

Planning Inventories

Planning EI's

- What is a Planning Inventory ?
 - Planning Inventories are a refinement of annual emission inventories
 - Created only for non-attainment areas
 - Ozone or precursors (i.e. ROG and NO_x), CO, SO_x, and PM₁₀ are the non-attainment pollutants considered at this time

Planning EI's

(continued)

- Purpose of Planning Inventories
 - To characterize emissions of a non-attainment pollutant (or its precursors) during air quality exceedance periods
 - A tool for air quality planners to assess what sources to target for emission reductions as required under the federal CAA

Planning EI's

(continued)

- Periods Analyzed
 - Ozone: summer operating period May-Oct (mainly concerned with ROG and NOx)
 - CO: winter operating period Nov-Apr
 - Other Periods: For the San Joaquin PM10 SIP, quarterly inventories were developed
- Two calculation methods--CEFS supports both methods

Old Calculation Method

- Point Sources

$$\text{SEMS (t/d)} = \text{EMS (t/y)} / \{\text{OP_DAY} * \text{WEEK_YR}\}$$

Where:

SEMS = Seasonal emissions (tons/seasonal day)

EMS = Annual Emissions (tons/year)

OP_DAY = # days of operation per week

WEEK_YR = # operating weeks per year

Old Calculation Method

- Area-wide sources

$$\text{SEMS (t/d)} = \{ \text{EMS (t/y)} * \text{SUMMER_THROUGHPUT} \} / \text{SUMOPDAY}$$

Where:

SEMS = Seasonal emissions (tons/seasonal day)

EMS = Annual Emissions (tons/year)

SUMMER_THROUGHPUT = Sum of fractional monthly throughputs

SUMOPDAY = 184 (summer days) / 7 (days/week)

* OP_DAY (operating days/week)

New Calculation Method

(not implemented yet!)

$$\text{SEMS (t/d)} = \text{EMS (t/y)} * \text{TF}$$

Where:

SEMS = Seasonal emissions (tons/seasonal day)

EMS = Annual Emissions (tons/year)

TF (Temporal Factor) = SEAS_FRAC / 182.5

SEAS_FRAC = (i) Sum of fractional monthly throughputs
Summer: May-October
Winter: November-April

or (ii) The ratio of the operating days
in the season to the operating days in
the year

Planning Inventories (cont)

Monthly Temporal Profile
Residential Fuel Combustion
Sacramento County

Percent

