

TUMWATER CITY COUNCIL WORKSESSION
MINUTES OF VIRTUAL MEETING
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CONVENE: 6:03 p.m.

PRESENT: Mayor Debbie Sullivan and Councilmembers Peter Agabi, Michael Althausen, Joan Cathey, Leatta Dahlhoff, Angela Jefferson, Charlie Schneider, and Eileen Swarthout.

Staff: City Administrator John Doan and Sustainability Coordinator Alyssa Jones Wood.

GREENHOUSE GAS EMISSIONS INVENTORY UPDATE: Coordinator Jones Wood introduced Assistant Planner Casey Mauck and Senior Planner Michael Ambrogi with Thurston Regional Planning Council. They updated the Council on the results of the 2021 Greenhouse Gas Inventory.

Ms. Mauck reported the inventory is part of the ongoing monitoring program for Thurston Climate Mitigation Plan implementation. The plan was adopted in 2020 through a joint effort by the cities of Lacey, Olympia, and Tumwater and Thurston County. The plan established emission reduction targets using a baseline year of 2015. The targets reduce community-wide emissions 45% below 2015 levels by 2030 and 85% below 2015 levels by 2050. The plan includes a variety of strategies and actions to accomplish the targets.

The inventory is essential to climate work by identifying the source of greenhouse gas emissions and informing the direction of future work. Part of the emissions inventory is to identify the largest sources of greenhouse gas emissions, how sources have changed over time, monitoring progress and whether partners are on track to attain goals, actions that could have the greatest affect, and where work should be directed.

The methodology for developing the inventory was based on the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions developed by International Council for Local Environmental Initiatives (ICLEI). The inventory did not include all sources of greenhouse gas emissions in the community. The inventory included activities inside the county and some activities located outside the county (electricity, natural gas production and distribution, and transportation and processing of solid waste by Thurston County residents). Several reasons for not including some emissions in the inventory were the lack of a widely accepted methodology to convert activity data into emissions or because of the lack of reliable data quantifying an activity. The inventory is not consumption-based. Goods and services used by Thurston County residents but produced outside the county were not included.

Inventory emissions since 2020 have steadily increased with a drop experienced in 2020. The region has experienced a 4% decrease in emissions between 2015 and 2021. Emissions per person have decreased

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by 13% since 2015.

The inventory is organized by five sectors representing buildings and energy (emissions from heating and electricity), transportation (emissions from both on-road and off-road vehicles), agriculture (emissions from livestock and fertilizing), water and waste (emissions from solid waste management, composting, wastewater treatment plant, and septic systems), and hydrofluorocarbons (industrial chemicals used for cooling, refrigeration, and fire suppression). The 2021 inventory reflects emissions from each sector with buildings and energy the highest at 54.3% followed by transportation at 35%, hydrofluorocarbons at 4.6%, water and waste at 3.1% and agriculture at 2.4%. Although agriculture was the lowest source of emissions, agriculture, forest, and prairies as a sector have the potential for a large impact on emissions. The sectors comprising the bulk of the inventory are experiencing decreases while smaller sectors are experiencing an increase in emissions since 2015. Water and waste has the higher percentage increase of any sector; however the sector represents only 3% of total emissions.

Ms. Mauck reviewed inventory results for each sector and factors included within each sector. Results specific to Tumwater include a higher rate of telework than in Thurston County and the drive alone to work rate is slightly lower than the county.

Another component of the Thurston County Climate Mitigation Plan is the monitoring program comprised of a series of webpages within the Thurston Climate Action Dashboard at [TRPC.org/climate](https://trpc.org/climate). The inventory is included as well as the Annual Climate Mitigation Progress Report and activity data.

As a member of the Thurston Climate Action Steering Committee, Councilmember Swarthout addressed questions on the purpose of the committee to provide coordinated leadership to build local capacity for climate mitigation actions. The Steering Committee is tasked with a series of actions in support of implementing actions identified in the Thurston Climate Mitigation Plan. TRPC produced a white paper for the Steering Committee that speaks to the responsible parties and how to enact actions within the plan. She suggested scheduling a Council worksession on the white paper.

Councilmember Althaus commented that in the last several years, the Legislature passed a requirement to increase efficiency of buildings. In terms of the latitude of the increases since 2015, he questioned whether it is possible to review the effect of new policies enacted locally or passed by the state to reduce emissions. He noted the changes in regulations pertaining to the use of natural gas in buildings and the possibility of measuring the effectiveness of those different policies. Ms. Mauck responded that in terms of the inventory, those types of measurements are

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difficult to isolate. It is not possible to quantify the impact of a specific legislative bill on emissions. However, activity data sources provide a source of information to measure natural gas usage or the number of new natural gas hook-ups, which would identify some of the impacts of those actions. The monitoring program is considering completion of an attribution analysis in conjunction with the inventory to provide more input, such as the impacts caused by weather or other types of events on emissions.

Councilmember Agabi commented that the transportation sector generates the highest amount of emissions. He asserted that I-5 from Lewis County to Joint Base Lewis McChord generates a substantial amount of transportation emissions. He questioned how the region plans to work with the federal government to mitigate transportation emissions caused by Interstate 5. Ms. Mauck explained that modeling for the inventory utilized a specific rate of pass through traffic and excluded that amount from the inventory, as pass through traffic along I-5 was not considered as an activity generating emissions by Thurston County residents.

Councilmember Agabi noted the increased rate of congestion and idling vehicles along I-5 from Wednesday through Sundays that contribute to a higher level of emissions in the county. Mr. Ambrogi replied that the challenge with the greenhouse gas emissions inventory is using vehicle miles traveled as activity data for estimating emissions. It does not account for the time a vehicle spends idling. The information utilizes average rates in terms of emissions produced by a vehicle based on miles driven. There is much work underway by the community to reduce congestion specifically; however, the challenge of attributing local action to the inventory has been difficult.

Councilmember Jefferson asked whether Thurston County has been compared against other counties. She asked about the possibility of displaying inventory results for each jurisdiction. Ms. Mauck advised of the difficulty of comparing emissions inventory between counties unless the sources and methodology are identical. TRPC staff encountered difficulty comparing 2015 inventory results against 2021 inventory results until staff reproduced the 2015 inventory results using updated methodology. In terms of breakdown by jurisdiction, it presents another challenge as most of the data in the inventory is produced at a countywide scale and not by each jurisdiction.

Councilmember Cathey asked whether the inventory includes a definition for industry within Thurston County. Mr. Ambrogi responded that the inventory is based on Puget Sound Energy (PSE) definitions. TRPC annually requests data from PSE on electricity and natural gas use. PSE provides the information in three categories of residential, commercial, and industrial. Staff is unsure as to how PSE differentiates between commercial

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and industrial.

Councilmember Cathey remarked that industrial uses are large emitters of greenhouse gas emissions in Thurston County and continue to increase as the county continues to develop.

Ms. Mauck added that one of the steps of inventorying is seeking information from either a state or federal database that track industries that fall within a specific threshold of greenhouse gas emissions. Those companies are required to complete an inventory and report emissions each year. Thurston County does not have any industrial uses that meet the threshold for reporting.

Councilmember Cathey inquired about the specific types of uses under the definition of off-road vehicles. Mr. Ambrogi said the definition applies to diesel equipment, such as tractors/backhoes, construction equipment, and lawn mowers, etc. The inventory estimates emissions from off-road vehicles based on a national model of different variables specific to the community. Although the sector is a smaller source of emissions, most of the equipment is diesel. The sector has a larger impact on the region's overall transportation gas emissions. Councilmember Cathey asked how garbage and other large trucks are factored within the inventory. Mr. Ambrogi said the inventory calculation is based on vehicle miles traveled for passenger vehicles and trucks and heavy-duty equipment, such as garbage trucks and transit buses.

Councilmember Cathey asked about any ongoing efforts for connecting the inventory with the outcomes to identify how it affecting the environment and climate change through the loss of land, trees, and vegetation because of new construction. She asked whether the Steering Committee is using the inventory as a connection to how emissions are affecting the region's environment and climate. She struggles as to how to incorporate the information at the City level to improve climate.

Ms. Mauck explained that a resource for translating regional emissions into the lived experience of community members was addressed in the 2018 Climate Adaptation Plan produced by TRPC and its partners. The plan includes an assessment of ways to change systems to improve outcomes. However, the plan was a one-time point in time assessment. Another resource interacting with the Greenhouse Gas Inventory report is the Annual Climate Progress Report. However, the report does not address emissions as to lived experiences of community members, but it does combine the inventory and the work completed by each jurisdiction to tie data and steps each jurisdiction is pursuing to address emissions. Regional and jurisdictional staff uses the information as one of several resources to develop work programs, prioritize actions, and direct investments.

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Mr. Ambrogi said that when the Thurston Climate Mitigation Plan was drafted, some work was completed using the inventory, which had previously been completed by Thurston Climate Action Team (TCAT). Some scenarios were explored using inventory data to model actions jurisdictions would need to complete to meet greenhouse gas emissions goals.

Councilmember Dahlhoff asked about the status of carbon sequestration data as it has an impact on the City through the City's Urban Forestry Management Plan and ongoing work the City is pursuing. She asked whether TRPC utilizes data from the Department of Commerce and Department of Ecology's greenhouse gas emission calculator for state agencies and state buildings. Ms. Mauck said the only data utilized are PSE data and specific emission factors and census data for other home heating fuels.

Mr. Ambrogi added that the inventory was developed using the U.S. Community Protocol developed by ICLEI to account for greenhouse gas emissions and the methodologies to use. At this time, ICLEI lacks a definitive answer as to how land cover change translates to greenhouse gas emissions. However, ICLEI is developing some tools. The greatest need for the inventory is factoring emissions due to land cover change, trees, and forests. The inventory used some of the new ICLEI tools, which is reflected as supplemental data. The LEARN tool is based on estimated emissions due to land cover change compared to a baseline. Staff estimated emissions. Caveats to consider when using the tools for analysis is how the tool is based on land cover data from satellites at a very coarse resolution with data only available every three to five years making it difficult to track year-to-year land cover change. A similar issue exists for agriculture as well. Staff used data on acres of fertilized farmland to estimate greenhouse gas emissions. Many variables include how the land is managed by the property owner, which can affect the amount of emissions, which is not accounted for in the inventory. Staff is hopeful that better tools will be developed over time to produce future inventories.

Councilmember Dahlhoff said the City recently inventoried the City as part of the Urban Forestry Management Plan. She asked about the possibility of using the City's data and the tool to obtain accurate data for Tumwater. Mr. Ambrogi said urban areas have been the biggest challenge as the data is too coarse and does not capture any level of granularity within the cities. Another challenge specific to land use is the necessity of collecting data using similar methodology over multiple years to produce inventories.

Ms. Mauck noted that the tool developed by ICLEI cannot utilize local land use data.

Councilmember Cathey inquired as to whether TRPC can identify the

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amount of land in Thurston County that is used for agriculture, forestry, industry, and housing. Mr. Ambrogi said TRPC has many robust data programs. TRPC tracks much of the data and publishes the information on its website. TRPC produces data on population, building permits, and land cover change over time. He encouraged the Council to visit the Climate Action Dashboard as the dashboard includes links to data.

City Administrator Doan commented on the importance of land cover change and the impact of conversion from agriculture or forestry to urban uses. The Growth Management Act protects timberland and agriculture lands located outside of urban growth areas. The City Habitat Conservation Plan (HCP) requires preservation of prairie land to protect the pocket gopher. Although less sequestration occurs on prairie land than on forested land, some sequestration occurs as the City's HCP calls for the preservation of 1,050 acres of permanently preserved gopher prairie land that would permanently provide sequestration. The inventory is helpful to the City as it provides another resource to assist the City in pursuing actions to reduce greenhouse gas emissions.

**MAYOR/CITY
ADMINISTRATOR'S
REPORT:**

City Administrator Doan asked the Council to consider touring a YMCA facility in Shelton as part of the ongoing conversation for an aquatic facility. He recommended touring the facility on March 28, 2023 in lieu of the Council worksession. Several Councilmembers indicated they would be unavailable to participate. City Administrator Doan offered to follow-up on a different date to accommodate all schedules.

ADJOURNMENT: **With there being no further business, Mayor Sullivan adjourned the meeting at 7:01 p.m.**

Prepared by Valerie L. Gow, Recording Secretary/President
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