



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

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



Community Air Risk Evaluation (CARE) Program Overview

Cumulative Impacts Working Group Meeting

Philip Martien, Ph.D.

Bay Area Air Quality Management District

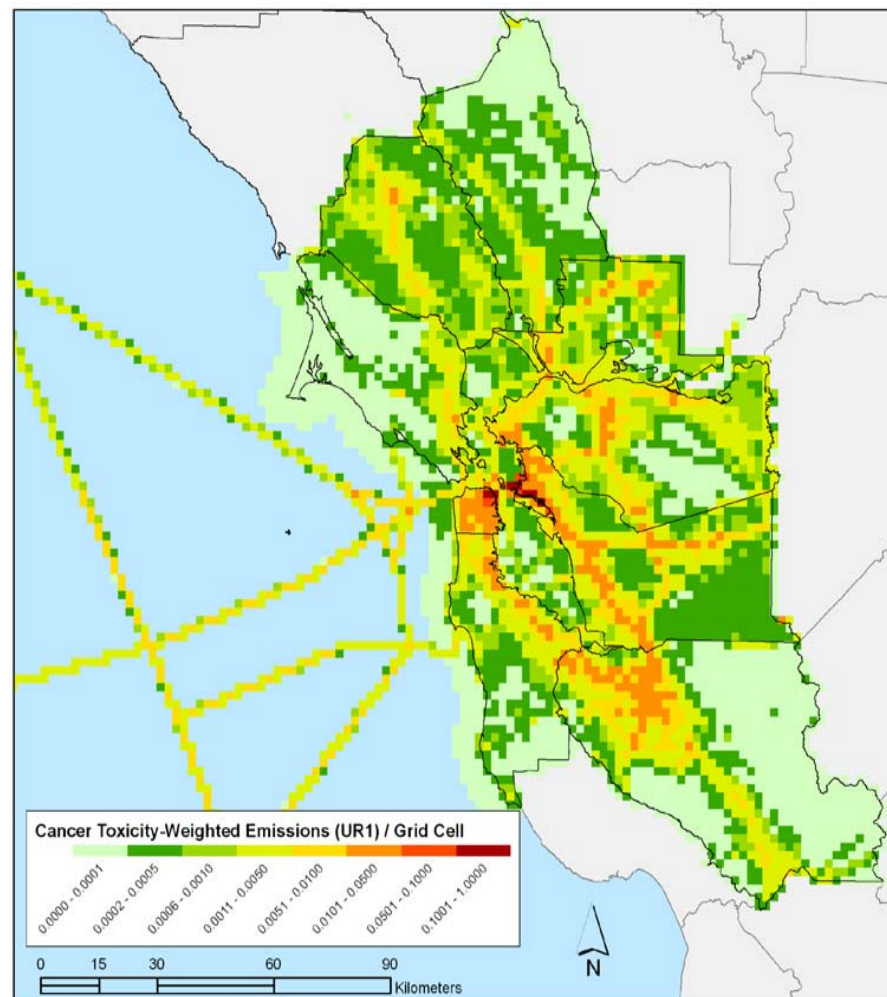
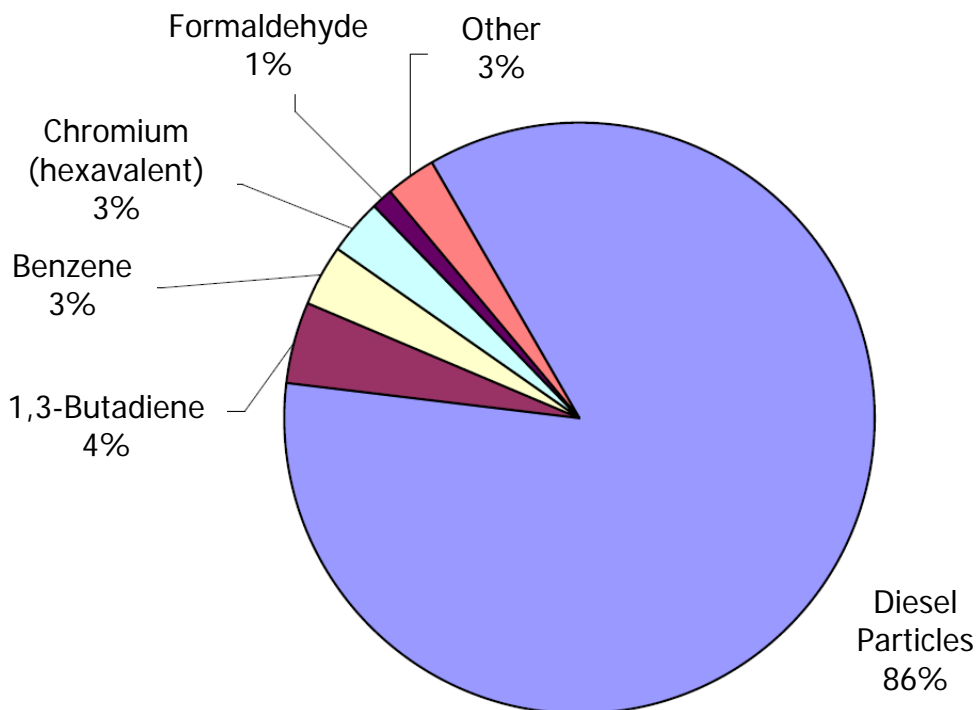
March 5, 2009

CARE Program Objectives

- Evaluate regional and community cancer and non-cancer health risks from ambient toxic air contaminants
- Identify sensitive populations
- Focus health risk mitigation measures on locations with higher risk levels and sensitive populations



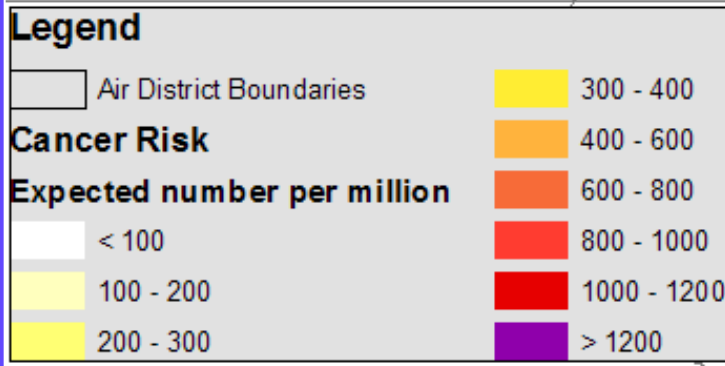
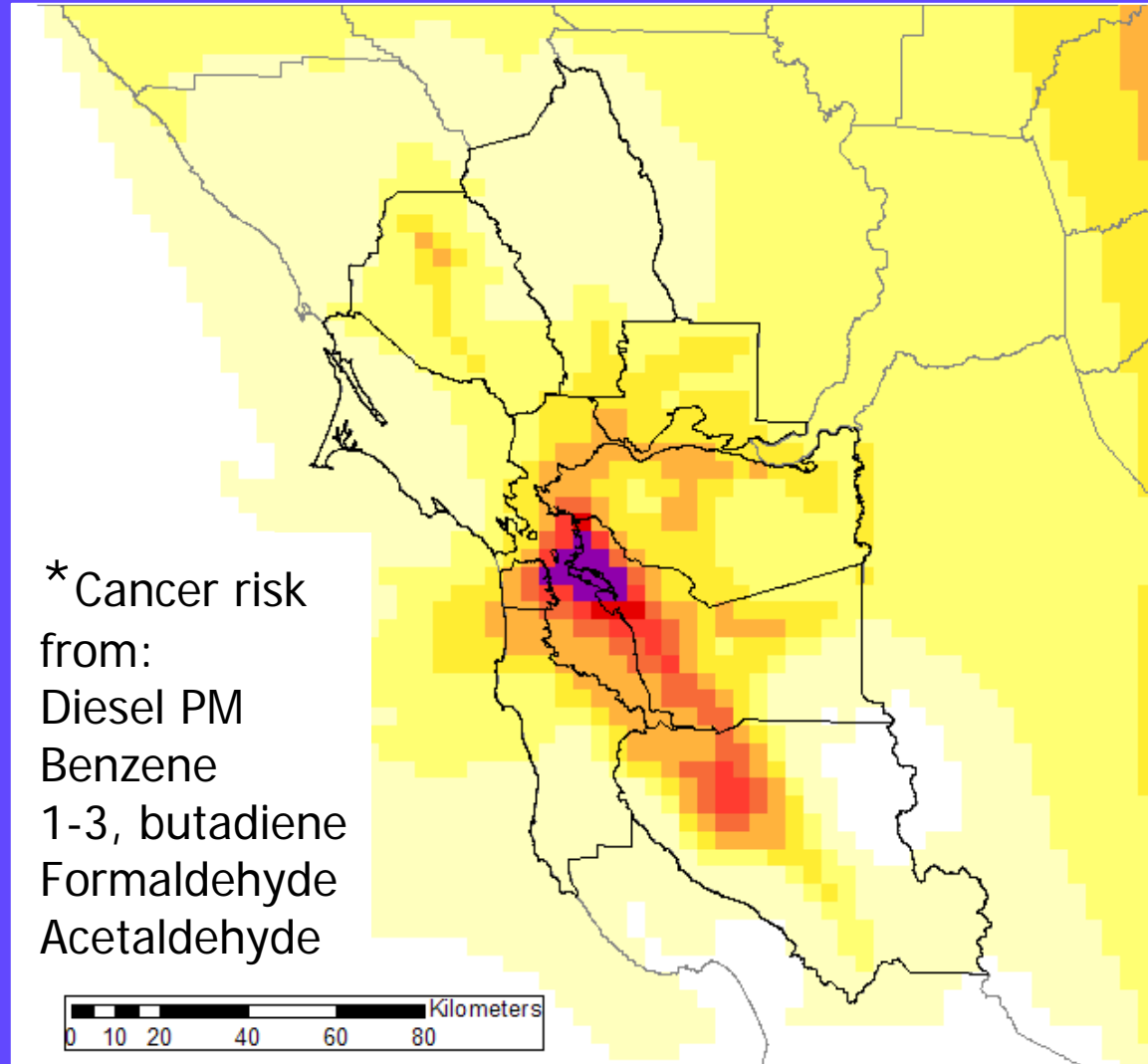
Cancer Toxicity-Weighted Emissions: Bay Area (2005)



Model-Estimated Cancer Risk*

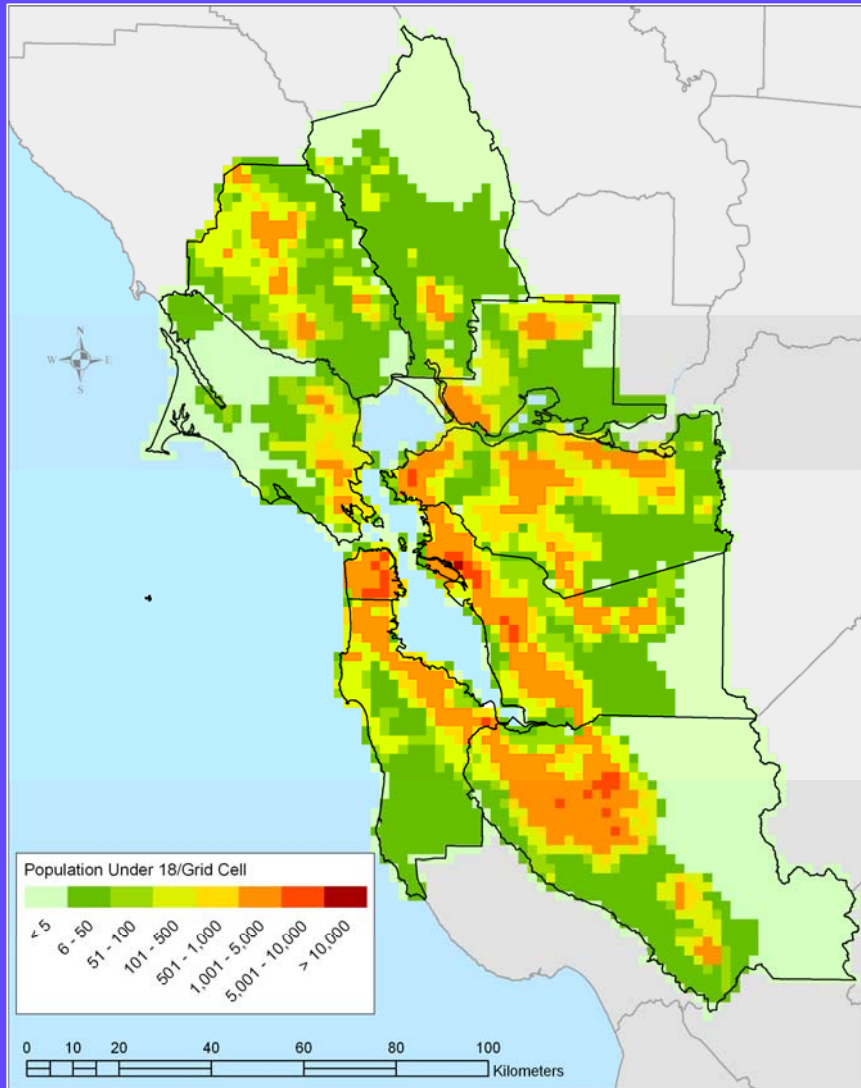
Based on year 2005 emissions

- Expected cancer incidents per million people – 70 year exposure
- Modeled concentrations weighted by health risk of each compound

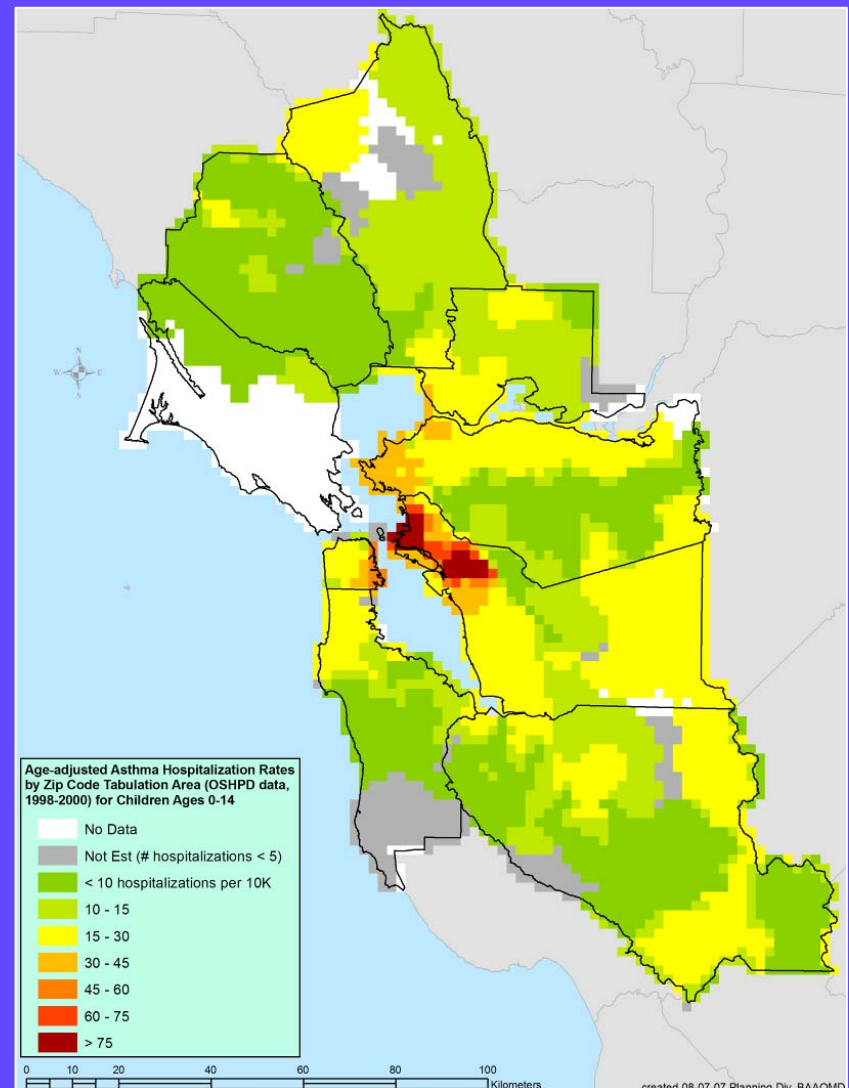


Demographic & Health Data

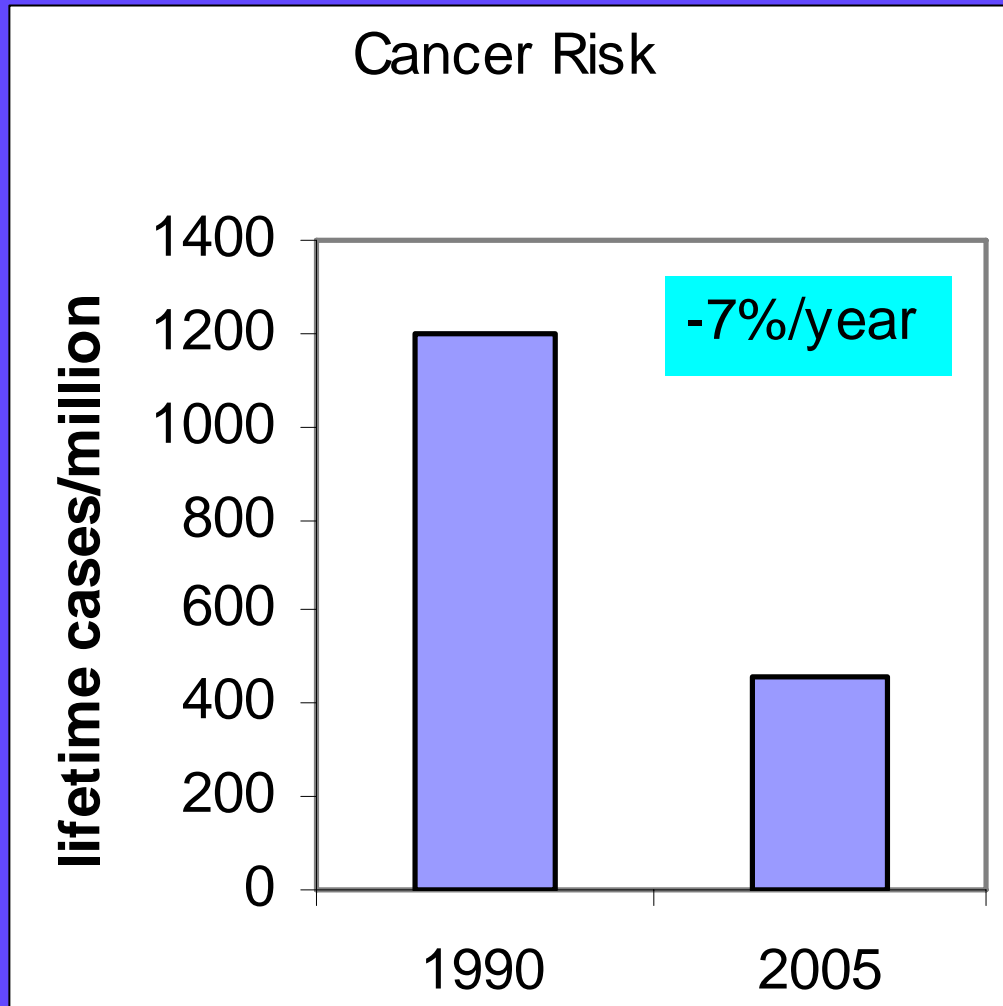
Population under 18



Asthma Hospitalization Rates



Measured Trends in Toxic Air Contaminants Show Risk Reduction



- Bay Area average cancer risk from air pollutants is **decreasing**
- Risk in some locations is high compared to average
- **Local measurement studies** guided by
 - regional modeling
 - demographic & health data
 - community input

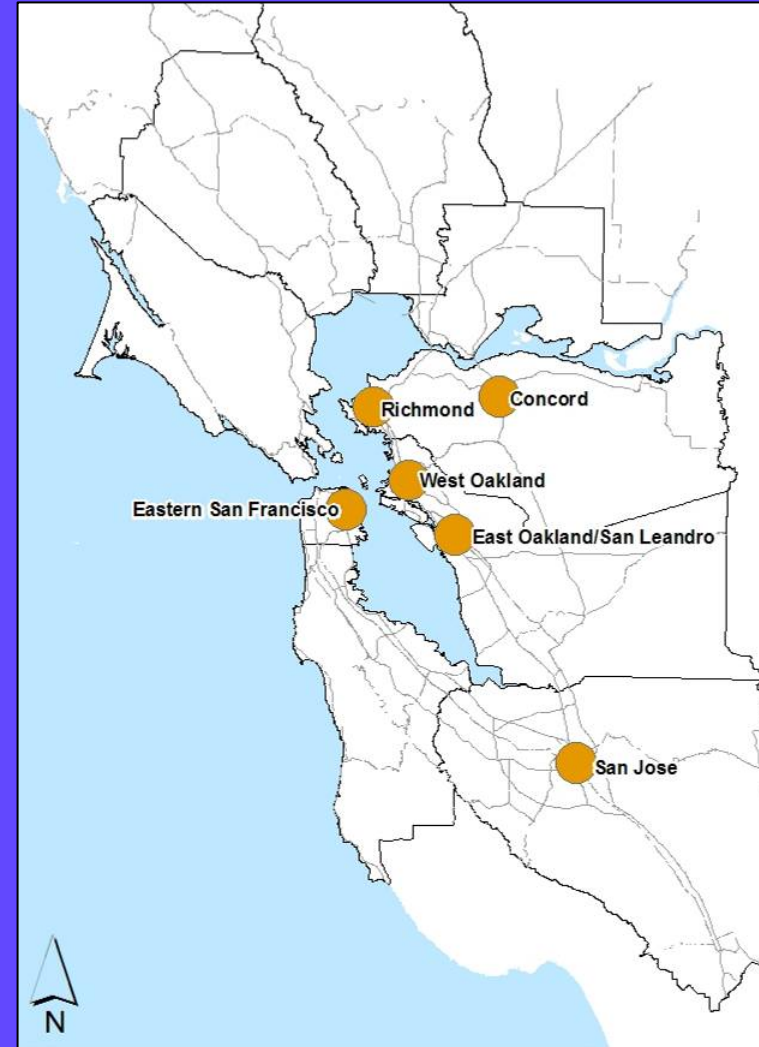
Local Studies and Measurements

- West Oakland health risk assessment
 - Local-scale modeling
- West Oakland truck traffic survey
 - District collaboration with community
- West Oakland measurement study
 - Saturation monitoring
 - Study design and site selection underway



CARE Mitigation Action Plan

- Focus risk reduction activities where they are most needed
- Based on maps of toxic air emissions and sensitive populations, six impacted communities were identified
 - Grant funds
 - Community outreach
 - Liaison with local health & planning departments
 - Green Ports Initiative
 - Land use considerations in risk reduction



Grant Funds Spent in Highly Impacted Communities

Highly Impacted Community	NOx Tons	ROG Tons	PM Tons	Incentives Funding
West Oakland	331	50	20	\$7,500,000
Richmond	49	8.3	2.7	\$1,600,000
East San Francisco	21	1.4	2.2	\$1,305,00
East Oakland/ San Leandro	30	2.5	2	\$825,000
San Jose	25.5	2	1	\$800,000
Concord	1.6	0.03	0.15	\$68,000
Total	458	64	28	\$12,100,000

Community Outreach

- Two rounds of community meetings in impacted areas in 2008
- Answer questions, discuss community concerns
- Seek input on projects to fund through the Air District's Grant and Incentive programs
- Provide community-specific information on toxic air contaminants and emission reductions
- Collaborate on local studies



Land Use Considerations in Risk Reduction

- Transportation is the largest source of air pollutants
- Coordinate land use, transportation, and air quality planning to minimize impacts
- Continue focusing grants, outreach, monitoring, and enforcement
- Develop targeted regulations – Indirect Source Rule
 - Address impacts of growth on both regional and local air quality
 - Reduce greenhouse gas emissions from land use
 - Support and implement CARE program goals and priorities

Collaboration on Cumulative Impacts

- Addressing cumulative impacts should consider many factors influencing health outcomes, involve other agencies and groups
- Collaboration with State
 - District part of Statewide process on cumulative impacts & precautionary approaches
 - Rulemaking & enforcement
- Collaboration with local officials
 - Cities and counties have authority over land-use decisions
 - County health officers are local health experts
- Collaboration with communities