

2025 Emissions Inventory Update

Goal:

COL staff completed a review of the annual emissions inventory process with the following goals:

- Evaluate what has been reported and is currently being reported
- Explore ways to increase the emissions inventory accuracy
- Review options for emissions reduction by direct reduction or sequestration
- Streamline the process in order to complete an accurate emissions inventory on a routine basis.

Findings:

The COL strives to continually improve the emissions inventory process to work toward the goal of carbon net zero by year 2050. Through this process, the following key findings were identified, and corresponding action items will address them.

- The current emissions inventory calculation method was not calculating the solid waste (landfill) emissions accurately
- Carbon sequestration was not being accounted for
- Fertilizer application totals were not being accounted for
- Overall emissions have been inflated for each previous year

Outcome:

With the identified findings, the following changes have or will be implemented:

- Started using the EPA Local GHG Inventory Tool, no longer using ICLEI
- Updated solid waste emissions calculation method to 40 CFR Part 98 Subpart HH - Trihydro Corporation completed this exercise with the intent of meeting the GHG Reporting Rule
- Updated inventory to include fertilizer use
- Continuing research on how to include an accurate carbon capture/sequestration calculation method
- Updated COL staff commute survey to incorporate into inventory

Summary:

- With the changes, our inventory accuracy continues to improve
- Most emissions stayed nearly the same, with the exception of the landfill emissions
 - Reported landfill emissions were reduced by 61%, however that is not an actual reduction in emissions, just a correction to what we're reporting.
- Benchmarking - our numbers are in line with similar sized cities if you remove the landfill as most cities do not own their landfill. (Bozeman, Helena, Boulder, etc)

MT CO2 Emissions by Source

Year	Buildings and Facilities	Vehicle Fleet	Employee Commute	Solid Waste Facilities	Water & Wastewater Treatment Facilities	Total
2018	1,454	820		56,179	270	58,723
2019	1,485	726	193	65,246	274	67,924
2020	4,259	1,098	187	97,809	276	103,629
2021	4,792	1,038	190	79,434	273	85,727
2022	7,322	1,015	158	71,121	270	79,886
2024/25	6,426	834	117	27,958	368	35,702