Village of Walden Community Green House Gas Inventory

Climate Smart Communities Program

January 2021

Naturally occurring gases dispersed in the atmosphere determine the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Overwhelming evidence shows that human activities are increasing the concentration of greenhouse gases and changing the global climate. The most significant contributor is the burning of fossil fuels for transportation, electricity generation and other purposes, which introduces large amounts of carbon dioxide and other greenhouse gases into the atmosphere. Generally, greenhouse gases include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), as well as hydrofluorocarbons (HFCs), Perfluorocarbons (PFC), and Sulfur hexafluoride (SF_6). Together, these six internationally recognized greenhouse gases accounted for 99.6 percent of national greenhouse gas emissions in 2010[1]. Collectively, these gases intensify the natural greenhouse effect, causing global average surface and lower atmospheric temperatures to rise. To respond to the climate emergency, New York State passed the Climate Leadership and Community Protection Act (The Climate Act) in June 2019.

The Village of Walden, through their participation in the Climate Smart Community Program, recognizes that that greenhouse gas (GHG) emissions from human activity are catalyzing profound climate change, the consequences of which pose substantial risks to the future health, wellbeing, and prosperity of our community. Furthermore, the Village has multiple opportunities to benefit by acting quickly to reduce community GHG emissions.

The Mid-Hudson Regional Greenhouse Gas Emissions Inventory (2012) is based upon GHG readings taken by New York State in 2010 indicates that the region's total emissions across all sectors in 2010 were approximately 26.5 million MTCO2e[2]. The single largest source of GHG emissions is the energy consumption for transportation, which is responsible for 45 percent of regional emissions or 11.9 million MTCO2e.

Leading emission sources are consistent at the local level as well with transportation leading the way. Local GHG emissions levels are reported in the Mid-Hudson Inventory as follows:

- ➢ **Village of Walden: 83,551 MTCO₂e**
- ➢ **Town of Montgomery: 269,844 MTCO₂e**
- ➢ **Orange County: 4,382,339 MTCO₂e**

---

[1] U.S. EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2010, April 2012

[2] MTCO2e stands for Metric Tons of Carbon Dioxide Equivalent

While the Village Walden's emissions are more than double surrounding Village's such as the Village of Maybrook and the Village of Montgomery when totals are evaluated on a per capita basis emissions totals are similar (see table below).

Municipality *(2010 population[3])*	Per Capita GHG Emissions (MTCO$_2$e)
Village of Walden *(6,978)*	11.97
Village of Washingtonville *(5,899)*	11.25
Village of Montgomery *(3,814)*	9.74
Village of Maybrook (2,958)	11.55
Village of Monroe *(8,320)*	10.93

Village of Walden GHG Emissions Breakdown by Sector

GHG Emission Sector	MTCO$_2$e
Residential	15,884
Commercial	9,604
Industrial	1,970
Mobile Energy (transportation)	49,303
Solid Waste	1,986
Wastewater Treatment	679
Industrial Processes	2,590
Agriculture	14
Energy Supply	1,520
TOTAL	**83,551**

As Walden continues with its climate-action planning the Village should focus on sectors with the highest emissions—mobile, residential and commercial energy use. This will involve promoting fuel efficient and alternative fuel vehicles, supporting alternative transportation infrastructure and public transit, and providing education and technical support to homeowners and businesses about energy efficiency and alternative energy opportunities.

Village contacts for the CSC Program:
Lynn Thompson, Village Trustee, CSC Coordinator
trusteelthompson@villageofwalden.org

John Revella, Village Manager
Manager@villageowalden.org

Community Greenhouse Gas Summary Prepared by:
Lanc & Tully Engineering and Surveying, PC

---

[3] 2010 Decennial U.S. Census. www.data.census.gov