



# Addressing Disproportionate Adverse Impacts of Air Pollution on Local Communities

NACAA Spring Membership Meeting  
May 24, 2011

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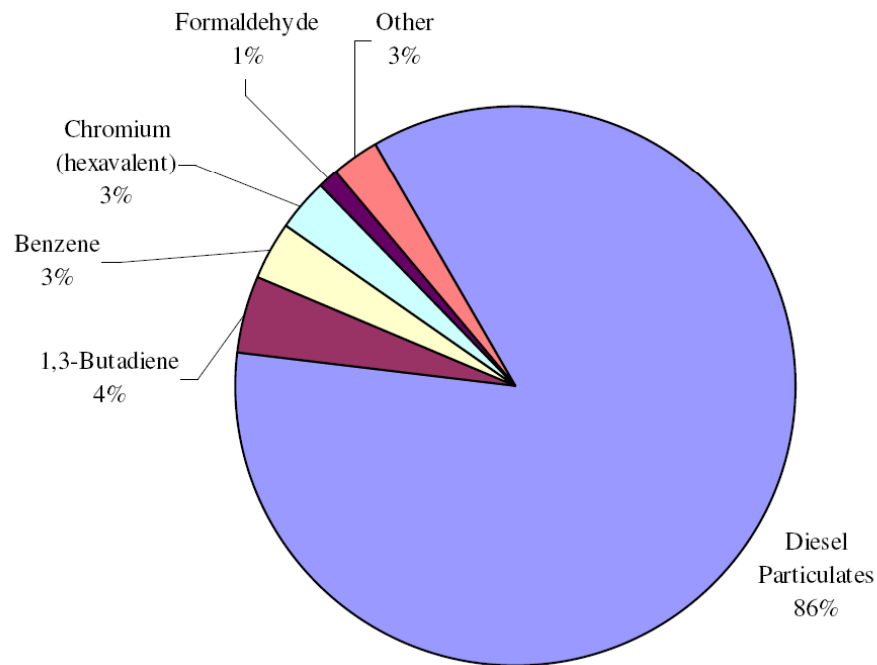
# Community Air Risk Evaluation (CARE) Program

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

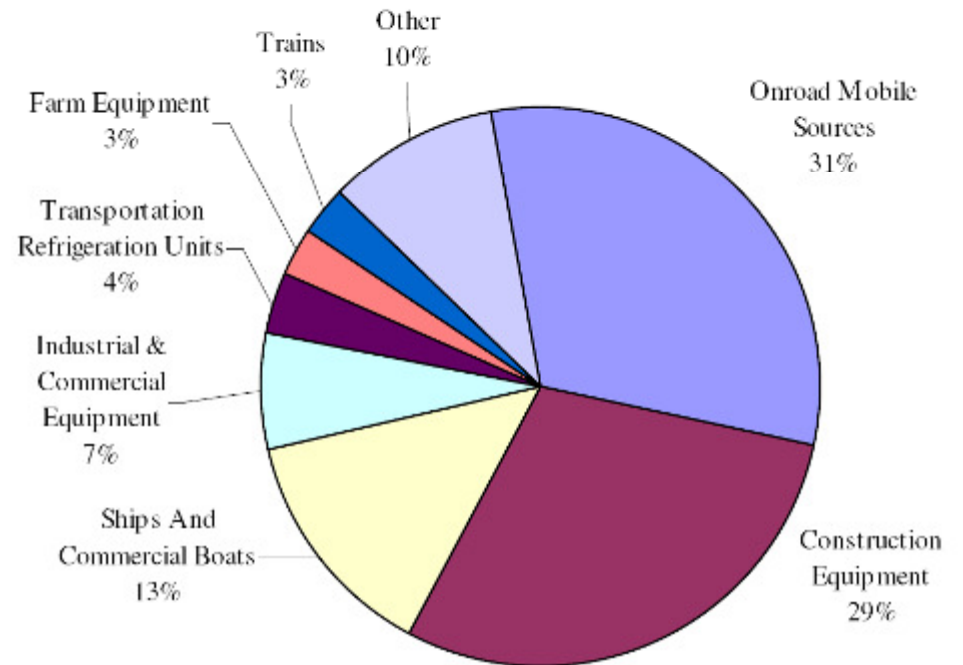


# Cancer Toxicity-Weighted Emissions (2005)

## By Pollutant

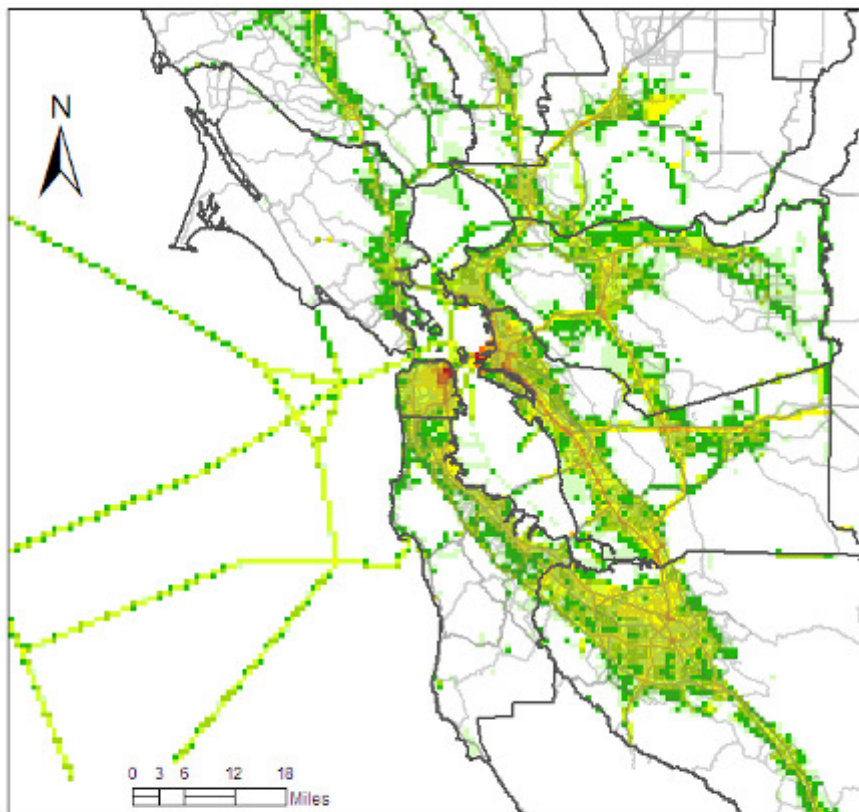


## By Source Category

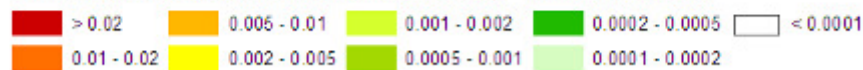


# Air Toxics Emissions and Risk (2005)

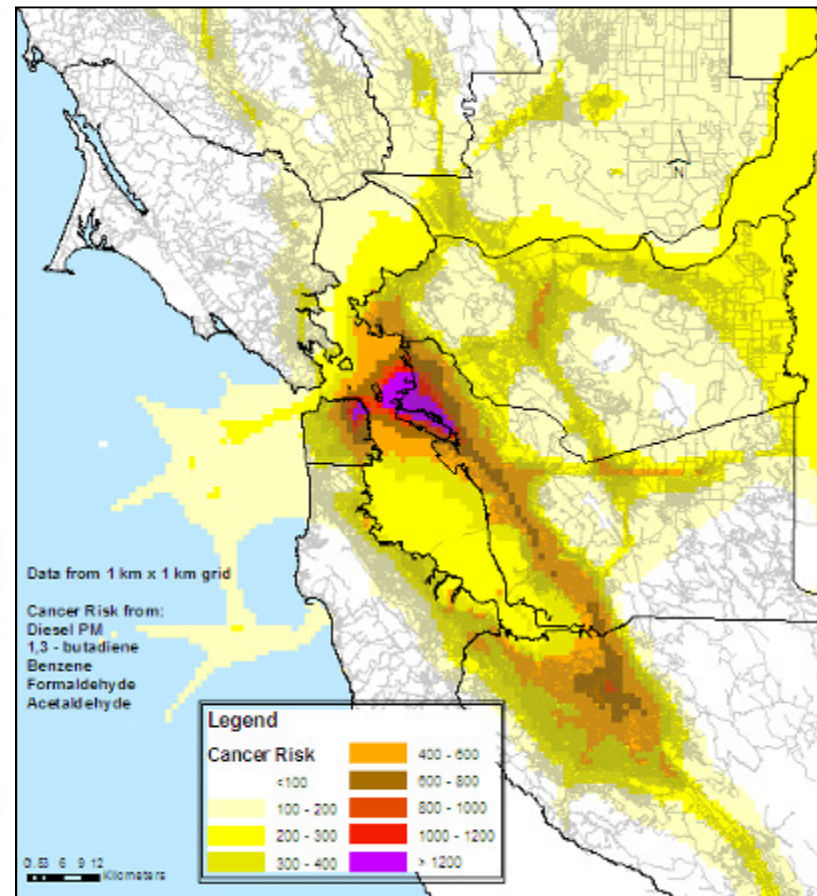
## Risk-weighted Emissions



**Cancer risk-weighted emissions (lbs/day \* unit risk factor)**



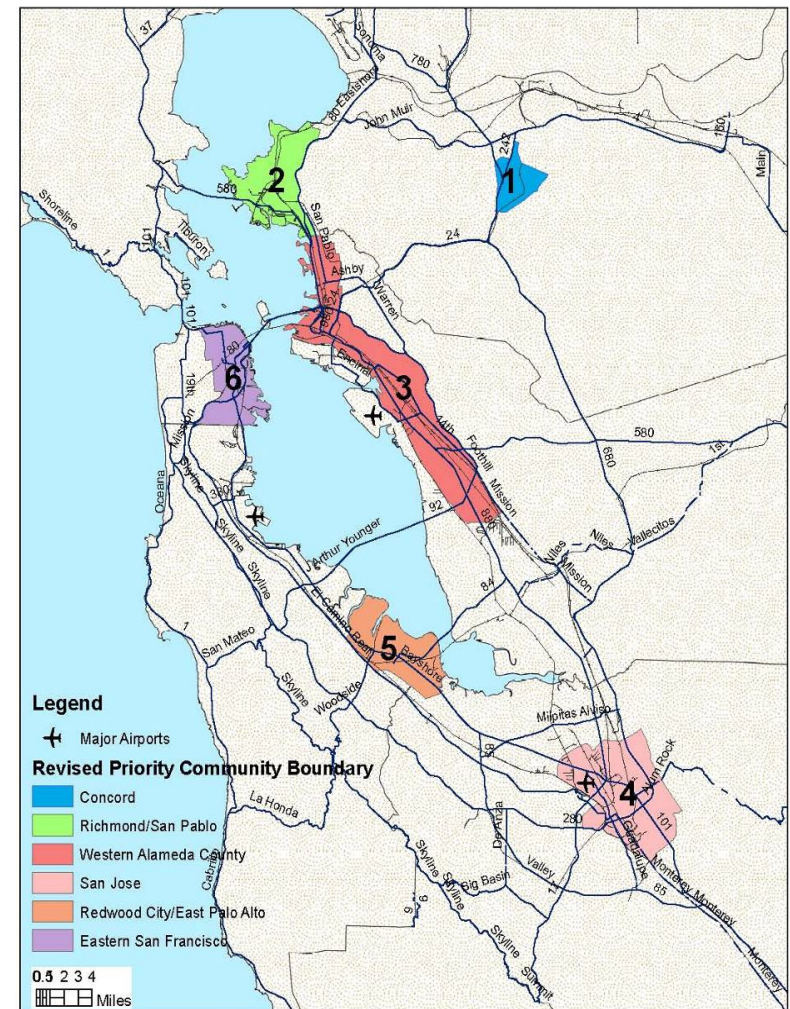
## Modeled Air Toxics Risk





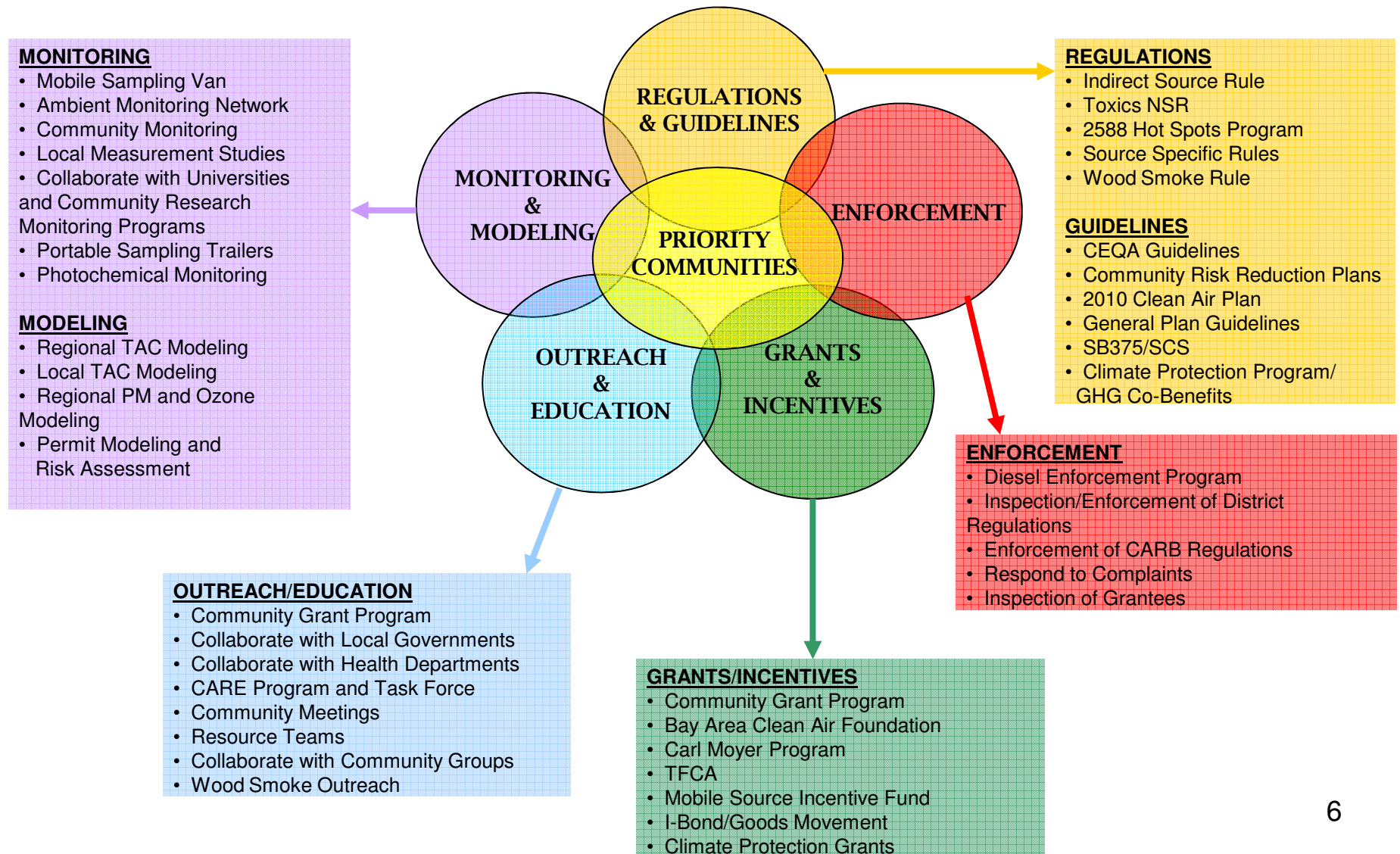
# Impacted Communities

- Identified areas with high modeled exposure of youth & seniors to major air toxics
- High emissions of air toxics
- Low household income
- Set boundaries at major roadways



# Clean Air Communities Initiative

## Multifaceted Approach to Cumulative Impacts

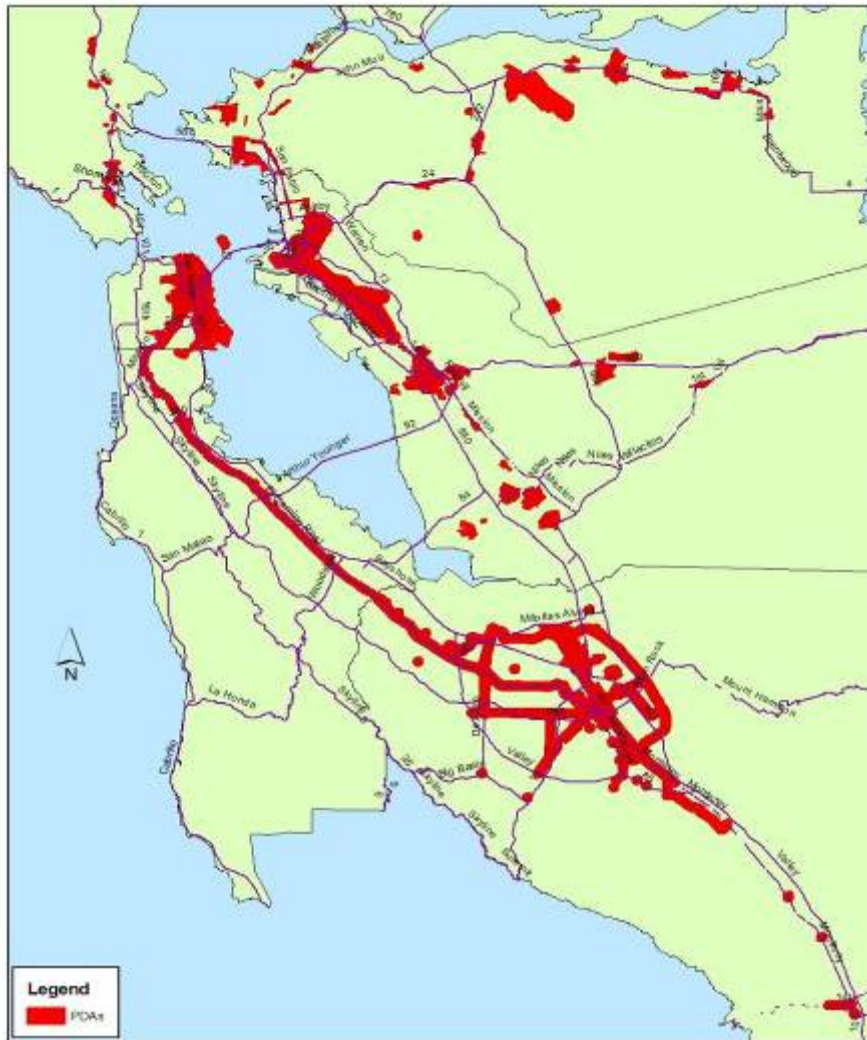


# California Climate Protection Mandates: AB 32 & SB 375

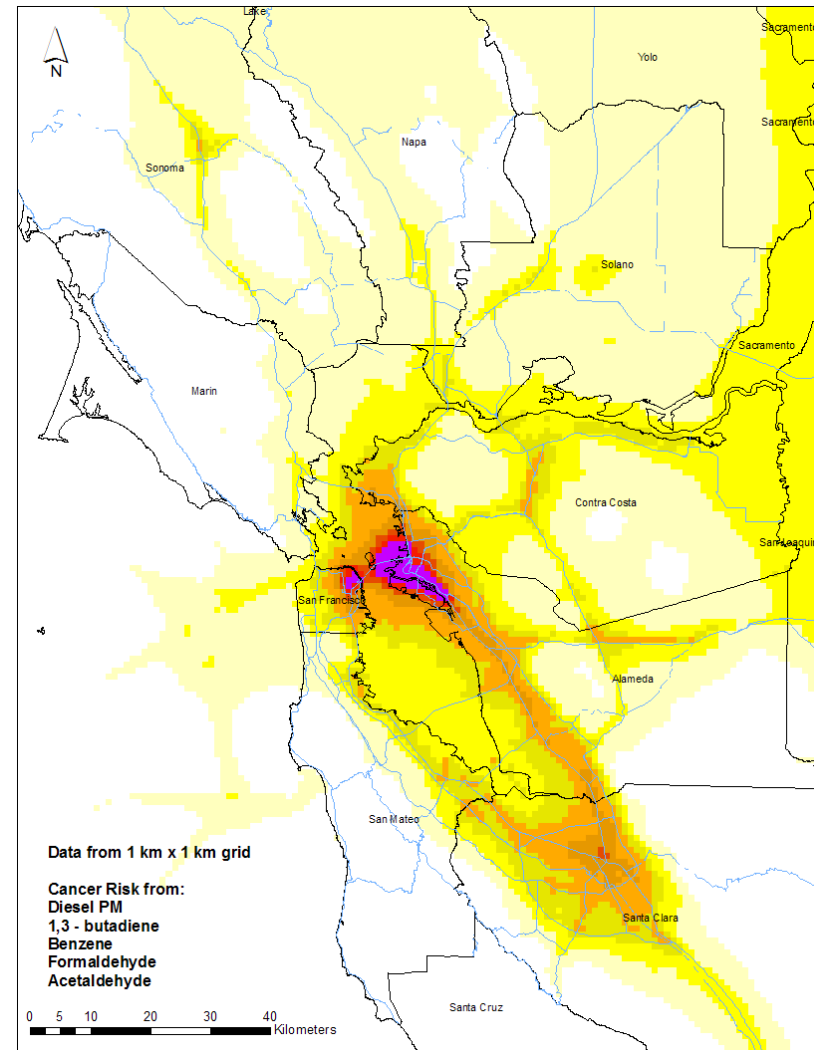
- Assembly Bill 32: Global Warming Solutions Act of 2006
  - Reduce GHG emissions in California to 1990 levels by the year 2020; 1990 levels = 427 MMT of CO<sub>2</sub>e
  - Scoping Plan specifies reductions required for all industry sectors and mechanisms for achieving reductions
- Senate Bill 375: Sustainable Communities and Climate Protection Act
  - Called for in AB 32 Scoping Plan as a means to reduce GHGs from *the transportation sector*, i.e. cars and light trucks (~30% of GHGs)
  - 18 metropolitan regions given GHG reduction target for 2020 and 2035. Reductions to be achieved via the regional transportation plan and projected land use pattern.
  - S.F. Bay Area targets: 7 % reduction by 2020; 15 % reduction by 2035
  - Regional Transportation Plan and SCS underway; complete 2013

# Priority Development Areas and Air Toxics

## Priority Development Areas



## Modeled Air Toxics Risk





# BAAQMD CEQA Guidelines

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- California Environmental Quality Act – similar to NEPA, but applies to all projects requiring public agency *approval*
- Guidelines assist local lead agencies in evaluating air quality impacts of land use development
- Include analytical tools, mitigation measures, thresholds to determine significance of AQ impacts
- Last published 1999, update needed
  - Attain health-based air quality standards for ozone and fine PM
  - Reduce local exposure to toxic air contaminants and fine PM
  - GHG reductions to achieve State mandates (AB 32, SB 375)
- Goal: encourage air quality beneficial land use
  - Support infill, TOD, mixed use
  - Minimize public health impacts of new development

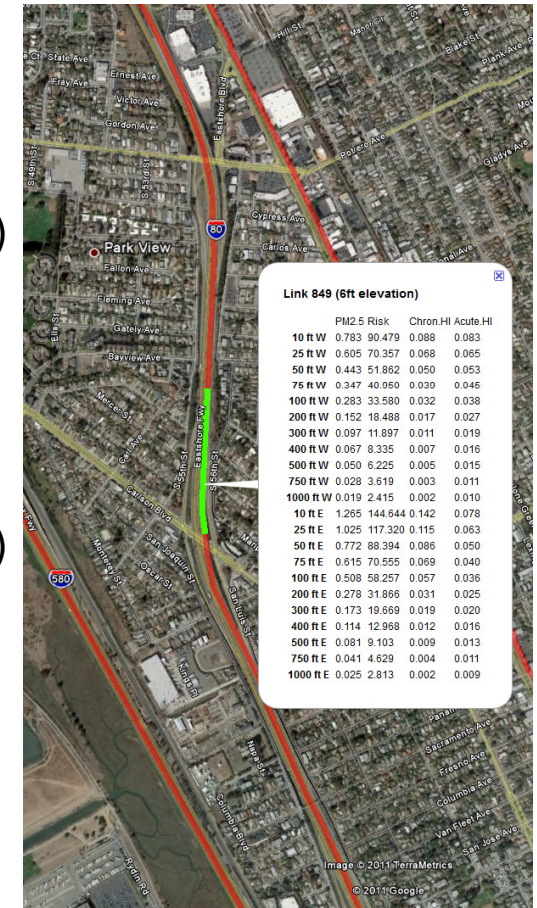
# BAAQMD CEQA Guidelines

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- GHGs
  - Address critical void – legal challenges, but no state guidance
  - Quantitative thresholds derived from Scoping Plan OR
  - Plan-based threshold – consistency with local climate action plan
  - Credit for lower vehicle use/efficiencies of infill, mixed use projects
- Local AQ impacts
  - Thresholds address PM and toxic risk
  - Address new sources of pollution *and* new receptors near existing sources (eg, freeways)
  - Consider individual sources and cumulative impacts
  - Consider *localized* impacts – within 1,000 feet
  - Quantitative threshold or plan-based approach – community risk reduction plans
- Criteria pollutants, odors, etc.

# Technical Tools to Assist Local Planners

- **State Highways Screening Tables**
  - Values for all links along every state highway
  - Local traffic volumes, truck percentages, and meteorology
  - Reflects reductions based on CARB diesel rules (2014)
  - 1<sup>st</sup> and 2<sup>nd</sup> floor receptors
  - Google Earth application
- **Surface Street Screening Tables**
  - County specific meteorology and truck percentages
  - Reflects reductions based on CARB diesel rules (2014)
- **Stationary Source Screening Tables**
  - Health risk assessment values where available
  - Site-specific modeling parameters and recommended default values
- **Modeling Guidance**
  - User friendly instructions for using screening tools
  - Acknowledging incorporation of risk reduction measures



# Community Risk Reduction Plans

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- Community wide planning approach to reduce cumulative impacts
- Collaborative effort between local governments & Air District
- CRRP elements
  - Define planning area & consider future development plans
  - Establish future goals, emission reduction targets
  - Prepare emission inventories and modeling
  - Develop & implement emission reduction measures
  - Monitor progress, Public involvement process
- Air District preparing local emission inventories
- Pilot projects underway in San Jose, San Francisco
- Air District provided funds to local jurisdictions to support CRRP development and implementation



# Community Risk Reduction Plans

- San Francisco, San Jose pilot CRRPs moving forward
  - Modeling local air pollutants
  - Identifying mitigation measures
  - Hosting public meetings
- Raising awareness of integrating air quality into local planning processes
- Jurisdictions committing to CRRPs in their General Plans – City of Santa Clara, Redwood City, San Pablo
- Current CRRP work to inform CRRPs in other CARE communities



# Regional Agency Collaboration

- Convened Air Quality/PDA workgroup with regional agency partners
  - Metropolitan Transportation Commission, Association of Bay Area Governments, Bay Planning and Conservation Commission
  - Assist in addressing air quality impacts in station area plans
  - Work with regional, local staff to evaluate AQ impacts and identify risk reduction measures
  - Streamline CEQA review for future projects
- Goals
  - Encourage healthy infill development
  - Provide clarity to local government



# Example of Station Area Plan Analysis: Union City BART (Draft)

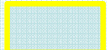



**Surface Streets:** PM and risk less than significant at 10 ft. or less.

**Highways (238):** PM and risk less than significant.

## Stationary sources:

- 1 source (diesel generator) has preliminary risk above threshold based on screening values.
- Next step: refined modeling.
- If refined modeling still shows significant impact, consider setbacks and/or diesel PM filter.

## LEGEND:

	: BART station		: Station Area Plan boundary
	: 1,000 ft boundary		: Source(s) needing refined analysis





# Community Development Guidelines

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- Simplify process for analyzing and mitigating local AQ impacts
- Provide worksheet/checklist to streamline review
- Standardize mitigation measures, e.g.,
  - Indoor air quality filters and ventilation
  - Building heights and air intakes
  - Truck routes and idling limits
  - Setbacks for drycleaners, back-up generators, gas stations, etc.
  - Land use and transportation planning to reduce vehicle emissions
- Use as project mitigation, can also inform measures in CRRPs





# Next Steps

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- Complete pilot CRRPs in SF and San Jose
- Initiate CRRPs in other CARE communities
- Complete community development guidelines/provide guidance on mitigation measures
- Continue to provide technical assistance to local planners and developers
- Collaborate with local, regional planners on air quality analysis of station area plans

