

**SOURCE INVENTORY**

**CATEGORIES # 751 - 752**

**MISCELLANEOUS EMISSION SOURCES  
ACCIDENTAL FIRES - VEGETATION  
- TIMBER / BRUSH (751)  
- GRASS / WOODLAND / AGRICULTURAL (752)**

**1999 EMISSIONS**

*Introduction*

Emissions reported in these categories result from wildfires in grass, woodland, timber and brush. Planned fires such as weed burning, field crops, prunings, range improvement burning and forest management are covered in categories 315-319.

*Methodologies*

Emission factor and acreage burned data for these categories was obtained from Section 9.3 (Wildfires) of the ARB document "Methods for Assessing Area Source Emissions in California" (October 1997).

The particulate, organic, NO<sub>x</sub>, SO<sub>2</sub> and CO (PONSCO) values, in units of pounds per acre and amounts of acreage burn by county are tabulated in Table 1 and 2, respectively.

Table 1  
Emission Factors (lbs./acre)

Category	Particulate	Organic	NO <sub>x</sub>	SO <sub>x</sub>	CO
751	630	375	60	0	3900
752	32	38	0	0	202

Table 2  
Acreage burn by County in 1999

Cat.	Ala	CC	Marin	Napa	SF	SM	SC	Solano	Sonoma
751	6	29	240	8	0	1	31	54	12
752	317	272	12	54	0	757	430	110	840

*Monthly Variation*

On the basis of historical data, CA State Department of Forestry suggests most of the wild fires occurring from mid-May to mid-November. The percentage of burning in each of the months involved was estimated as follows: May - 5%, June - 10%, July - 15%, August - 20%, September - 25%, October - 20% and November - 5%.

### *County Distribution*

About half of the land in Solano and in Sonoma Counties is in the BAAQMD jurisdiction. Therefore, only half of these two counties' total timber / brush and grass / woodland / agricultural wildfire emissions were included in the totals for District. The acreage burned values shown above for these two counties are about half the counties' totals provided by the California Department of Forestry.

## **TRENDS**

### *History*

Emission trend data for Base Year 1983 that were used in the first (combined) trend data work for 1987 Base Year generally showed variable values for the period 1972 - 1983. Coupled with the first (combined) 1987 PONSCO emission values developed here (before the category was split), it appeared there were essentially 13 years for which an average set of emission data for all contaminants could be developed. For 1987 Base Year, that first (combined) average data set was then used for all remaining years in the (combined) trend data file. (This covered the periods 1960 - 1971, 1984 - 1986 and 1988 - 2010.) For the years 1960 - 1986, the 'annual activity variation' ratio values prepared and used in the new "data bank" trend file, for these categories, were developed in proportion to organic ton per day values contained in the original five-contaminant trend file first developed for the (combined) category, this Base Year.

### *Growth*

Actual acreage burned can vary from year to year depending on weather conditions. Therefore, greater number of wildfires may occur during a relatively dry year.

## **COMMENTS AND RECOMMENDATIONS**

Any data that would show the number of acres burned by county, by month and more accurate emission factors would improve the accuracy of emissions for these categories.