CITY COUNCIL STAFF REPORT

CITY OF CHULA VISTA

August 23, 2022

ITEM TITLE

Presentation of 2020 Community and Municipal Greenhouse Gas Emissions Inventories

Report Number: 22-0188

Location: No specific geographic location

Department: Economic Development

Environmental Notice: The activity is not a "Project" as defined under Section 15378 of the California Environmental Quality Act State Guidelines; therefore, pursuant to State Guidelines Section 15060(c)(3) no environmental review is required.

Recommended Action

Hear the presentation and accept the report.

SUMMARY

As part of the City's ongoing greenhouse gas (GHG) monitoring effort and to comply with the 2017 Climate Action Plan (CAP), staff completed the 2020 Municipal and Community GHG Emissions Inventories report. The report is structured into two sections, including 1) Community Inventory, which includes GHG emissions created within City boundaries from homes, businesses, vehicles, water usage and the generation of waste; and 2) Municipal Inventory, which covers GHG emissions created by City operations, from City operated buildings, street and traffic lights, vehicle fleet and waste generated from City facilities. Because much of City operations take place within City boundaries, many of the emissions in the Municipal Inventory are also included in the Community Inventory.

The 2020 GHG Inventory report indicates that the community GHG emissions have decreased by seventeen percent (17%) compared to the 2005 baseline (the farthest back year with comparable data). These reductions are even more significant when considering the twenty-five percent (25%) increase in population over this same time period. The report indicates a thirty three percent (33%) decrease in per capita emission levels compared to the 2005 levels. The municipal report indicates approximately a ten percent (10%) increase in emissions from municipal sources (i.e., operations, facilities and vehicle fleet) compared to the most recent previous GHG inventory in 2018 levels but still sixty seven percent (67%) below the 1990 baseline (the farthest back year with comparable data). Staff will continue implementation of the 2017 CAP and is working to incorporate the Climate Change Working Group (CCWG) recommendations that were approved by City Council in April of 2021 into the next Climate Action Plan Update.

ENVIRONMENTAL REVIEW

The Director of Development Services has reviewed the proposed activity for compliance with the California Environmental Quality Act (CEQA) and has determined that the activity is not a "Project" as defined under Section 15378 of the State CEQA Guidelines because it will not result in a physical change in the environment; therefore, pursuant to Section 15060(c)(3) of the State CEQA Guidelines, the activity is not subject to CEQA. Thus, no environmental review is required.

BOARD/COMMISSION/COMMITTEE RECOMMENDATION

City Staff presented the 2020 Community and Municipal GHG inventories to the Sustainability Commission (SSC) on June 13th, 2022. The SSC provided feedback and comments that were incorporated into the reports and unanimously recommended that City Council accept the report.

DISCUSSION

The City of Chula Vista continues to be a nationally recognized leader in fighting climate change in our community. The 2017 CAP includes 11 climate "mitigation strategies," each with multiple individual actions designed to reduce GHG emissions. Together with previous climate action planning documents, these actions guide the ongoing City staff efforts. In addition to addressing climate change, these climate action measures offer numerous community co-benefits such as utility savings, better air quality, reduced traffic congestion, local economic development and improved quality of life. The importance of climate action was reinforced by City Council declaring a climate emergency in March of 2022, stating, "The City of Chula Vista acknowledges that a global climate crisis exists and poses a serious, urgent and pressing threat to the well-being of Chula Vista, its inhabitants, economy and environment, and therefore there is need for immediate actions to address the global climate crisis."

<u>2020 GHG Inventory Report Methodology:</u>

Like the previous 2016 and 2018 GHG Emissions Inventories, the Municipal GHG Inventory was created by City staff using the Local Government Operations Protocol (LGOP, Version 1.1) and the ClearPath tool. The ClearPath tool is provided to ICLEI members and helps local jurisdictions create GHG inventories by providing GHG calculations, default assumptions, and record keeping. The Community GHG Emissions Inventory was created by the University of San Diego's Energy Policy Initiatives Center (EPIC) who was contracted by SANDAG. EPIC utilized SANDAG's Regional Climate Action Planning (ReCAP) Framework. The

ReCAP framework is a tool created by SANDAG through collaboration with local agency staff and leading climate planning experts to prepare a planning framework that identifies best practices for preparing Climate Action Plans (CAP) and monitoring their implementation. ReCAP establishes a technical framework for regionally consistent climate action planning that also preserves local policy flexibility for the unique needs and circumstances of each local jurisdiction. Additional information on ReCAP is available on the SANDAG website (www.sandag.org/climate).

SANDAG is still preparing the 2020 Snapshot and monitoring information and they will be added to the City's climate webpage at www.chulavistaca.gov/clean and will be available from SANDAG at https://climatedata.sandag.org/. A full review of the inventory methodology can be found in the Technical Appendices at www.sandag.org/index.asp?classid=17&subclassid=46&projectid=565&fuseaction=projects.detail. Many of the GHG inventory methodologies remained the same and continued to use the U.S. Community Protocol (Version 1.0). In the protocol, the emissions from five main parameters – building energy consumption, transportation, water (embedded energy), wastewater and solid waste are evaluated. These parameters are based solely on "end use activities" and their emissions are expressed as CO2 equivalent (or CO2e), which allows greenhouse gases of different strengths to be added together. It should be noted, there was an error found in the 2018 inventory for the amount of waste that was disposed in the landfill, that total was changed from 265,974 to the 209,700 tons but did not have an effect on the GHG emissions reported form that sector. Due to the unprecedented impacts of Covid-19 on transportation, SANDAG was not able to provide a Vehicle Miles Traveled (VMT) estimate. To get this data EPIC created an estimate based for internal-internal (I-I) VMT that was estimated based on 2016 I-I VMT and 2016-2020 VMT rate of increase on Chula Vista local roads from CalTrans Highway Performance Monitoring (HPMS) data. 2020 Chula Vista internal-external/external-internal (I-E/E-I) VMT is estimated based on 2016 I-E/E-I VMT and 2016-2020 San Diego regional VMT rate of increase from CalTrans Performance Measure System (PeMS). 2016 Chula Vista I-I and I-E/E-I VMT are from SANDAG ABM2+ version 14.2.2. Because of this, there is no transportation related emission reported in SANDAG's Climate Action Data Portal.

Community Inventory

Community GHG emissions in 2020 totaled 1,098,000 metric tons of carbon dioxide equivalent (MT CO2e). This is a reduction of four percent (4%) below the 2018 inventory and seventeen percent (17%) below the 2005 baseline. The City just met its 2020 GHG reduction goal of a fifteen percent (15%) reduction below 2005 but needs nearly 500,000 MT C02e additional reductions to meet its 2030 science-based reduction goal. These emissions reductions are even more significant after considering the City experienced a twenty-five percent (25%) increase in population during the same time period. The report indicates a thirty-three percent (33%) decrease in per capita emission levels compared to the 2005 baseline levels. The three largest sources of emissions were from the transportation sector which contributed 581,000 MT CO2e or fifty-three percent (53%) of emissions, while the electricity sector contributed 260,000 MT CO2e or twenty-four percent (24%) and natural gas sector contributed 191,000 MT CO2e or seventeen percent (17%) of emissions, see Figure 1 on the next page. The electricity sector had the most emission growth from the previous inventory as it rose seventeen percent (17%) above its 2018 emissions, however, it remains ten percent (10%) below its 2005 baseline. The increase in electricity emissions appears to come largely from SDG&E's change in renewable and clean electricity because community-wide electricity use was down by 1% but emissions increased. In 2018, forty-three percent (43%) of SDG&E's electricity came from renewable sources but that dropped to thirty-one (31%) in 2020. With the full launch of San Diego Community Power

(SDCP) the amount of renewable energy should increase to fifty (50%) plus an additional five percent (5%) or greenhouse gas free electricity. The natural gas sector is still the only sector that is above its 2005 baseline. More detailed information can be found on Attachment "1." Staff expect transportation emissions to increase in future years as Covid-19 related telecommuting options are phased out or reduced over time, although the increase in electric vehicle adoption will provide some emission reductions. While there is good overall progress, increased reductions will need to be made to meet our 2030 science-based reduction goal of fifty seven percent (57%) below 2018.

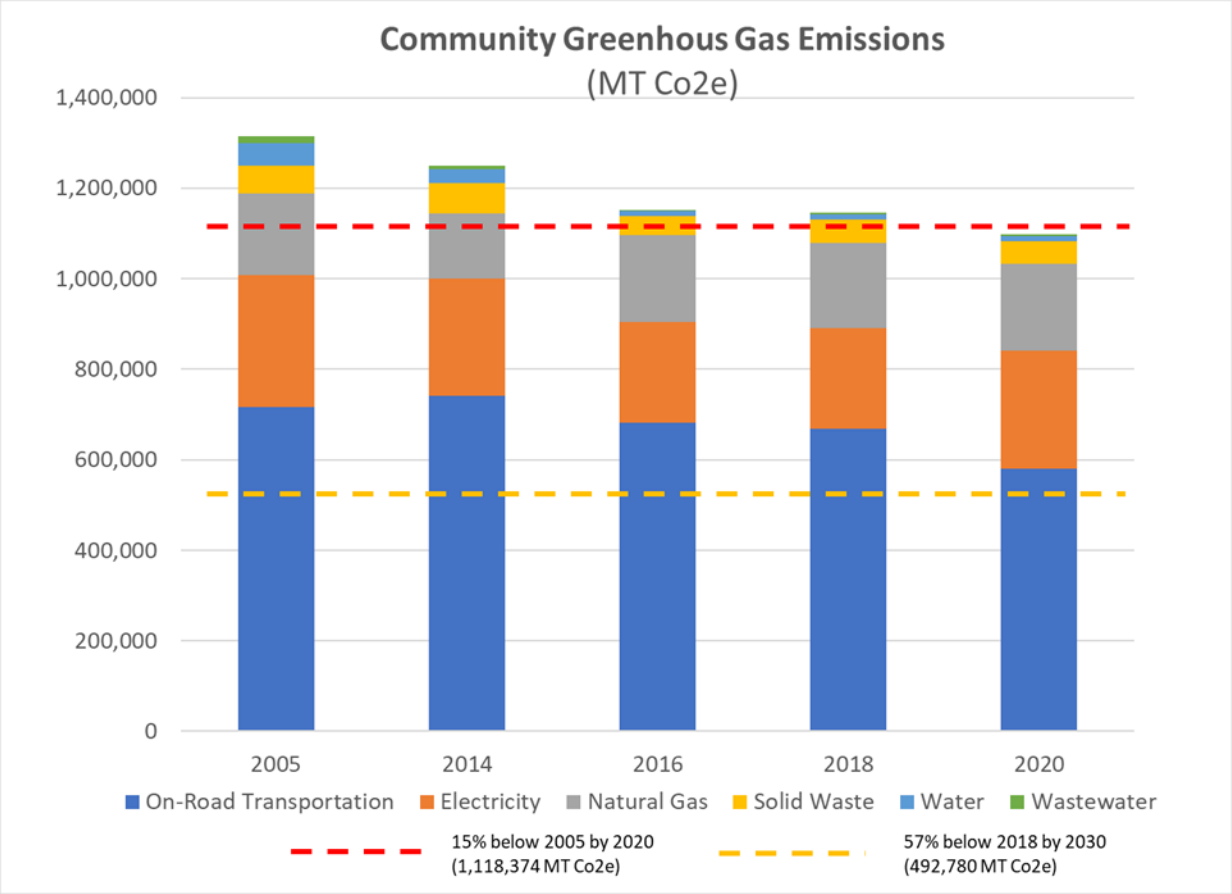

Figure 1: Total GHG emissions from community sources (by sector) in 2005, 2014, 2016 2018 and 2020. The red dashed line represents the City's 2020 carbon reduction goal, the yellow dashed line represents the City's 2030 reduction goal.

Municipal Inventory

The 2020 GHG Emissions Inventory indicates that Chula Vista's municipal GHG levels have increased by about ten percent (10%) compared to the most recent 2018 inventory. GHG emissions from municipal sources (i.e., operations, facilities and vehicle fleet) in 2020 totaled 11,191 MT CO2e. This represents a reduction of sixty-seven (67%) below the initial 1990 inventory. The two largest sources of emissions were from the energy consumption at facilities which generated thirty-five percent (35%) of emissions and

emissions from the City's solid waste disposal which accounted for twenty-six percent (26%), see Figure 2 below. More detailed information can be found on Attachment "2." The City started a new project to install additional solar panels in June 2018. During construction, the existing solar panels were disconnected for a period of time to merge new systems with the existing systems, which led to an increase in building energy usage. Due to a significant reduction from the vehicle fleet emission of forty-four percent (44%) since 2016, that sector fell from the second to third largest sector.

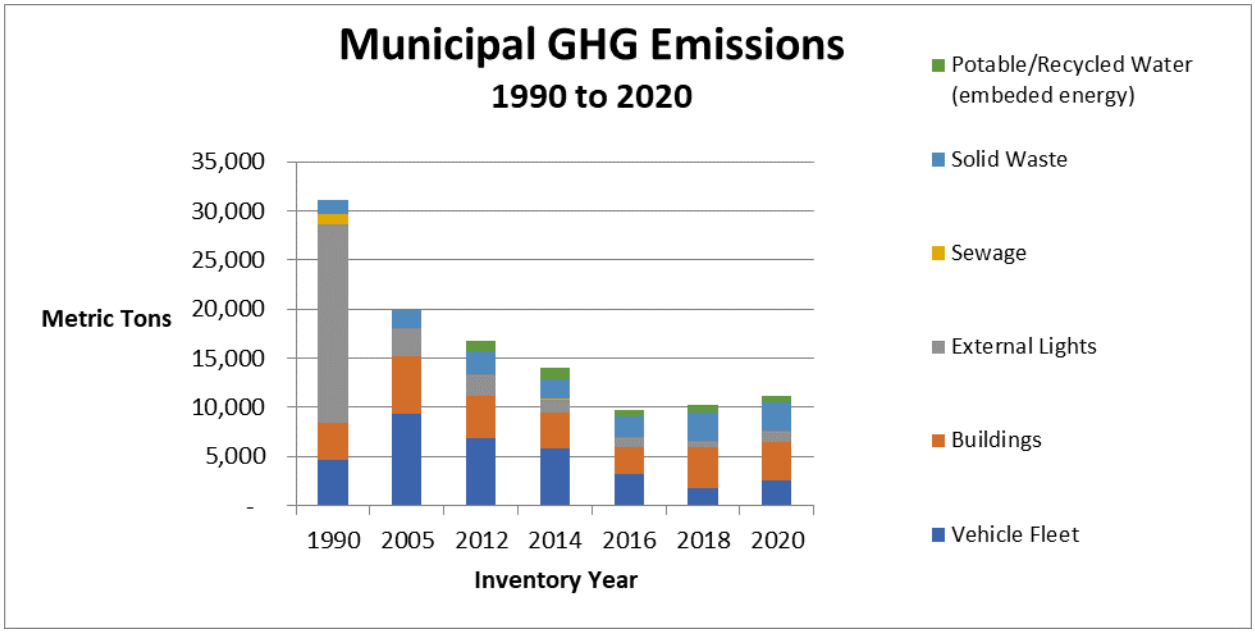

Figure 2: Total GHG emissions from municipal sources (by sector) in 1990, 2005, 2012, 2014, 2016, 2018 and 2020.

Next Steps

Staff will continue to implement the 2017 CAP and City Operations Sustainability Plan with the goal of updating both to reflect the City's new goal of getting to net zero by 2045. Some of the implementation actions being taken are:

- Enrolled all municipal controlled accounts in SDCP's 100% renewable electricity rate starting March 2021. Commercial accounts were defaulted into SDCP in July of 2021 and all other residential accounts were defaulted into SDCP in May of 2022. Because solar accounts receive an annual bill or true-up those accounts will transition to SDCP after their true-up date.
- Install a 280 kW hybrid photovoltaic (PV)/thermal solar plus storage cogeneration system at the Chula Vista PD HQ in partnership with Icarus, through a $1.1 million grant from the California Energy Commission.
- Implementation of the Smart City Strategic Action Plan.
- Implementation of the Waste Reduction Strategic Plan that was adopted in March 2022.
- Implementation of the food waste collection program that became effective on July 1st 2022 and expanded compost use at municipal facilities.

- Implementation of a benchmarking and building performance standards ordinance that would increase transparency into energy usage at large commercial and multifamily buildings and require energy efficiency improvements for under-performing buildings.
- Promote the Sustainable Home Tool Kit (www.chulavistaca.gov/departments/clean/retrofit) and Electric Induction Cooktop (www.ehomecooktops.com) lending programs at the Chula Vista Library.
- Launched the Chula Vista Community Shuttle with grant funding from the state's Clean Mobility Options program and additional funding by the Community Congregational Development Corporation in June 2022 to provide free rides to seniors in northwest Chula Vista in a fleet of 100% electric vehicle sedans and an ADA accessible electric van.
- Seek additional grant funding to expand the EV shuttle and other similar programs.

Staff is currently working to update the CAP with the CCWG recommendations, below, that were adopted by City Council in April of 2021.

Climate Change Working Group Recommendations

1	Approve and implement zero waste plan recommendation to eliminate the use of single use plastics
2	Implement education and outreach in support of decarbonization in new construction and evaluate incentives and building code options to eliminate GHG emissions associated with building energy use
3	Review solar permitting process and revise where necessary
4	Implement education and outreach in support of clean transportation while evaluating appropriate codes that reduces fossil fuel usage
5	Ensure implementation of the Chula Vista Active Transportation Plan to increase protected bike lanes, or highest level of protection possible, focusing on where active transportation collisions have occurred
6	Adopt a Climate Equity Index to address disproportional impacts of climate change
7	Adopt GHG reduction goal of carbon neutrality by 2045

DECISION-MAKER CONFLICT

Staff has reviewed the decision contemplated by this action and has determined that it is not site-specific and consequently, the real property holdings of the City Council members do not create a disqualifying real property-related financial conflict of interest under the Political Reform Act (Cal. Gov't Code § 87100, *et seq*.).

Staff is not independently aware and has not been informed by any City Council member, of any other fact that may constitute a basis for a decision-maker conflict of interest in this matter.

CURRENT-YEAR FISCAL IMPACT

There are no current year fiscal impacts associated with the 2020 GHG Emissions Inventory.

ONGOING FISCAL IMPACT

There are no ongoing fiscal impacts associated with the 2020 GHG Emissions Inventory.

ATTACHMENTS

1. 2020 Community Greenhouse Gas Emissions Inventory
2. 2020 Municipal Greenhouse Gas Emissions Inventory

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