

SOURCE INVENTORY

CATEGORY # 761

SANITARY SEWERS

1999 EMISSIONS

Introduction

This category includes organic compounds emissions from sanitary sewer lines in industrialized areas leading to sewage treatment plants. This category also includes waste material generated from portable or semi-permanent toilets and discharged to the sanitary sewer system.

Methodology

A report on "Evaluation of Emissions from Selected Uninventoried Sources in the State of California", by R. Dickson; W.R. Oliver, and S. Tate, 1988 showed an estimate of discharged material to the sewer systems in the United States. This estimate of national loading to sewers was adjusted for the Bay Area. A rough estimate of 16% of this total influent was attributed to industrial sewers. In the report, it was assumed about 50% of volatile organic compounds from the discharged material volatilizes in the sewer prior to becoming influent to treatment plants. It was further assumed that 50% of the volatilized materials have already been accounted for in other categories, such as cleanup solvent.

An emission factor of 250 lbs of organics per thousand pounds of industrial sewer loading was also developed based on the above report. Emissions are calculated by multiplying the throughput data with the emission factor.

Emission Calculation :

$$\text{TOG Emissions} = \frac{442.6 \text{ thou. lbs. loading/yr.} \times 250 \text{ lbs. TOG/thou. lbs. loading}}{2000 \text{ lbs./ton} \times 365 \text{ days/yr.}}$$

$$= 0.151 \text{ ton/day}$$

Monthly Variation

Monthly distribution was estimated based on estimated load throughout the year.

County Distribution

The county population was used to distribute emissions into each county.

TRENDS

History

Emissions through the years were estimated by using historical data on household population.

Growth

Projections to year 2030 was also based on the ABAGs' growth profile on household population in the Bay Area.