

CO₂ Emission Calculation

The calculation of carbon dioxide (CO₂) and other GHG emissions is a challenging task. Emission calculation models are just being developed or are at their infancy stage. The following is a “Back of the Envelope” calculation of CO₂ emissions of passenger cars and light trucks for the MPO Area:

According to ODOT Highway Performance Monitoring System (HPMS) data the daily vehicle miles of travel (DVMT) for the Corvallis MPO Area is **857,000**

According to the EPA the current average fuel efficiency of the national fleet of passenger cars and light trucks is **20.3** miles/gallon.

$$857,000 \div 20.3 = \mathbf{42,217} \text{ gallons of gas used per day}$$

According to the EPA, 1 gallon of gas produces **8.8** kg. (19.4 lb) of CO₂

$$42,217 \times 8.8 = \mathbf{371,510} \text{ kg of CO}_2 \text{ emitted daily.}$$