



Monterey County

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Board Report

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- a. Receive a report on the updated 2005 Municipal Operations Greenhouse Gas Emissions Inventory from AMBAG Energy Watch staff; and
- b. Provide direction to County staff as appropriate.

RECOMMENDATION:

It is recommended that the Alternative Energy & Environment Committee:

- a. Receive a report on the updated 2005 Municipal Operations Greenhouse Gas Emissions Inventory from AMBAG Energy Watch staff; and
- b. Provide direction to County staff as appropriate.

SUMMARY:

The Monterey County Municipal Climate Action Plan (MCAP) was adopted by the Board of Supervisors in 2013. The MCAP outlines the County's goal to reduce municipal greenhouse gas (GHG) emissions to 15% below 2005 baseline levels by the year 2020.

The Association of Monterey Bay Area Governments (AMBAG) Energy Watch, in collaboration with Go Green! Program has been working to update the County's GHG Emissions Inventory to be used in the Phase II update of the MCAP. Upon reevaluating methods used to calculate the 2005 baseline, staff discovered a discrepancy in employee commute emissions calculations resulting in a significant error by a factor of ten. Staff also discovered that the number of employees reported to calculate total commute emissions from survey results were overestimated by 13.4%, further compromising 2005 employee commute emissions estimates.

AMBAG Energy Watch staff has reevaluated 2005 estimates and analyzed the County's 2016 GHG emissions inventory using current best practices and the newest modeling tools. Current estimates for 2005 GHG emissions for County operations are 33,062 metric tons of GHG emissions (MT CO₂e), 54% higher than previous estimates. 2016 GHG emissions are estimated to be 32,627 MT CO₂e, showing a 1.2% decrease in GHG emissions from 2005 to 2016.

Go Green! Program staff will include the updated information from AMBAG's *Local Government Operations Greenhouse Gas Emissions Inventory: 2016 Inventory Update* (Attachment A) into the Phase II update of the MCAP. Additionally, staff will provide an update on previously recommended GHG reduction measures and provide recommendations on new measures, as needed.

DISCUSSION:

In 2009, a former part-time intern working in the County's Resource Management Agency

conducted the 2005 baseline GHG inventory to be used in Municipal Climate Action Plan (MCAP). The intern received support from ICLEI staff and was funded by the AMBAG Energy Watch program. The purpose of the report was to determine the climate action goals for the County's municipal operations and to examine areas in need of improvement. Several areas of the County's municipal operations were examined, which include the following:

- Building and Facilities
- Monterey County Fleet Vehicles
- Employee Commute
- Government Generated Solid Waste
- Water Transportation
- Public Lighting
- Wastewater Facilities

With help from AMBAG Energy Watch, Go Green! Program staff has been in the process of updating the MCAP, which involves constructing a new GHG emissions inventory for 2016. Upon reevaluating the County's GHG emissions for 2016, AMBAG Energy Watch staff examined the methodology used in 2005 and discovered that employee commute emissions for 2005 were underestimated by a factor of ten. This is due to a user error in Microsoft Excel, subsequently, reducing estimates generated from ICLEI's GHG emissions modeling software. Additionally, Go Green! Program staff discovered an inconsistency in the total number of County employees used to extrapolate GHG emissions estimates from the employee commute survey results. In 2005, GHG emissions from employee commute accounting for 39.8% of the total estimated GHG emissions, previously projected to be 7.9%. AMBAG Energy Watch has addressed both discrepancies in the *Local Government Operations Greenhouse Gas Inventory: 2016 Inventory Update*.

In addition to correcting discrepancies in the employee commute data, AMBAG Energy Watch has improved 2005 baseline estimates by applying current best practices and accepted methods to calculate municipal GHG emissions. Moreover, all estimates were recalculated using ICLEI's newest modeling tool, providing a consistent methodology for estimating both 2005 and 2016 emissions estimates. Because best practices and ICLEI's modeling tool have changed in recent years, other jurisdictions implementing similar strategies will be confronted with similar challenges in comparing old and new emissions levels.

Baseline emissions estimates for 2005 have been recalculated to be 33,062 metric tons of GHG emissions (MT CO₂e), a 54% increase from the previous estimate, reported at 21,460 MT CO₂e. Countywide GHG emissions for 2016 are calculated to be 32,627 MT CO₂e, a 1.2% decrease from the current 2005 emissions. Considering the County's 16% workforce expansion and an increase in the County's building stock (such as the Schilling Complex), this is an accomplishment. This decrease can be attributed to the following factors:

- An increase in PG&E's renewable energy portfolio resulting in fewer emissions
- A decrease in natural gas consumption throughout County facilities, reducing overall GHG emissions
- Increased fuel efficiency of employee vehicles, allowing an increase of only 6% in employee commute emissions, despite a 16% increase in the workforce from 2005 to 2016

- Increased fuel efficiency in fleet vehicles and reduction in fleet size resulting in a 9% reduction in GHG emissions

With the updated GHG Emissions Inventory provided by AMBAG Energy Watch, the Go Green! Program will update the MCAP to reflect current GHG emissions levels for 2005 and 2016. Additionally, the Go Green! Program will reevaluate future MCAP GHG reductions measures, as needed, to guide the County in reaching its climate action goals.

OTHER AGENCY INVOLVEMENT:

AMBAG Energy Watch drafted and performed the analysis for the *Local Government Operations Greenhouse Gas Emissions Inventory: 2016 Inventory Update*. RMA - Planning Division drafted the Municipal Climate Action Plan (2013) in collaboration with several County departments.

FINANCING:

This report does not directly impact the County's general fund. General fund impacts resulting from the Phase II update to the MCAP are still to be determined.

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Attachments: Local Government Operations Greenhouse Gas Emissions Inventory: 2016 Inventory Update.