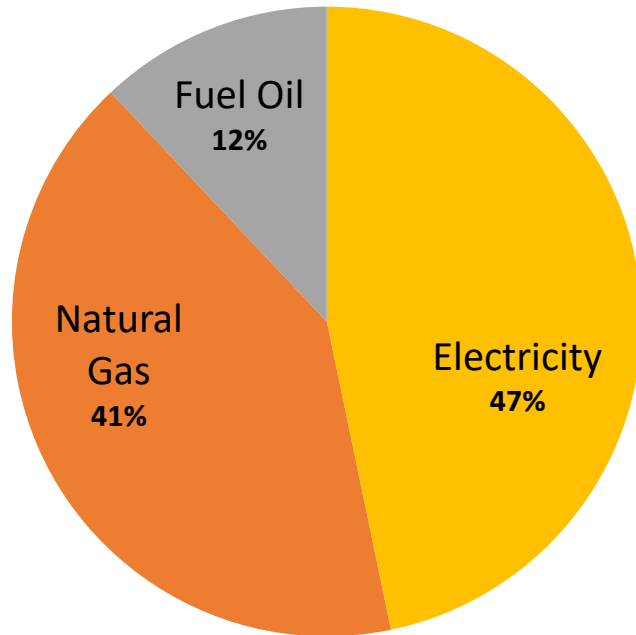**Community-wide Emissions (MT CO2e) by Sector**

Waste **2,835** 1.1%

Transportation **100,512** 40.7%

Stationary Energy **143,516** 58.1%

Percent of Total Community-wide Emissions by Subsector

Solid Waste Disposal **0.0%**

Biological Treatment of Waste **0.0%**

Incineration and Open Burning **0.1%**

Railways **0.0%**

Wastewater Treatment and Discharge **1.1%**

On-road **40.7%**

Residential Buildings **29.1%**

Construction **0.1%**

C&I Buildings & Manufacturing Industries **29.0%**

Westford GHG Building Emissions 2017

Westford GHG Emissions 2017

Percent of Total Community-Wide Emissions by Subsector
(with Municipal Emissions Disaggregated)

- Public Transportation (Buses, Trolleys, & Railways) **0.8%**
- Commercial Vehicles **1.0%**
- Passenger Vehicles **38.4%**
- Construction **0.1%**
- Municipal Buildings **2.4%**
- Municipal Vehicles **0.5%**
- Waste (Landfill, Biological Treatment, & Incineration & Open Burning) **0.1%**
- Wastewater Treatment and Discharge **1.1%**
- Residential Buildings **29.1%**
- C&I Buildings & Manufacturing Industries **26.6%**
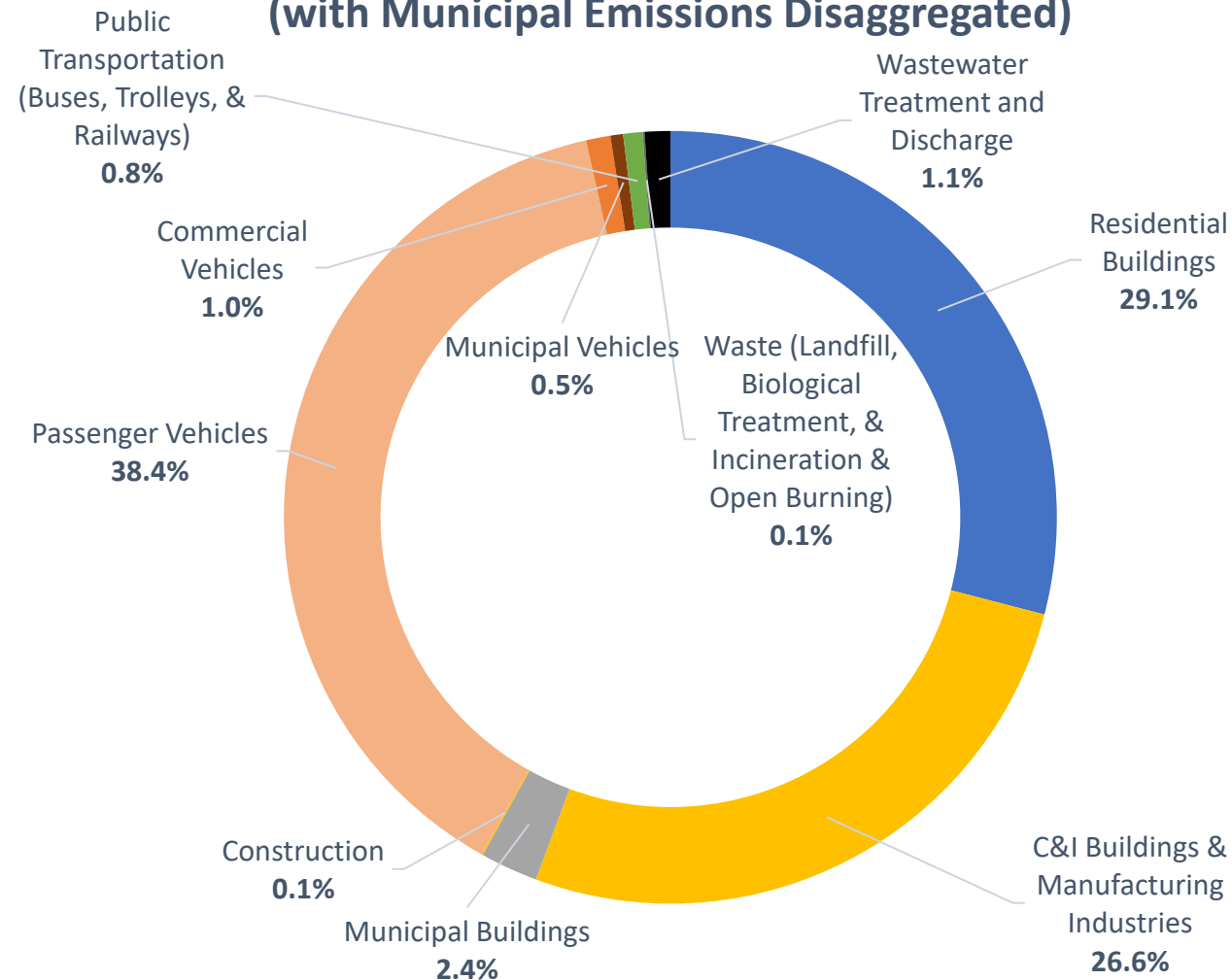
GHG Inventory Take-Aways

- **For Westford in 2017:**
  - **Passenger vehicles account for almost 40% of GHG emissions**
  - **Residential electricity and heating are almost 30%**
  - **Commercial and industrial is slightly more than 25%**
  - **Municipal emissions are about 3%**

- **Westford's total emissions in 2017 estimated at 247,000 MT CO2e**
- **Per capita is about 10 MT CO2e**