

April 13, 2021

Via e-mail

Heather Adamson, AICP
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Re: GHG Inventory Methodology and VMT

Dear Heather,

LandWatch recently reviewed the [Draft GHG Inventory for the City of Carmel](#) that was prepared by an AMBAG intern, and found that the approach to estimating GHG emissions from transportation had two important methodological issues. We've outlined these below and hope you or your staff can address them.

Generally, we are hoping to encourage the County of Monterey and the cities in Monterey County to base their climate action plans on consistently generated inventories of transportation emissions that include a fair share of the emissions attributable to trip origination or attraction. In short, we want to make sure that all transportation emissions are accounted for and that they are allocated to the jurisdictions that can mitigate them. We also want to ensure that changes in the Highway Performance Monitoring System (HPMS) methodology between the 2014 and 2015 do not result in mischaracterization of emissions.

1) Local streets-only allocation vs. origin/destination allocation

Carmel's GHG inventory has two critical issues with its VMT estimates. First, the approach being used (which AMBAG has used for many years and for many other jurisdictions) relies upon the Highway Performance Monitoring System (HPMS) to estimate VMT on local roads within the jurisdiction of interest.

This approach means that a jurisdiction is only accountable for emissions associated with travel on its local roads, regardless of how far the vehicles had to travel to get there – as far as Carmel is concerned, a trip to downtown Carmel from Monterey would have the same emissions as a trip that started in Salinas or Soledad.

For this reason, most jurisdictions typically use an origin-destination model to assign emissions from trips evenly between the origination and destination cities. In fact, AMBAG already has and maintains an origin-destination model for the Metropolitan Transportation Plan and Sustainable Communities Strategy. LandWatch was unable to identify a reason why it is not used for GHG emissions from transportation in local inventories as well.

This choice of a local streets-only approach to VMT emissions also leads to important policy outcomes: under AMBAG's methodology that looks solely at VMT from local streets, cities are incentivized to block new development, as it would increase VMT on local streets, regardless of how much it might reduce commute distances across the region. In contrast, an origin-destination approach accurately considers how changing land use patterns – namely, putting homes and jobs closer together – can help reduce VMT and GHGs.

2) HPMS methodology change

There is a second problem with the existing approach: HPMS' own methodology for generating these local VMT estimates changed in 2015. This change resulted in (in some cases) dramatic shifts in local VMT estimates. In 2014, HPMS estimated Carmel's daily VMT at 85,400; in 2015, HPMS pegged it at 47,250. Clearly, Carmel's VMT did not fall by 46% in one year; nevertheless, AMBAG's own GHG inventory for Carmel says "The transportation sector emissions decreased by 50 percent from 2005 to 2018. During this period there was a decrease in Vehicle Miles Travelled (VMT) on local roads in Carmel." Virtually all of the change between 2005 and 2018 is attributable to the 2015 methodology change.

If AMBAG is going to continue to rely upon HPMS and a local streets approach for GHG inventories, HPMS data prior to 2015 must be scaled to be consistent 2015 levels, to address the dramatic step change in VMT estimates that occurred. Failing to do so can lead cities to incorrectly evaluate their baseline year and the effects of any policies they may have adopted in the intervening time. For instance, due to this change in how VMT was estimated, Carmel appears to now be 42% below its 2005 baseline, despite the fact that VMT has not, in fact, changed nearly as substantially as reported. This can lead to cities failing to adopt necessary climate action policies and smart land use approaches to reduce VMT.

3) Public Records Act Request for AMBAG GHG inventories on which jurisdictions relied in preparing climate action plans

It appears that Carmel has only begun to consider a climate action plan and so has not yet relied on the AMBAG GHG inventory. However, it is not clear to us whether any other jurisdictions may have relied on AMBAG-generated GHG inventories that reflect the local-streets only approach or that do not recognize that HPMS changes its methodology between 2014 and 2015. Our preliminary research in Monterey County suggests to us

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that only the cities of Gonzales and Monterey may have prepared climate action plans. The City of Monterey apparently used an origin/destination model prepared by Kimley Horn, but Gonzales apparently relied on an AMBAG inventory. (See Gonzales Climate Action Plan, 2018, Chapter 3, available at <https://gonzalesca.gov/sites/default/files/2018-11/Adopted%202018%20Gonzales%20CAP%20Update.pdf>.)

Would you please provide us with each of the AMBAG-generated GHG inventories, if any, that have been furnished to other Monterey County cities that have actually used those inventories to prepare a CAP?

Please provide at least the AMBAG-generated GHG inventories relied on by Gonzales. This would apparently include the “Gonzales 2005 Baseline Emissions Report,” which is variously referenced in the Gonzales Climate Action Plan as AMBAG 2011, AMBAG 2017, and AMBAG 2018, perhaps reflecting the dates of the original report and its updates to that report.

LandWatch seeks electronic versions of responsive records if possible, in PDF, Word, Excel, CSV, or other accessible format. LandWatch does *not* seek direct access to the model or modeling software itself.

Thank you for your help with this.

Yours sincerely,

M. R. WOLFE & ASSOCIATES, P.C.

A handwritten signature in blue ink, appearing to read 'JF', is positioned above the name John Farrow.

John Farrow

JHF:hs

Cc: Ashley Paulsworth, County of Monterey
Ben Gould, EcoDataLab
Michael DeLapa