

CEFS/CCOS_WEB **Version Documentation and Update Chronology** **(Version 1.0)**

CEFS/CCOS_WEB Version 1.0 was developed to provide “draft” planning and modeling projections for the ARB and district staff to use for preliminary analyses of future year emission inventories for plan development and photochemical modeling. Version 1.0 outputs were used for the “Draft” San Joaquin Valley PM10 SIP, and preliminary modeling for various Ozone and PM episodes.

Note: The version control for updates to the planning and modeling inventory projections are principally kept in sync. If inputs to the forecast model have changed, both planning and modeling projections are re-run to ensure that the planning and modeling inventory outputs reflect the same set of inputs. There is typically a lag time of a couple days between the dates posted for planning and modeling EI projections (either in their original posting or when updates occur) due to the CEFS longer run-time required for the modeling projections.

I. Base Year Emissions Data

The selection of the 1999 inventory as the base year inventory for the CCOS domain was decided several years ago when the project began. As a result, the greatest amount of resources has been dedicated by the ARB staff and the districts in the CCOS domain to construct and maintain the most comprehensive inventory possible for the 1999 calendar year. Extra efforts have been made in the quality assurance review of the emissions data as well as the spatial and temporal information in the 1999 inventory to ensure a reliable product. The CCOS projections are based on the 1999 CEIDARS inventory with updates as of November 6, 2002 (Note: The 1997 inventory was used as the base year inventory for the South Coast *point source* projections to be consistent with the South Coast AQMP). Documentation of area source emission estimation methodologies for ARB categories are available at <http://www.arb.ca.gov/emisin/areasrc/areameth.htm>

II. Stationary Source Growth Data

San Joaquin Valley and other CCOS regions in Central California:

Primary data source: Statewide emission growth activity study; E.H. Pechan and Associates – February 2001.

[Link to Pechan Report.](#)

Livestock Waste Growth Data – ARB developed growth profiles.

Bay Area:

Submittal to ARB June 24, 2002.

Mendocino:

Growth assumptions based on district email dated January 29, 2002.

South Coast Coast District:

Growth assumptions are based on SCAG economic data
Submittal to ARB April 24, 2001

Demographic data updates
Submittal to ARB May 21, 2002;

Economic data updates for Los Angeles County
Submittal to ARB July 19, 2002.

Other Data Sources:

Department of Finance – Population Data

Growth Overwrites – Mojave, Santa Barbara, San Luis Obispo, and
Ventura districts provided growth data for some specific categories.

III. Stationary Source Control Data

San Joaquin APCD:

Control Rule data submittal (Arons Study):
Submittal to ARB December 28, 2000

Updates for rules adopted in 2001 and 2002:
Submittal to ARB September 11, 2002

Rule 4701 Update
Submittal to ARB October 3, 2002

Bay Area AQMD:

Submittal to ARB November 17, 2002.

Sacramento Metro AQMD

El Dorado County APCD

Placer County APCD

Yolo Solano AQMD

Submittal to ARB July 25, 2002

South Coast District:

Submittal to ARB June 4, 2002.

Ventura APCD:

Submittal to ARB March 26, 2001.

Santa Barbara APCD:

Submittal to ARB November 12, 2002

Note: For other CCOS Regions, stationary source control profiles are still based on prior ARB control category definition defaults – no district rule specific control data are available yet.

IV. On-Road Mobile Source Emissions

Based on EMFAC2002 version 2.2

Fractions from the CEIDARS database were used to calculate emissions for ROG and PM10.

V. Off-Road Mobile Source Emissions

Based on OFFROAD Model Runs September 2002

Key Updates to the Sep 2002 OFFROAD version:

- “Draft” evaporative emission estimates incorporated for planning and modeling purposes only (yet to be Board Approved)
- SO_x and PM emissions re-calculated to account for statewide low sulfur fuel benefits and SCAQMD Rule 403.1

VI. Special Categories in SCAQMD

Projected emissions for aircraft, ships, and RECLAIM sources were submitted in batch to ARB (as opposed to running CEFS projections based on growth and control data). The emissions were derived by SCAQMD staff as follows:

Aircraft - Projected emissions for aircraft were submitted in batch to ARB (as opposed to doing CEFS projections based on growth and control data). The emissions were derived by SCAQMD staff as follows:

Commercial Airports - 1999 and 2025 emissions were provided by SCAG (scenario 9). (In-between years interpolated by SCAQMD based on MAP data from SCAG for each airport at 5-year increments)

General Aviation - Growth factors developed by SCAQMD based on SCAG's projected level of operations.

Military Aircraft - Projected emissions developed by the military bases and submitted to SCAQMD.

Ships - Projected emissions for ships were submitted in batch to ARB (as opposed to doing CEFS projections based on growth and control data). Data Source: Marine Vessels Emissions Inventory (An Update to 1996 Report); ARCADIS; Sep 1999.

RECLAIM – Future year RECLAIM emission allocations (by facility for NOx and SOx) submitted by SCAQMD to the ARB in batch.

VII. CEFS Forecast Notes

CEFS includes two options for generating seasonal (or “planning” emission estimates):

Method 1 - Traditional method (used in the 1994 SIP and 1997 South Coast AQMP) which estimates seasonal emissions for point sources based on the number of operating days per week and the number of operating weeks per year;

Method 2 - New method, which estimates the seasonal emissions for point sources, based on the fractional monthly operation activity for each emission process.

Method 1 was employed for the South Coast District region at the request of SCAQMD to be consistent with methods used in prior AQMP's, and Method 2 was utilized for the rest of the CCOS domain.

VIII. Version Control Chronology

a.) Planning Projections

[EIB Chain of Custody Reference Form #861web](#)

December 13, 2002:

Original Web Release of Version 1.0 Planning Projections

January 17, 2003:

Updated planning projections for San Joaquin Valley Air Basin to reflect revised TOG and PM emissions and associated ROG and PM10 fractions for point sources.

Updated planning projections for South Coast Air Basin to reflect revised base year emissions for coatings and degreasing in the 1997 inventory.

Updated projections for Santa Barbara to reflect updated control rule data.

January 27, 2003:

1993, 1995, and 1997 emissions added the annual and seasonal planning projections.

March 3, 2003:

Updated CCOS Emission Reductions by Rule.

b. Modeling Projections

EIB Chain of Custody Reference Id:

[EIB Chain of Custody Form #861](#)

December 23, 2003:

Posting of July/August 2000 Ozone Episode Modeling Projections
Posting of January 2001 PM Episode Modeling Projections

January 24, 2003:

Update of August 2000 Ozone and 2001 PM Episodes to incorporate updated TOG and PM emission estimates for 1999 point sources in SJV and revised coating and degreasing emission estimates for South Coast Air Basin.

Posting of September 2000 Ozone Episode Modeling Projections

January 29, 2003

Posting of July 1990 and 1999 Ozone Episode Modeling Projections

February 10, 2003

Posting of August 1990 Ozone Episode Modeling Projections