



THURSTON  
CLIMATE  
MITIGATION  
COLLABORATIVE

## MEMORANDUM

TO: Thurston Climate Mitigation Collaborative Community Advisory Workgroup

FROM: Thurston Climate Mitigation Collaborative Staff Team:  
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DATE: July 2, 2024

SUBJECT: 2022 Greenhouse Gas Emissions Inventory

### Requested Action

Review and provide feedback on the 2022 Inventory of Community-Wide Greenhouse Gas Emissions for Thurston County.

### Background

The Thurston Climate Mitigation Plan (TCMP) includes the targets of reducing greenhouse gas (GHG) emissions 45% by 2030 and 85% by 2050, relative to a 2015 baseline. To gauge accountability and track progress toward achieving these targets, the TCMP's monitoring framework recommends that the jurisdictions complete regular GHG emissions inventories, track key performance indicators, and provide qualitative updates on progress of individual actions in the plan.

A GHG emissions inventory uses local data to estimate the relative contribution of emissions from different sectors within a defined geographic boundary. Thurston County's emissions inventory uses a standard approach to quantifying emissions known as the *U.S. Community Protocol for Accounting and Reporting Greenhouse Gas Emissions*, which was developed by ICLEI—Local Governments for Sustainability USA (ICLEI). The Thurston Climate Action Team (TCAT) completed GHG inventories for Thurston County from 2010 to 2020, and Thurston Regional Planning Council (TRPC) completed the 2021 inventory. Thurston County contracted with ICLEI on behalf of the Thurston Climate Mitigation Collaborative (TCMC) to complete the 2022 GHG emissions inventory. ICLEI's scope of work also included a review of prior inventories for accuracy, completeness, and methodological consistency.

### Results Summary

The 2022 breakdown of emissions by sector is similar to in prior years, with Buildings and Energy accounting for 54% of total emissions and the Transportation Sector accounting for 36%. The other

sectors in the 2022 inventory are Agriculture (3%), Fugitive Emissions (3%), Solid Waste (3%), and Wastewater (1%).

The report estimates that that **Thurston County's total gross emissions increased by 6.6% between 2015 and 2022**. As described in the report, new data sources (maritime and railway emissions) accounted for 1.5% of emissions so **a more accurate estimate of the 2015 - 2022 emissions increase would be 5.1%**. This indicates that the abrupt drop in emissions observed from 2019 to 2020 was a temporary effect of reduced on-road transportation during the Covid-19 pandemic.

Key highlights of the 2015-2022 data comparison:

- On-road transportation emissions remained stable from 2015-2022.
- Electricity use increased by 15%, but electricity emissions decreased by 1.2% as a result of PSE's investments in cleaner generation.
- Natural gas use increased by 42% - the largest increase in emissions activities.
- Solid waste emissions increased by 96% - the second largest increase in emissions activities.
- Animal agriculture increased by 66% - the third largest increase in emissions activities.

The scope of the current project with ICLEI did not include a "Contribution Analysis," which is a new technique that separates out the impact of different drivers of change between multiple inventory years. This type of analysis could be a next step to investigate possible explanations for each of the observed changes in Thurston County's emissions.

### Forthcoming Commerce GHG Inventory

The WA Department of Commerce is currently contracting with Cascadia Consulting Group to complete another 2022 communitywide GHG inventory for each of the 11 largest counties in WA, including Thurston County. This project aims to support counties in developing their Comprehensive Plan Climate Change Elements; and to provide a consistent, comparable, and replicable GHG inventory methodology across WA counties. Cascadia shared preliminary inventory data with Thurston County on June 10 and plans to deliver a final report by the end of June. Because this inventory utilizes some different data sets in alignment with other WA counties, its results differ from the TCMC/ICLEI 2022 inventory reported here.

Commerce recommends that counties use the 2022 inventory as a baseline for setting and achieving GHG reduction targets in the Comprehensive Plan. The project will also deliver a "wedge analysis" to projects future emissions scenarios that incorporate federal, state, and regional policies; and a scenario planning tool to help counties develop local strategies to meet GHG reduction targets.

### Next Steps

Once Thurston County and the TCMC cities have each drafted GHG reduction targets and timelines for the Comprehensive Plan Climate Change Element, the Staff Team will consider how to best align these goals and targets with future updates to the TCMP. The Staff Team will present recommendations for TCMP targets and GHG inventory methods at future Executive Committee and CAW meetings.

As noted, another potential next step for the TCMC is to conduct a Contribution Analysis to better understand drivers of change in Thurston County's emissions over time.

ICLEI recommends that communities conduct emissions inventories every three to five years. The TCMC Regional Guidance states that “after the 2022 inventory, future inventories will be conducted at least every three years.” Considering the staff and budget resources required to conduct an inventory, the Staff Team recommends a three-year interval for future communitywide GHG inventories.

### Attachment

- Final Report - 2022 Greenhouse Gas Inventory