Estimating Total Emissions from Biomass Burning

Peter Tittmann, Ph.D.

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To arrive at an estimate of total CO2 equivalent (CO2e) emissions for 2015, we combine Black Carbon (BC) emissions estimates from the California Air Resources Board (CARB) Criteria Air Pollutant Emissions Inventory with GHG emissions estimates reported in the CARB GHG Emissions Inventory and the CONSUME model. The time discrepancy between the most recent GHG Emissions Inventory in 2004 and the current year is acknowledged as an irreconcilable source of uncertainty in this estimation. The use of the COMSUME moel to predict pile buring emissions is likely more reliable and as pile buring is a central focus of this analysis we confidently use the emissions estimated here for pile burning thourghout. Model-based estimation could be used to derive a ratio of Greenhouse Gas (GHG) to PM using the USFS CONSUME model. Overall, this analysis demonstrates that substantial emissions from forest management residuals have been reported by CARB emissions inventories and that such inventories may be utilized to establish a baseline condition. We find that a rough estimate of CO2e emissions from pile burning annual approaches 1 Mt CO2e Table **??**.

Mt CO2e	Source
1.4071705	CO2e pile burning
1.1073965	CO2e BC pile burning
2.514567	Total Mt CO2e

BC emissions in terms of CO2e has not been included in any GHG emissions inventory published by CARB. Remove?