



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

*Committed to Achieving Clean Air to Protect
the Public's Health and the Environment*



Revisions to Emissions Inventory and Preliminary Evaluations

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CARE Task Force Meeting

August, 17 2006

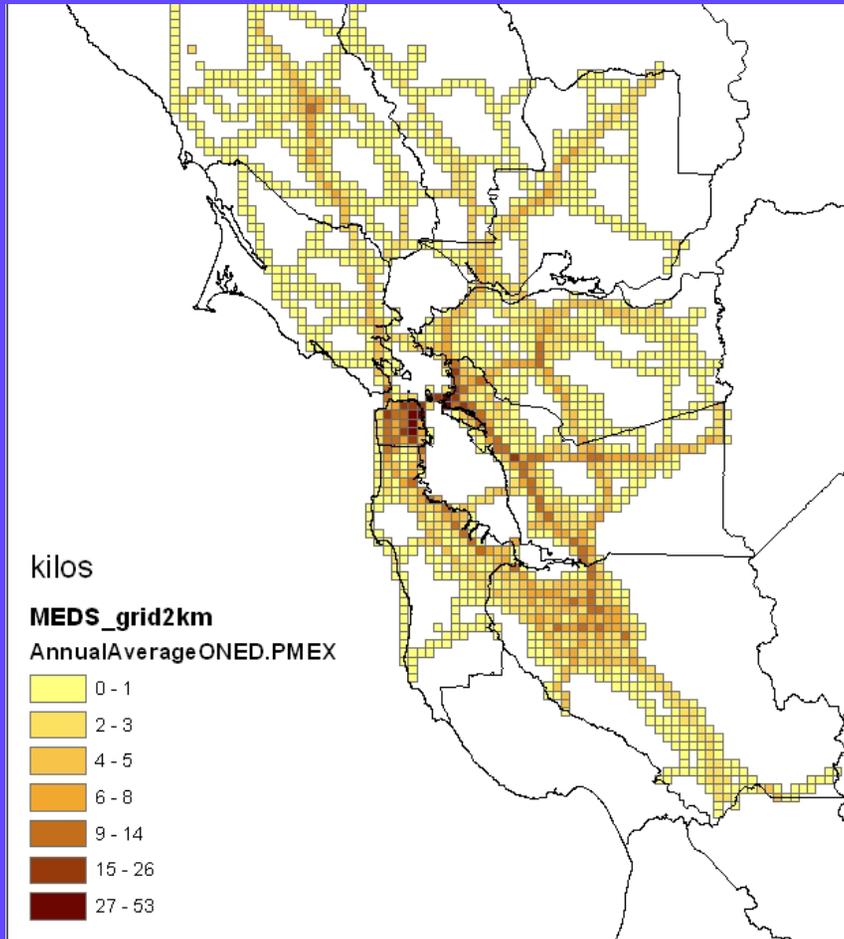


Overview

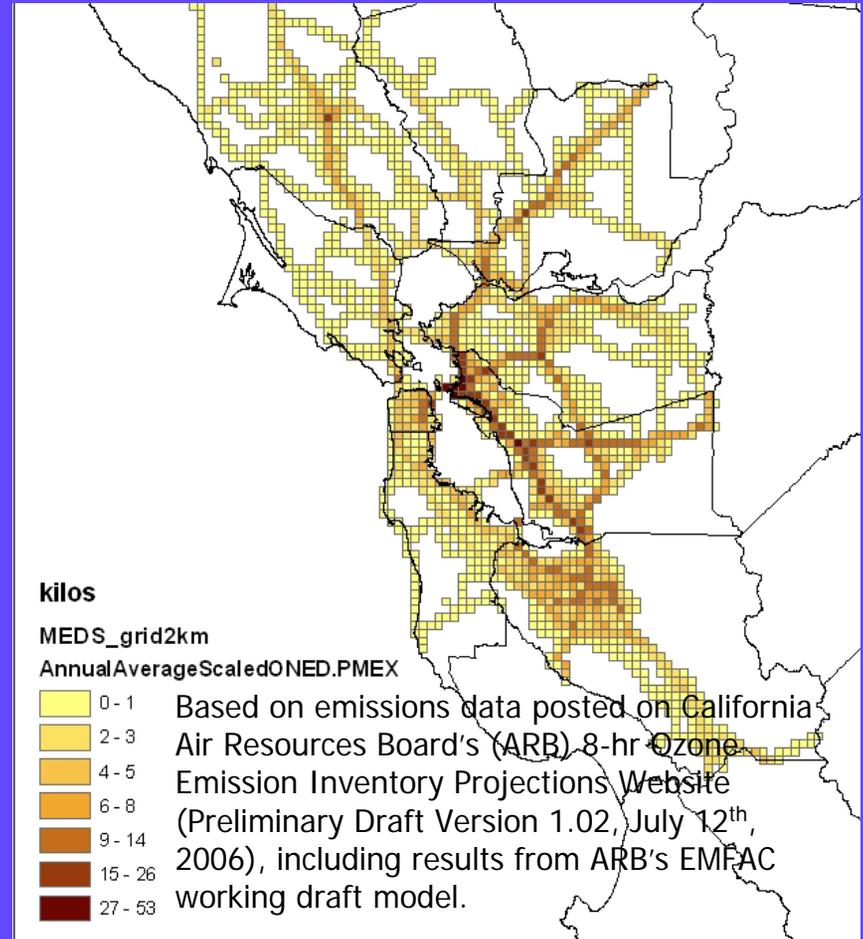
- Revisions in diesel particulate matter (PM) emissions due to EMFAC changes
- Evaluations of TAC emissions using measured data
 - Preliminary steps
 - Acrolein investigations
- Summary and next steps

Redistribution of On-Road Diesel PM Emissions

Current EMFAC



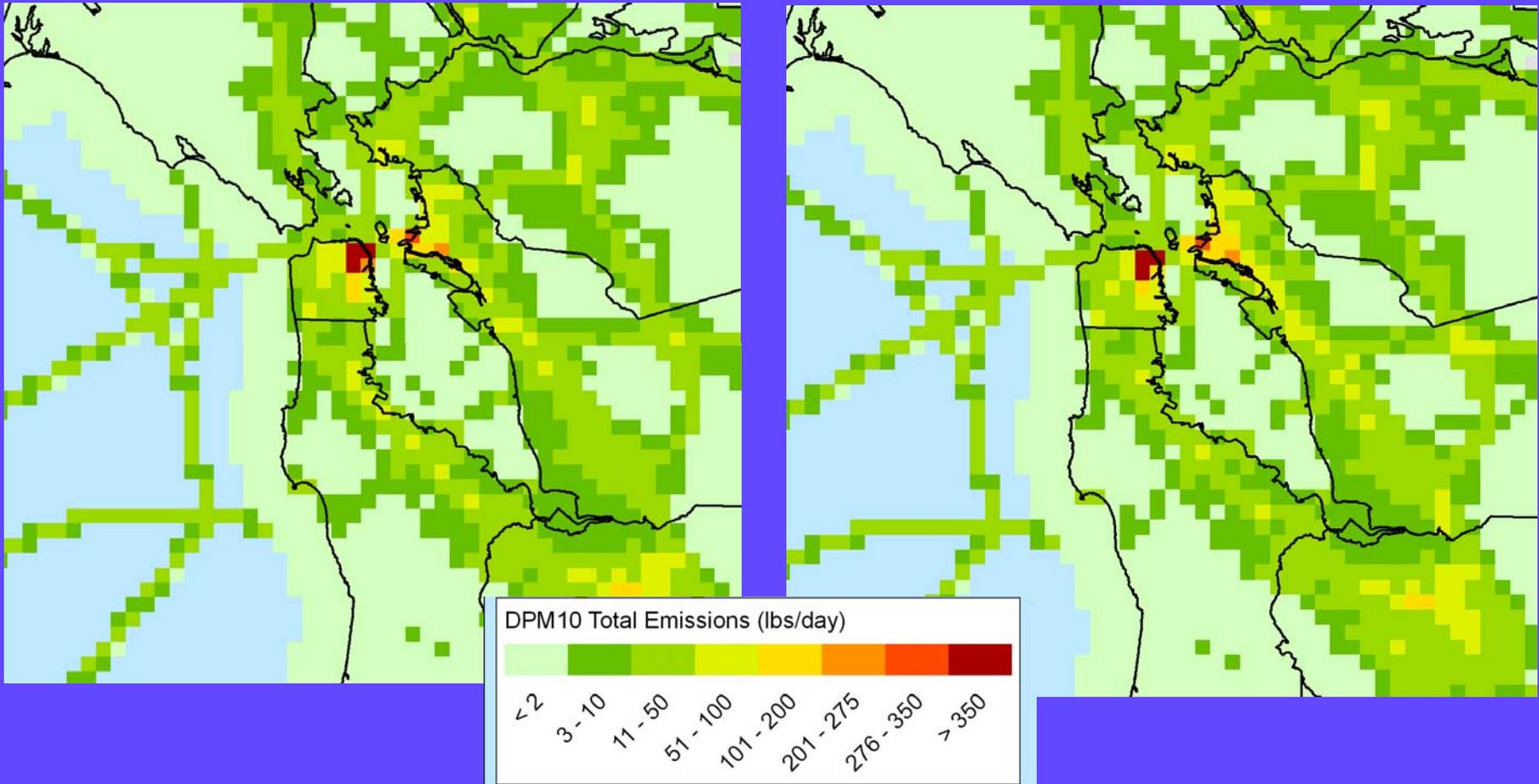
EMFAC Working Draft Model



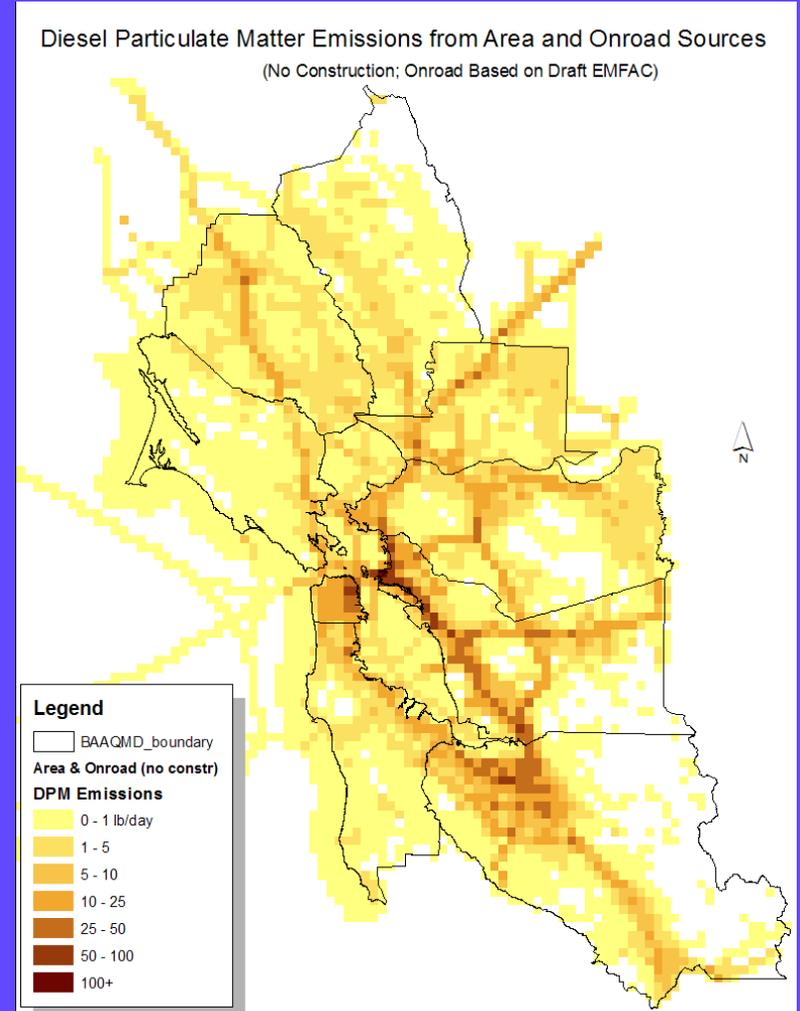
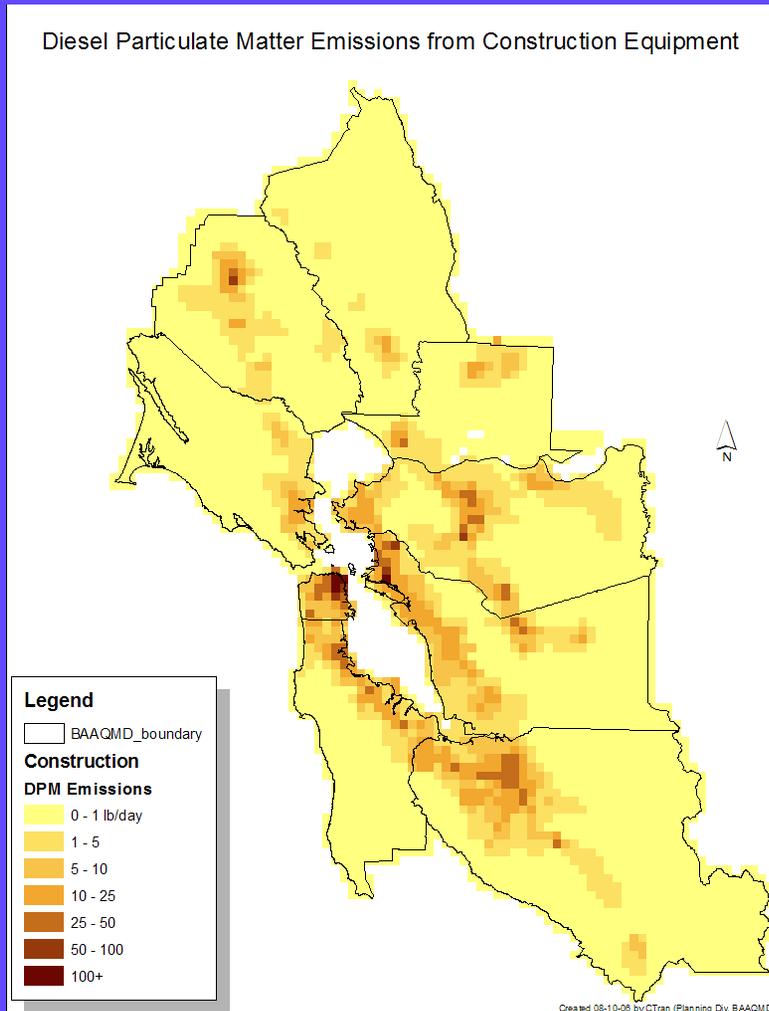
Changes in Total Diesel PM Emissions

Current EMFAC

EMFAC Working Draft Model



Construction Equipment Diesel PM emissions High in S.F.



Emissions Status

- Diesel PM emissions from on-road heavy-duty trucks revised
- Diesel PM emissions from construction equipment require further investigation
 - Review California Air Resources Board (CARB) estimates of diesel PM from construction equipment
 - Compare fuel use of on-road and off-road heavy-duty diesel
 - Survey historical and current construction activity

Evaluations of TAC Emissions Using Measurements

- **Toxic Monitoring Sites**
 - 18 sites in 2000
 - Measurements collect by Air District & ARB
 - 13 Air District only, 2 ARB only, 3 both
 - **Urban locations**
 - Oakland at Davie Stadium,
 - San Francisco Arkansas St.,
 - San Jose 4th Street,
 - San Pablo, and Richmond
 - **Background station at Fort Cronkite**

Preliminary Steps in Evaluating Emissions

- **Extracting TAC emissions around toxic monitoring sites**
 - Exploring extractions within various distances of each monitoring site
 - Extract all measured compounds and diesel PM and acrolein
- **Using monitored data from 1999 to 2001**
- **Reasonable correlation between estimated area & on-road emissions and measured benzene concentrations**

Acrolein Findings

- Acrolein measured at CARB sites
- Compared average measured concentrations to reference exposure levels (REL)
 - Acute REL: 0.08 ppb (0.19 ug/m³)
 - Chronic REL: 0.03 ppb (0.07 ug/m³)
 - Ave. Bay Area conc.: ~0.5 ppb (~1.2 ug/m³)
- Significant uncertainty in the acute REL; OEHHA is currently re-evaluating it

Summary and Next Steps

- Preliminary TAC emissions complete
- Evaluations of emissions underway
- Improvements will be on-going
- Plan to use best available TAC emissions as surrogate for exposure until
 - concentrations are modeled (Phase II)
 - exposures are estimated (Phase III)