



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

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

CARE Program Phase I: Findings and Policy Recommendations

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CARE Task Force Meeting

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Overview

- Phase I findings
- Policy recommendations
 - District approaches for reducing toxic air contaminants
 - Initial screening methodology for evaluating relative risk
- Next steps – beyond phase I

CARE Program Phase I Projects

- Screening-level TAC emission inventory
- Support studies
 - Residential wood burning survey
 - PM source apportionment study
 - Carbon dating—old vs. new carbon
 - Organic PM speciation
- Demographic & health data
- Mitigation measures

Phase I Findings

- About 80% of the cancer health risk is from diesel PM.
- About 50% of the chronic non-cancer risk is from acrolein.
- More than 90% of the acute non-cancer risk is also from acrolein.
- There are uncertainties associated with the determination of risk.

Phase I Findings (cont.)

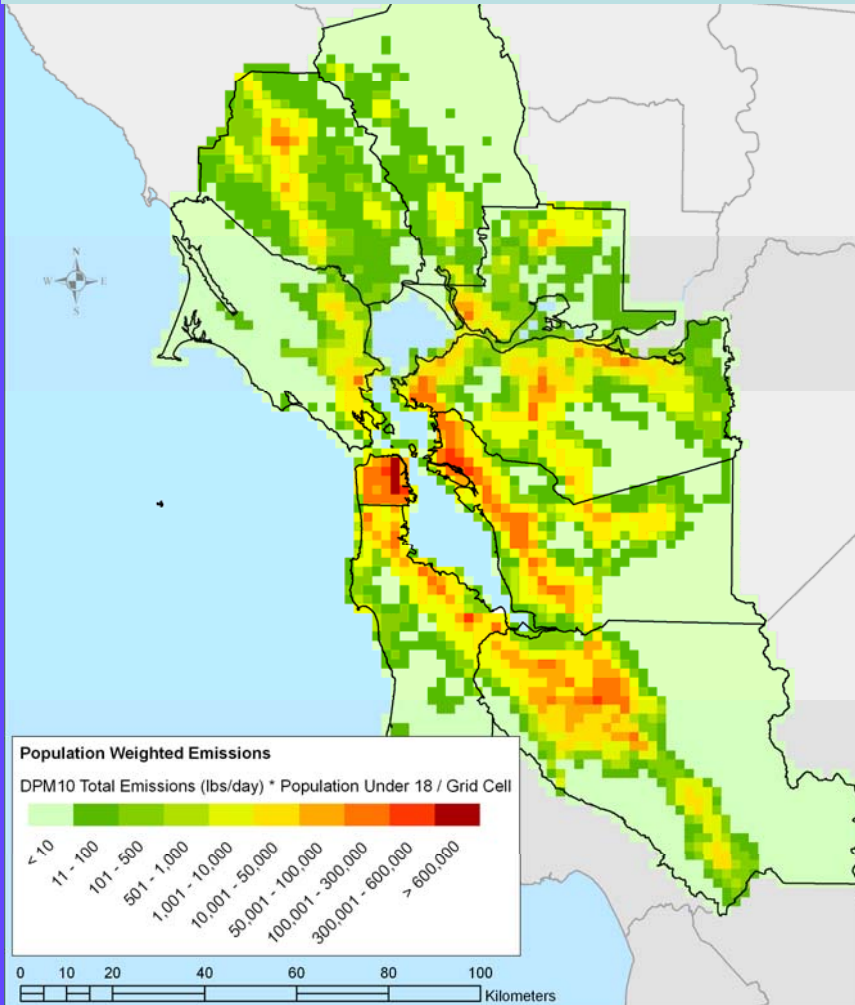
- On-road and off-road diesel emissions—including construction, shipping, rail—are large sources of cancer risk.
- Gasoline powered vehicles and aircraft are large contributors to non-cancer risk.
- The highest densities of diesel PM and acrolein are in eastern S.F. and western Alameda & Contra Costa counties.
- These areas also have large numbers of sensitive people.

Policy Recommendations

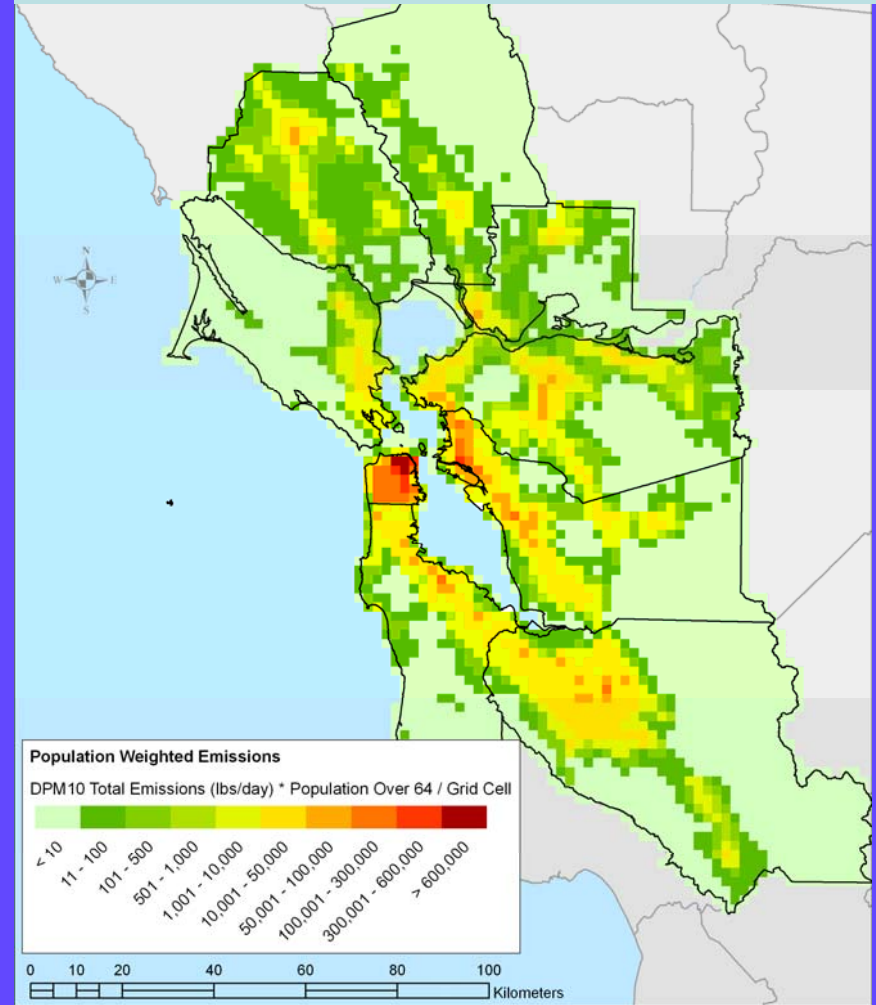
- Use gridded TAC emission inventory as a surrogate for exposure.
- Use available regional demographic data to identify grid cells with sensitive populations.
- Target appropriate mitigation measures to areas with high TAC emissions and sensitive populations.
- Follow up with more sophisticated techniques to evaluate exposure.

Population Weighted Emissions

Diesel PM10*Population Under 18

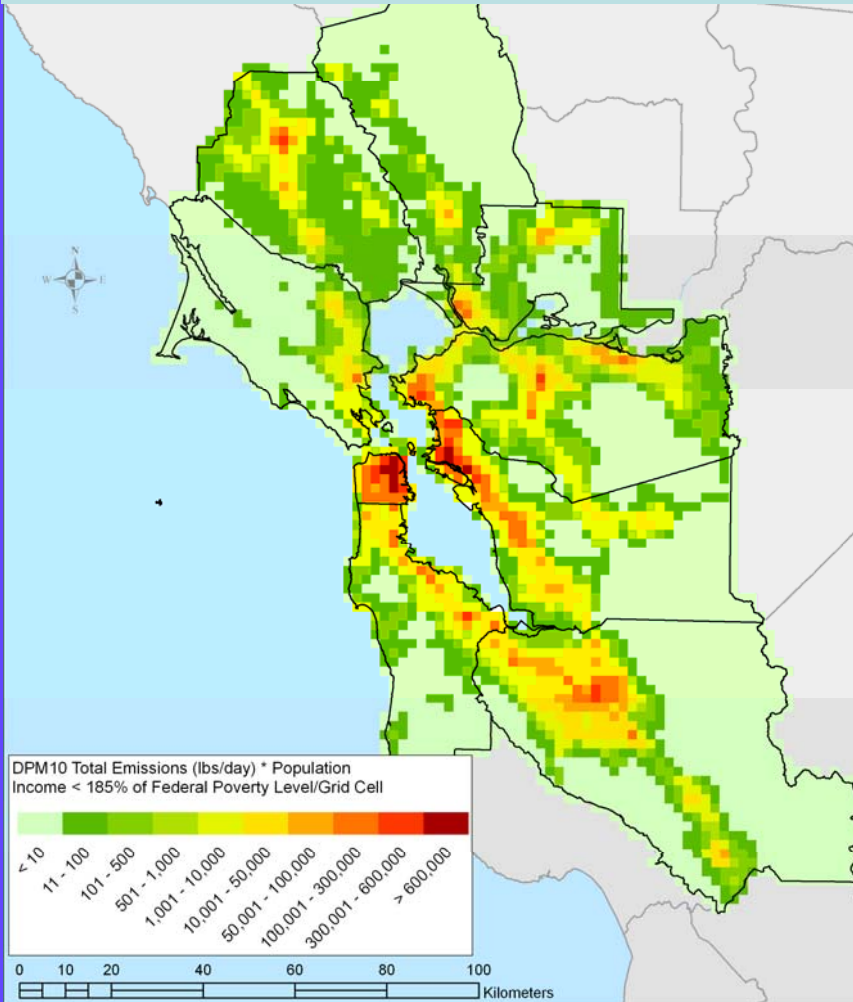


Diesel PM10*Population Over 64

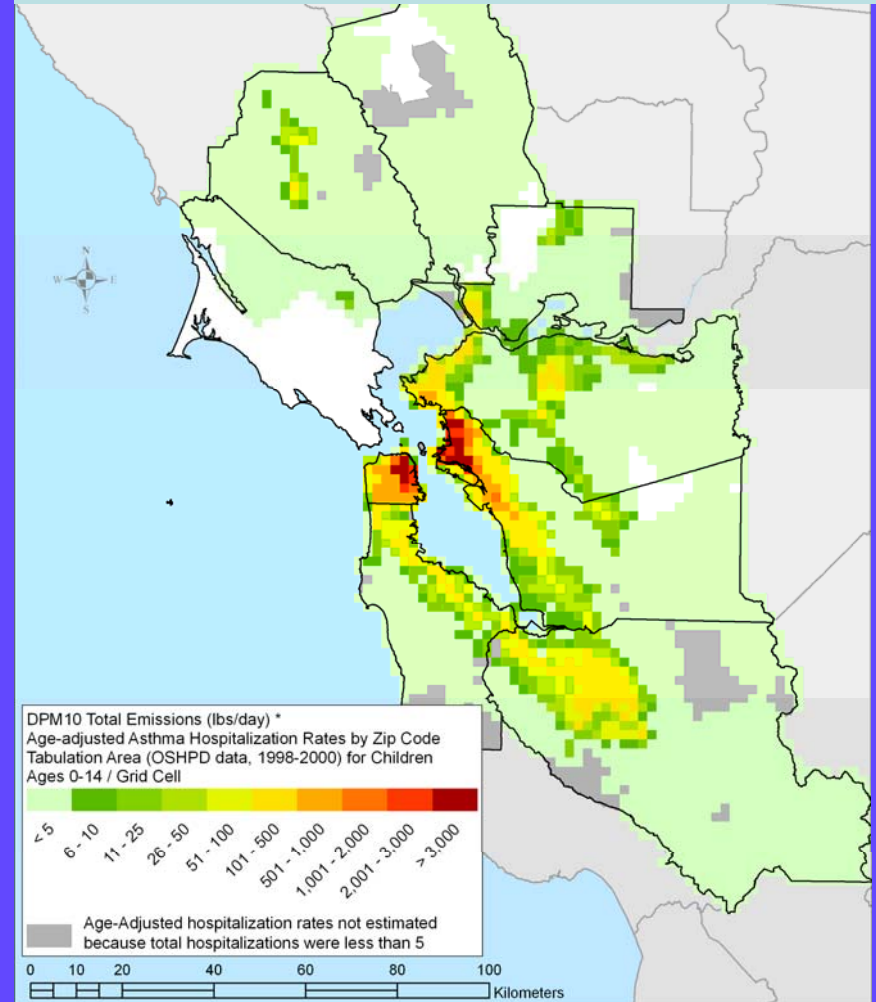


Weighted Emissions

Diesel PM10* (Income < 185%)

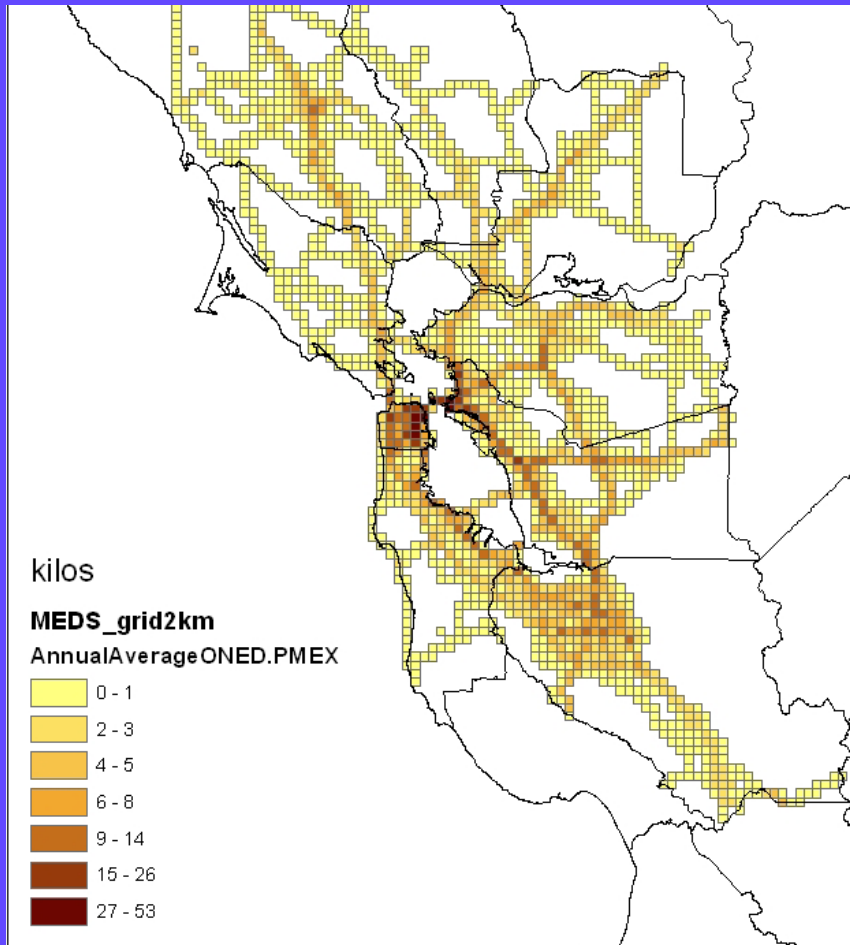


Diesel PM10* Asthma Rate

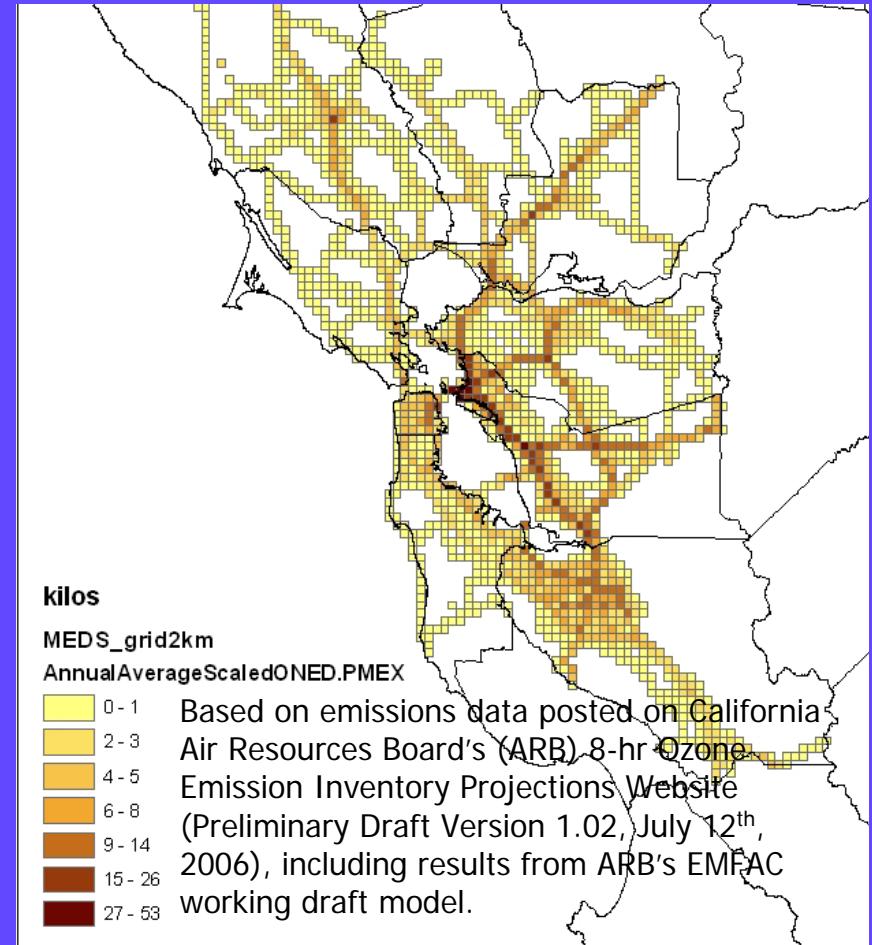


Proposed Redistribution of On-Road Diesel PM Emissions

Current EMFAC



EMFAC Working Draft Model



Next Steps

Phase II: Modeling Concentrations and Continued Mitigation

- Preliminary modeling—local & regional scale
- Participate in health risk assessments
 - Port of Oakland
 - Rail Yards
- Additional mitigation measures

Next Steps

Phase III: Exposure Assessments and Continued Mitigation

- Exposure assessments
- Refined modeling & measurements
- Additional health risk assessments
- Additional mitigation measures