

**Date:** May 5, 2020

**From:** MCAAC Baseline ADHOC Committee

**To:** Mendocino County Climate Action Advisory Committee

**Subject:** Recommendations for the Development of Baseline GHG Emissions for Mendocino County

**Baseline Ad hoc Committee Members:** Walter Smith, Cathy Monroe, Ellen Drell, Javier Silva, John Nickerson

**Frequent Public Members:** Elisha Hardy

The Baseline ad hoc committee has held three virtual meetings since the last full committee meeting. We offer the following recommendations and findings:

1. Rational for a baseline of emissions/carbon storage at the county level.

A baseline of county-level emissions and carbon storage is critical to prioritizing mitigation activities which will enable the county to develop and achieve emission reduction targets. Furthermore, the MCAAC has a mandate to establish a baseline of emissions and carbon storage.

2. Definition of baseline.

The baseline will be a composite of selected (prioritized – see Section 5- Prioritized Sinks and Sources) GHG sinks and sources. The baseline will be developed from historical and current data to enable a trend of emissions and carbon storage to be projected to 2030 and perhaps 2050, which is aligned with State of California targets for emissions reductions. Figure 1 displays an example using fictitious data to display how inventories from historical and current emissions will be projected to a future target date.



Figure 1. Example of approach to the use of historical and current emissions/carbon storage inventories (fictitious data for example only) will be projected to future target date.

3. Included gases

The baseline will be based on the inventory of methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and carbon dioxide (CO<sub>2</sub>). Ozone (O<sub>3</sub>) may also be included if found to be critical for any of the inventories of GHG sinks and sources. All emissions will be standardized as CO<sub>2</sub>-equivalent, using conversion numbers from the International Panel on Climate Change.

4. Inventory methodological approach

Each selected GHG sink and source will utilize a sound inventory methodology. Specifically, inventory methodologies will be sought that have precedent in other county reports, is specifically sanctioned by the State of California, is a sub-unit of existing state-wide inventories, or is validated by the California Air Resources Board prior to use. Specific qualities sought in the selection of GHG inventories include:

- Completeness
- Transparency
- Replicability
- Ability to be applied in the future as a monitoring strategy
- Ease of use (preferably can be accomplished ‘in house’)
- Alignment with California GHG inventories

The ad hoc committee recommends that the baseline development process be used to document, coalesce, and archive all methodological approaches in a public repository so a consistent approach to inventory develop can occur in the future to facilitate monitoring efforts.

5. Prioritization of Sinks and Sources

Table 1 displays the prioritized sinks and sources to be included in Mendocino County’s baseline. Additional thoughts are added to the table to communicate how the data is likely to be presented and the status/approach to methodological development and analysis.

Sector	Sub-sector	Notes	Status of Inventory Development
Transportation	Commercial	Transportation accounting to include transportation of solid waste	Ad hoc committee is investigating methodologies used in other counties and will recommend an approach upon completion of analysis.
	Personal/Commuting		
Energy	Heating	May be broken out more based on approach to inventory methodology. Energy use for managing solid waste to be included here.	
	Industrial Use		
	Residential Use		
Natural and Working Lands	Coniferous Forests	Forests to be further sub-divided within sector by broad species, size, and density classes, which will enable further trend analysis	
	Hardwood Forests		
	Brush/Chaparral		
	Grasslands		
Urban Forests	Urban Forests	Urban Forests	Data to be generated using approach in Sonoma and Merced Counties. Analysis to begin shortly.
Agriculture	Row Crops	May be broken out by more specific crop/orchard type based on data availability	Mendocino Resource Conservation District (RCD) has been given the lead in the county and is contracting with Ascent Environmental. Baseline ad hoc committee is coordinating with the RCD.
	Orchards		
	Vineyards		
	Irrigated Pasture		
	Marijuana		

Following considerable analysis and review of previous efforts in Mendocino County, the ad hoc committee has determined that methodologies and data need to be developed and/or updated to align with the ad hoc committee's recommendations identified in this report. That is, we are generally starting from scratch.

Sinks and/or sources that are considered to be a lower priority at this time include:

- Concrete manufacturing
- Wetlands
- Sewage
- Farm ruminants
- Landfills
- Oceans