



Bay Area Air Quality Management District CEQA Guidelines Update

Public Workshop

Staff-Recommended California Environmental Quality Act (CEQA) Thresholds of Significance

October 2, 2009
Sunnyvale

[Objectives of the Guidelines]

- Assist in attainment of state and federal standards.
- Protect public health.
- Reduce emissions from land use and transportation.
- Support transit-oriented, smart growth and infill development.

Reasons to Update Thresholds

- Substantial changes in air quality regulatory activity since last update in 1999.
- Address emerging & growing air quality concerns.
 - Greenhouse gases.
 - Local impacts.
- Changes in analytical methodologies & mitigation strategies.

[Scope of the Guidelines Update]

- Comprehensive review of thresholds, analytical methods, mitigation strategies.
- Provide guidance to local governments for analyzing air quality impacts of new land use developments.
- Address construction and operational related emissions from individual projects and plan-level (general plans, specific plans, etc.) developments.

[New and Revised Thresholds]

- Criteria Pollutants: Ozone Precursors (ROG, NOx) & Particulate Matter (PM₁₀, PM_{2.5})
- Greenhouse Gases
- Local Community Risks and Hazards

- Unchanged Thresholds: Carbon Monoxide and Odors

Criteria Pollutant – Project Level

Project Level	Construction and Operational (daily)	Operational (annual)
ROG	54 lb/day	10 tpy
NO _x	54 lb/day	10 tpy
PM ₁₀	82 lb/day	15 tpy
PM _{2.5}	54 lb/day	10 tpy

Why These Thresholds?

- Levels based on the trigger levels for the federal New Source Review (NSR) Program.

Criteria Pollutant – Plan Level

Thresholds for Plan Level Emissions	
ROG	Consistency with Current Air Quality Plan control measures AND Rate of VMT increase or vehicle trips is less than the rate of increase in the Plan's population growth rate.
NO_x	
PM₁₀	
PM_{2.5}	

Why These Thresholds?

- Addresses past difficulty of comparing projects with the growth rates in AQPs that could be several years older.
- The option of using vehicle trips rather than VMT for comparison addresses problem that VMT is not always available.
- Supports implementation of transportation control measures.

GHG – Project Level

Project Level	Operational Related
Non Stationary Sources	Compliance with Qualified Climate Action Plan OR Threshold of 1,100 MT CO ₂ e/yr OR 6.7 MT CO ₂ e/capita/yr (residential) & 4.6 MT CO ₂ e/SP/yr (mixed use)
Stationary Sources	10,000 MT/yr

Why These Thresholds?

- Numerical threshold represents needed GHG emission reductions from land use to meet AB 32.
- Efficiency approach offers options for large projects.
- Stationary source threshold recognizes reductions expected from AB 32 regulations.

[GHG – Plan Level]

	Operational Related
Plan Level	<p>Qualified Climate Action Plan</p> <ul style="list-style-type: none"> • emissions inventory • reduction goal consistent with AB 32 • measures • monitoring <p>OR</p> <p>6.7 MT CO₂e/capita/yr (residential) & 4.6 MT CO₂e/SP/yr (mixed use)</p>

Why These Thresholds?

- Qualified Climate Action Plan follows OPR guidance.
- Recognizes Bay Area communities that developed climate action plans.
- Qualified Climate Action Plans ensure that projects achieve their fair share of GHG emission reductions.
- Efficiency approach allows comparison of small and large plans on equal terms.

[GHG – Construction]

Project Level	Construction Related, Plan & Project
Non Stationary Sources	<p data-bbox="525 696 915 796">Best Management Practices</p> <ul data-bbox="458 868 868 1011" style="list-style-type: none"> <li data-bbox="458 868 792 911">• Alternative fuels <li data-bbox="458 918 773 961">• Local materials <li data-bbox="458 968 868 1011">• Recycled demolition
Stationary Sources	

Why These Thresholds?

- Adaptable over time; considers improvements in construction emission reduction technologies.
- Operational thresholds alone would only capture extremely large construction and result in fewer reductions.

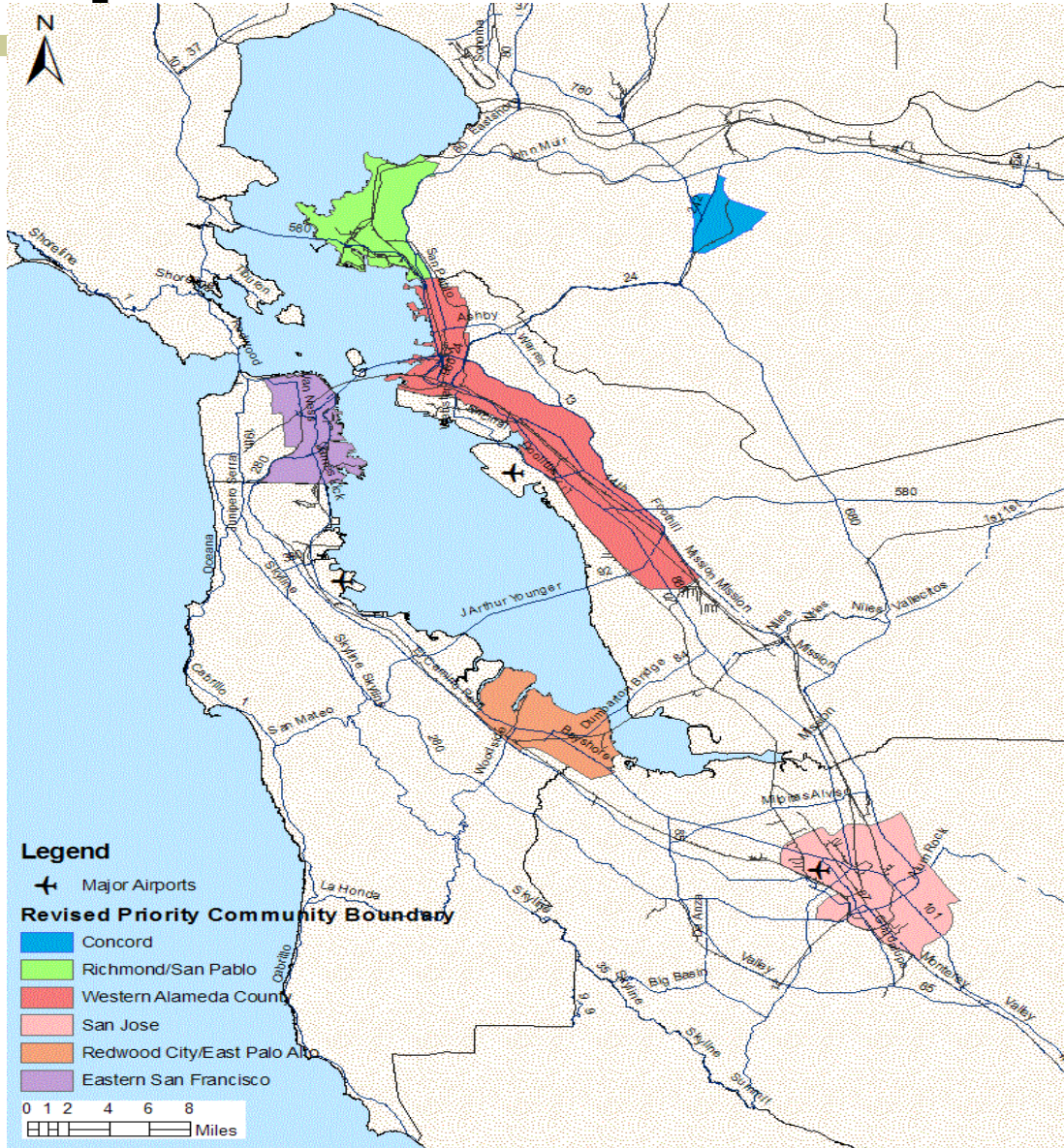
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Questions and Comments

[Local Community Risks & Hazards]

- New Source: land use developments that create emissions, including permitted sources, gas stations, roadways, etc.
- New Receptor: land use developments that house people, such as residential, hospitals, schools, etc., that may be sensitive to local emissions.
- Cumulative Impacts: the total impact from emissions of nearby sources.

Impacted Communities



- Impacted communities are communities disproportionately impacted by local air pollution.
- The Air District's Community Air Risk Evaluation program identified 6 impacted communities in the Bay Area.

Local Community Risk & Hazards – New Source/Receptor

Siting a New Source or Receptor

All Areas

- Cancer risk of >10 in a million
- Non-cancer Hazard Index >1.0
- PM_{2.5} level > 0.3 µg/m³ annual average

Impacted Communities

- Compliance with local risk reduction plans in impacted communities

Zone of Influence

- 1,000 foot radius from fence line of receptor

Why These Thresholds?

- Encompasses a broader analysis than excess cancer risk alone.
- Provides health protection to local residents.
- Incentivizes aggressive mitigation approaches to reduce risks in targeted infill areas.
- Consistent with EPA proposed stationary source significant impact level.

Local Community Risks & Hazards – New Source/Receptor (cumulative)

Cumulative Significance Criteria (Source or Receptor)

All Areas

- Cancer risk of > 100 in a million
- Non-cancer Hazard Index > 1.0
- PM_{2.5} level > 0.8 µg/m³ annual average

Impacted Communities

- Compliance with local risk reduction plans in impacted communities

Zone of Influence

- 1,000 foot radius from fence line of source or receptor

Why These Thresholds?

- Based on analysis of near-roadway exposures and consistent with EPA significant impact level and guidance.
- Provides health protection from multiple local sources.

Local Community Risks & Hazards – Plan Level

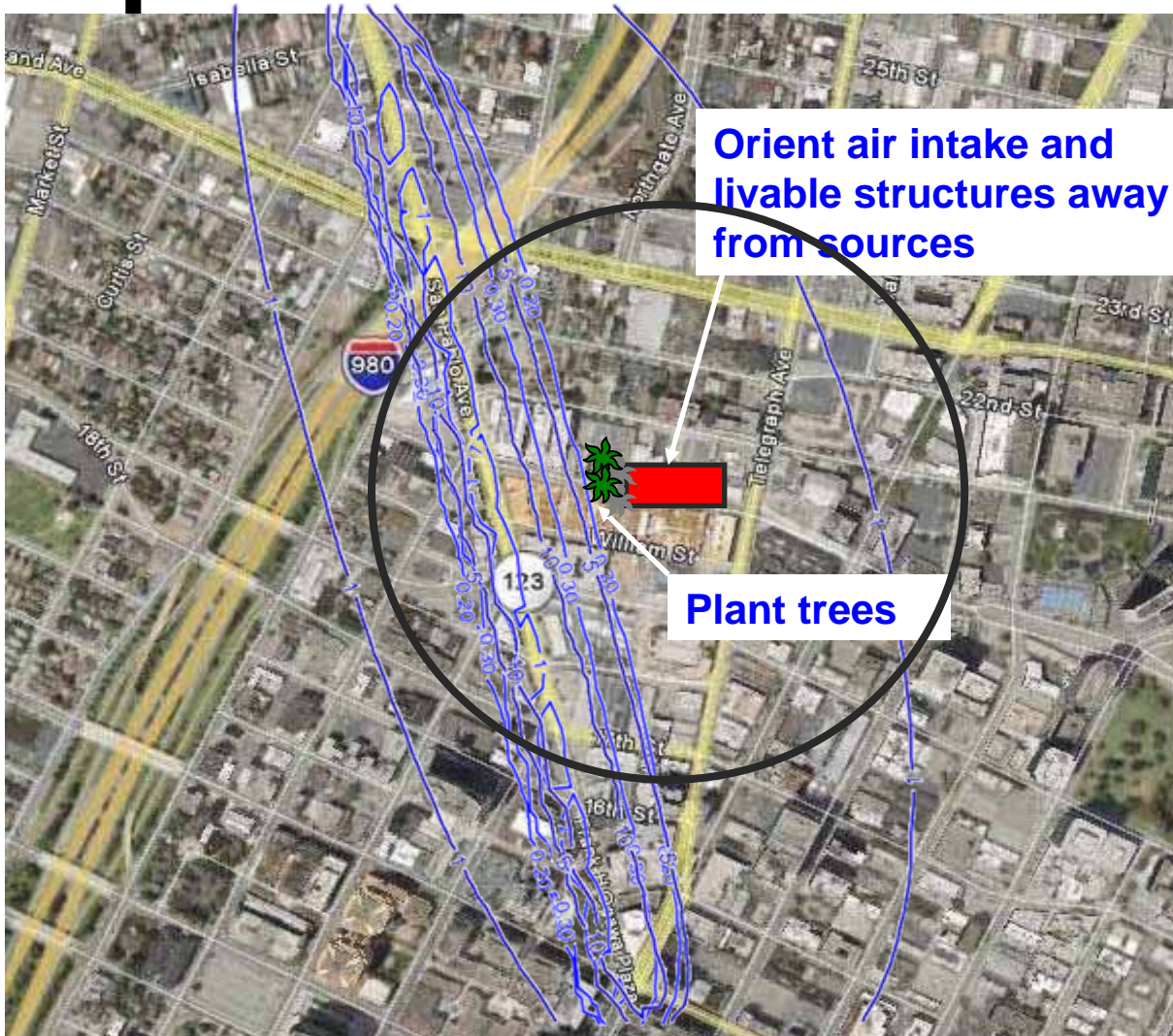
Risks & Hazards / Odors

- Overlay zones around existing and planned sources of TACs and odors
- Special overlay zones of least 500 feet on each side of all freeways and high volume roadways
- Local risk reduction plans in impacted communities

Why These Thresholds?

- Local jurisdictions can take preemptive action before project-level review to reduce the potential for significant exposures.
- Overlay zones are more effective than project by project basis - more mitigation options exist for overlay approach than case-by-case.
- Supports more robust cumulative consideration for future project CEQA analyses.

Example Siting a New Receptor



- Step 1 – Recommend Toxics Best Practices
- Step 2 – Evaluate Single Source Contribution
 - 1,000 foot radius
 - PM2.5 from roadway

PM2.5 (ug/m3) from San Pablo Ave (5300 vehicles per hour)		
200 ft	500 ft*	1000 ft
0.6	0.16	<0.3 ug/m3

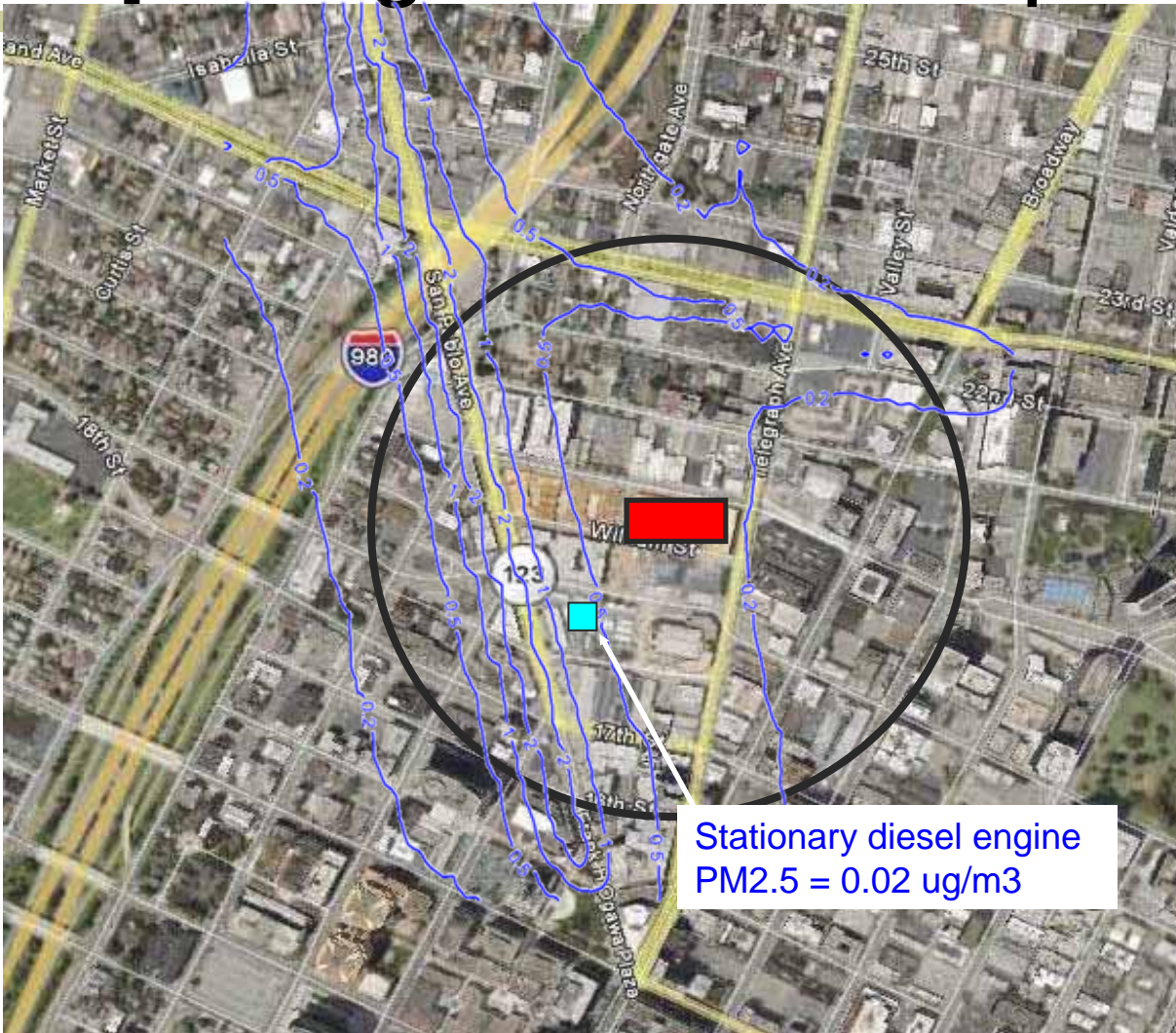
Cancer risk from San Pablo Ave (risk per million)		
200 ft	500 ft*	1000 ft
7	3	<10 in million

– Compare to thresholds
Less than Significant Impact

* Distance to new development

Example

Siting a New Receptor (PM2.5)



Step 3 – Cumulative Analysis for PM2.5

- 1,000 foot radius
- Evaluate ALL roadways

PM2.5 (ug/m3) contribution from ALL Roads (distance from San Pablo Ave)		
200 ft	500 ft*	1000 ft
1	0.4	0.25

- Evaluate ALL stationary sources

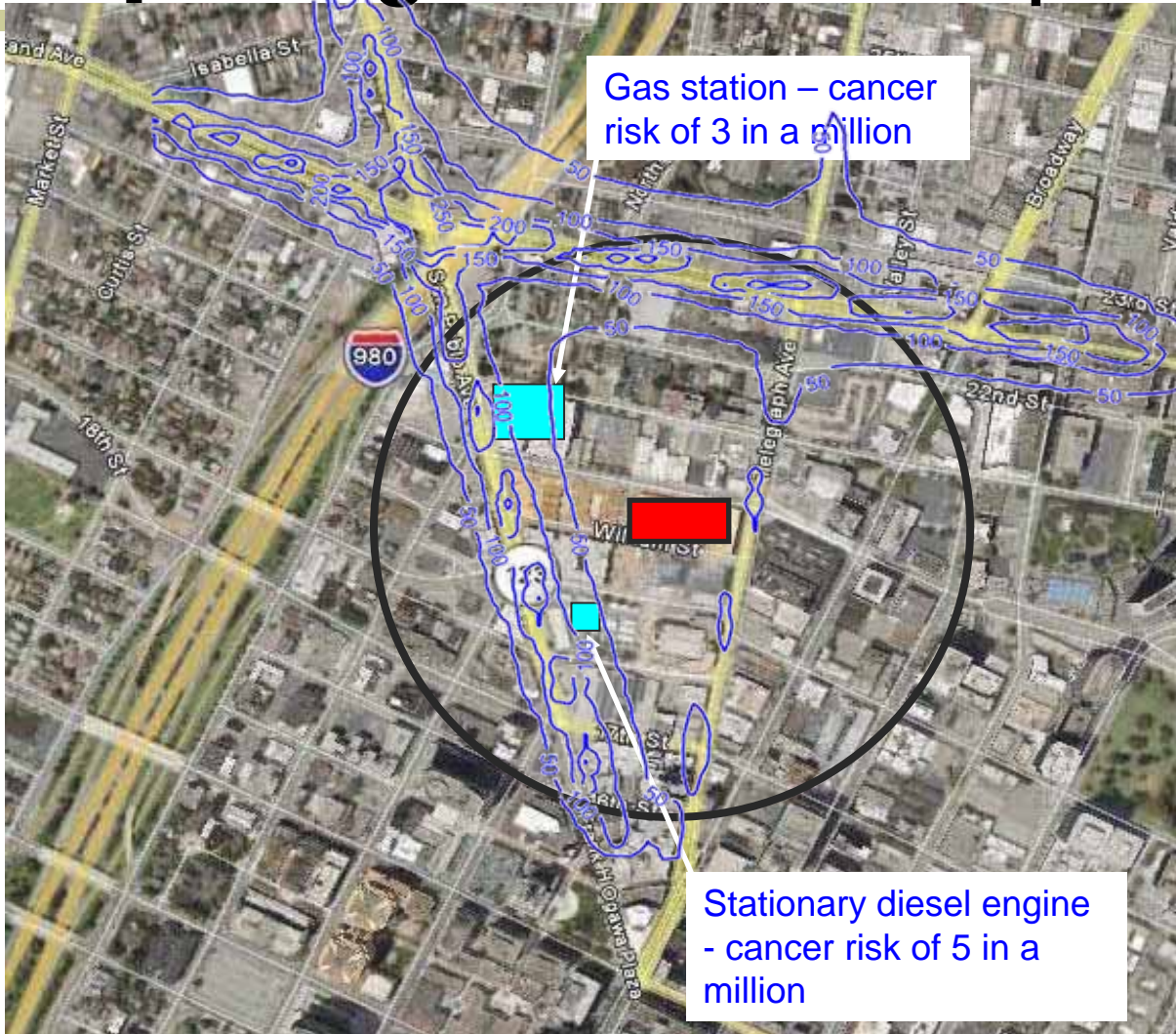
PM2.5 (ug/m3) from All Sources		
Roads	Pt Sources	Total
0.4	0.8 ug/m3 >	0.42

- Compare to threshold
Less than Significant Impact

* Distance to new development

Example

Siting a New Receptor (Cancer)



Step 3 – Cumulative Analysis for **Cancer Risk**

All Major Sources

– Roadways

Cancer risk (risk per million) from All roads (distance from San Pablo)

200 ft	500 ft*	1000 ft
60	35	35

– Stationary Sources

Cancer risk (risk per million) from All Sources

Roads	Pt Sources	Total
35	100 in a million >	43

– Compare to threshold
Less than Significant Impact

Schedule/Next Steps

- Comments due October 9, 2009
- Draft CEQA Guidelines – November 2009
- Visit our website for updates:
 - <http://www.baaqmd.gov/Divisions/Planning-and-Research/>
 - Click on Planning Programs and Initiatives (left side menu)
 - Click on CEQA Guidelines (left side menu)

- Contact: Greg Tholen at
gtholen@baaqmd.gov
415-749-4954



Questions and Comments