



CITY OF HARRISONBURG PUBLIC WORKS

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TO: Eric Campbell, City Manager
FROM: Thomas Hartman, PE, PMP, LEED AP, Director of Public Works
DATE: October 12, 2021
RE: Report on the City of Harrisonburg Greenhouse Gas Emission Inventory

Summary:

The Public Works Department and its consultant, Dr. Sean McGinnis, will present findings from the recently completed City of Harrisonburg Greenhouse Gas Emissions Inventory.

Background:

The City of Harrisonburg, Virginia, greenhouse gas (GHG) emissions inventory was completed for the calendar years 2016 and 2019. The baseline year chosen for future comparisons was 2016. This report is part of Phase 2 of the City of Harrisonburg's Environmental Action Plan (EAP). The GHG emissions inventory was completed at both the Municipal and Community levels.

The scope of the Municipal inventory includes energy (electricity, natural gas, and fuel oil) for City buildings/facilities, electricity for street/traffic lights, diesel/gasoline fuels for City fleet vehicles/equipment and City Transit buses. This scope is focused on areas in which the City has some control of decisions that can affect GHG emissions.

The scope of the Community inventory includes energy (electricity and natural gas) split among the following major sectors: Residential, Commercial, Industrial, Municipal, Water & Sewer, and James Madison University (JMU). Community inventory also includes estimated fuel use (gasoline and diesel) for vehicle travel within the City boundaries based on Virginia Department of Transportation (VDOT) traffic counts. GHG emissions from Solid Waste, Water Treatment, and Waste Water Treatment are included in the Community Inventory as well. This scope is focused on the broader Community GHG emissions, which are only indirectly affected by City policies/initiatives and controlled more directly by the activities and behavior of the community as a whole and its members individually.

Total Municipal GHG emissions in 2019 for Harrisonburg were 16,600 metric tons, a 16% decrease from the 2016 baseline level. Buildings/facilities accounted for 43% of these emissions and the dominant fuel source for the City was electricity at 49%. School operations including electricity, natural gas, fuel oil, and diesel fuel (school buses) contribute 34% of all Municipal GHG emissions.

Total Community GHG emissions in 2019 for Harrisonburg were 530,000 metric tons, a 9% decrease from the 2016 baseline level. The Transportation (34%) and Commercial (31%) sectors each accounted for approximately 1/3 of Community GHG emissions and the dominant fuel source for the Community was electricity at 32%. The Municipal sector accounted for approximately 3% of the total Community GHG emissions.

This initial report can serve as the basis for further discussions and planning among key stakeholders in both the City and Community to develop action plans for GHG emissions reductions.

Key Issues:

N/A

Environmental Impact:

N/A

Fiscal Impact:

N/A

Prior Actions:

In 2020 City Council adopted Phase 1 of the Environmental Action Plan.

Alternatives:

N/A

Community Engagement:

The Environmental Action Plan has been shared with the community on multiple occasions and has subsequently been adopted by City Council.

Recommendation:

City staff recommends that City Council request the Environmental Performance Standards Advisory Committee review this Greenhouse Gas Emissions Inventory and utilize this document to further implement Phase 2 and Phase 3 of the Environmental Action Plan.

Attachments:

1. City of Harrisonburg Greenhouse Gas Emissions Inventory
2. Presentation
3. Greenhouse Gas Emissions Inventory Summary Flyer

Review: