



Bay Area Air Quality Management District
CEQA Guidelines Update

Public Workshop

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

September 8, 9, & 10, 2009
Redwood City, Santa Rosa, & Oakland

[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
<p>Non Stationary Sources</p>	<p>Compliance with Qualified Climate Action Plan OR Threshold of 1,100 MT CO₂e/yr OR 6.7 MT CO₂e/capita/yr (residential) & 4.6 MT CO₂e/SP/yr (mixed use)</p>
<p>Stationary Sources</p>	<p>10,000 MT/yr</p>

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="625 797 1014 894">Best Management Practices</p> <ul data-bbox="558 967 968 1110" style="list-style-type: none"> <li data-bbox="558 967 888 1008">• Alternative fuels <li data-bbox="558 1016 873 1057">• Local materials <li data-bbox="558 1065 968 1110">• 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.

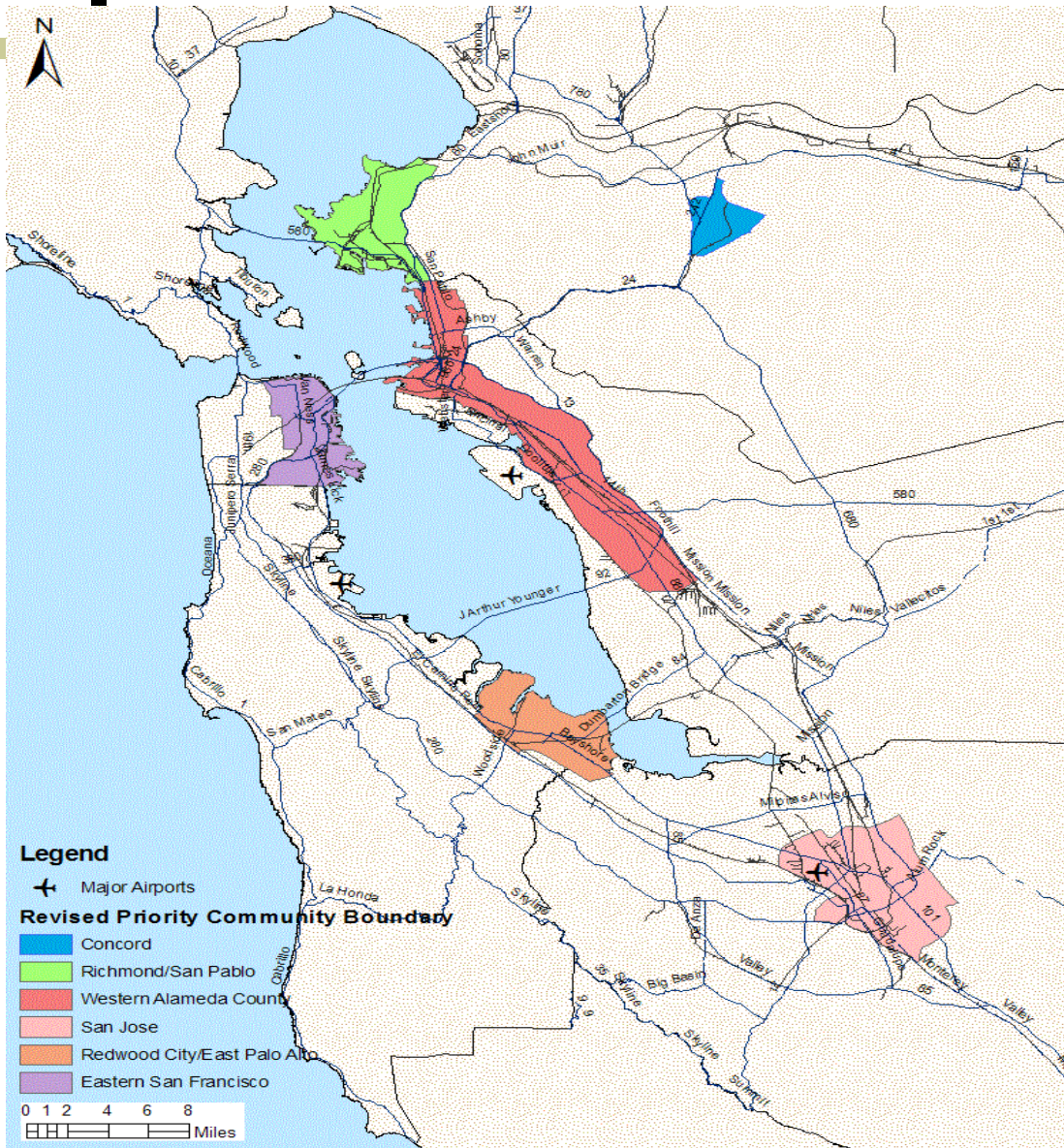
A decorative graphic consisting of a horizontal line with a gradient from light green to yellow. A large black left bracket is on the left side, and a large yellow right bracket is on the right side.

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 Risks & Hazards – New Source

Siting a New Source	<u>Impacted Communities</u> <ul style="list-style-type: none">• Cancer risk of > 5 in a million• Chronic non-cancer Hazard Index > 0.5• Acute non-cancer Hazard Index > 1.0• PM_{2.5} level > 0.2 µg/m³ annual average
	<u>Elsewhere</u> <ul style="list-style-type: none">• Cancer risk of > 10 in a million• Non-cancer Hazard Index > 1.0• PM_{2.5} level > 0.3 µg/m³ annual average

Why These Thresholds?

- Recognizes increased burden from sources in impacted communities.
- Consistent with EPA proposed stationary source significant impact level.
- Encompasses a broader analysis than excess cancer risk alone.
- Achievable with current control technologies.

Local Community Risk & Hazards – New Receptor (impacts from single source)

Siting a New 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

- Implement TBACT/TBP

Zone of Influence

- 1,000 foot radius from fence line of receptor

Why These Thresholds?

- Provides health protectiveness to local residents.
- Incentivizes aggressive mitigation approaches reduce risks in targeted infill areas.
- The 1,000-foot distance supported by findings that impacts diminish significantly between 500- 1,000 ft. from large sources.

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

Risks & Hazards	Operational and Construction Related
Cumulative Significance Criteria (Source or Receptor)	<p><u>All Areas</u></p> <ul style="list-style-type: none"> • Cancer risk of > 100 in a million • Non-cancer Hazard Index > 1.0 • PM_{2.5} level > 2 µg/m³ annual average <p><u>Zone of Influence</u></p> <ul style="list-style-type: none"> • 1,000 foot radius from fence line of source or receptor

Why These Thresholds?

- Cancer risk is consistent with ambient air levels.
- Provides health protectiveness from multiple local sources.

Local Community Risks & Hazards – Plan Level

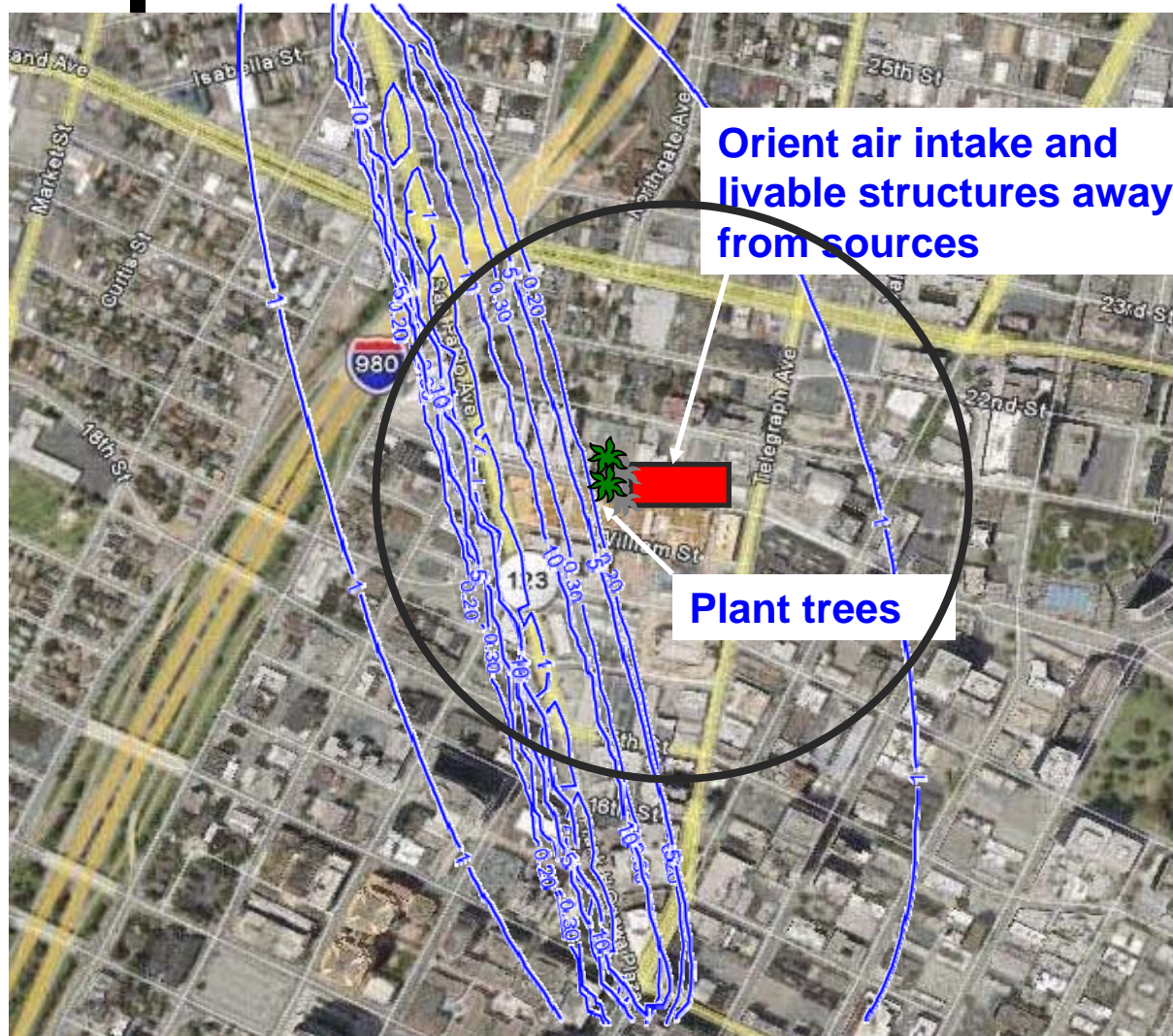
Risks & Hazards / Odors

- 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

Why These Thresholds?

- Local jurisdictions can take preemptive action before project-level review to reduce the potential for significant exposures.
- Overlay zones is 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 – Implement Toxics Best Practices

Step 2 – Evaluate Single Source Contribution

- 1,000 foot radius
- PM2.5 from roadway

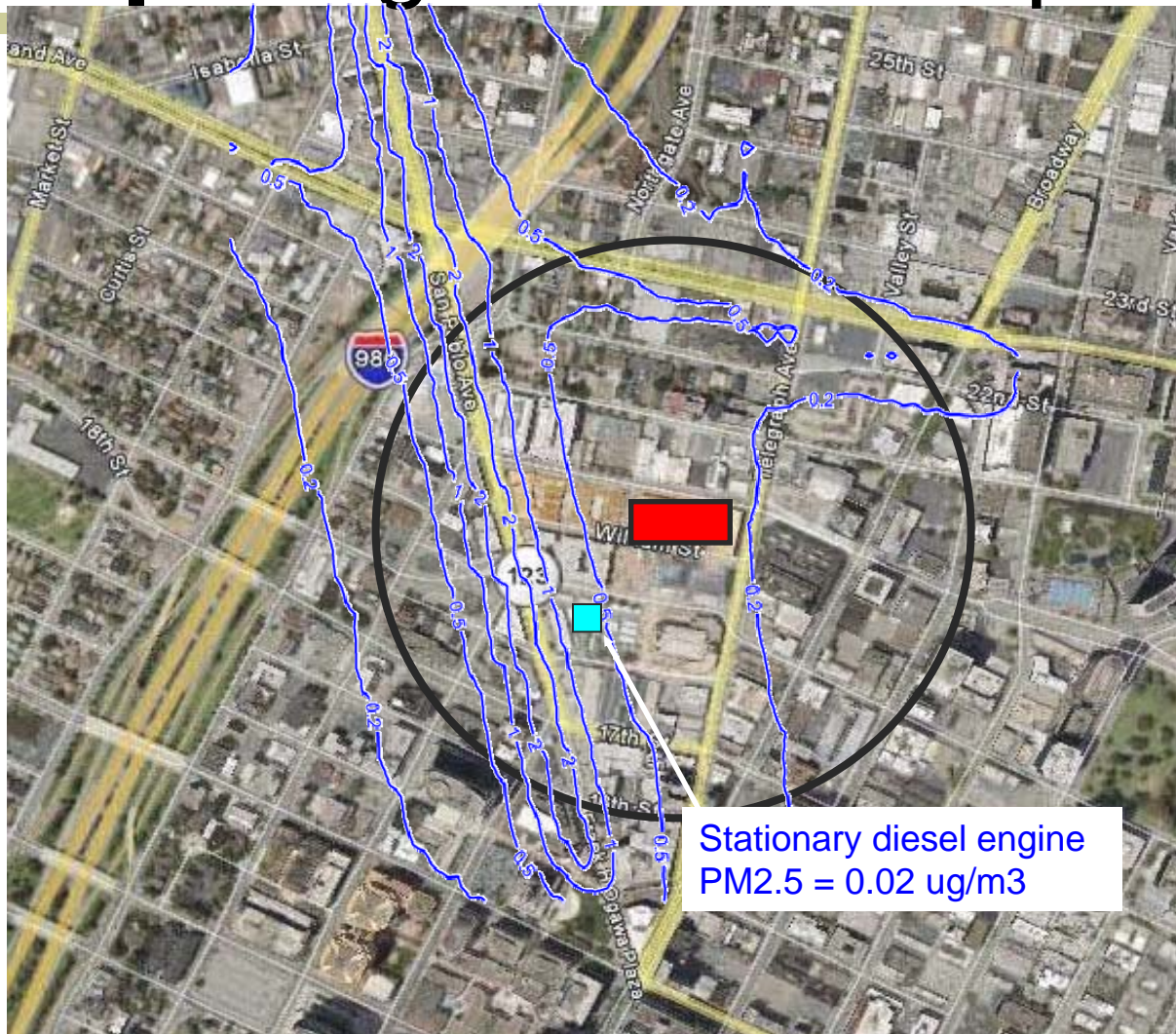
PM2.5 (ug/m3) from San Pablo Ave (5300 vehicles per hour)		
200 ft	500 ft*	1000 ft
0.6	0.16	<0.3 ug/m3

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

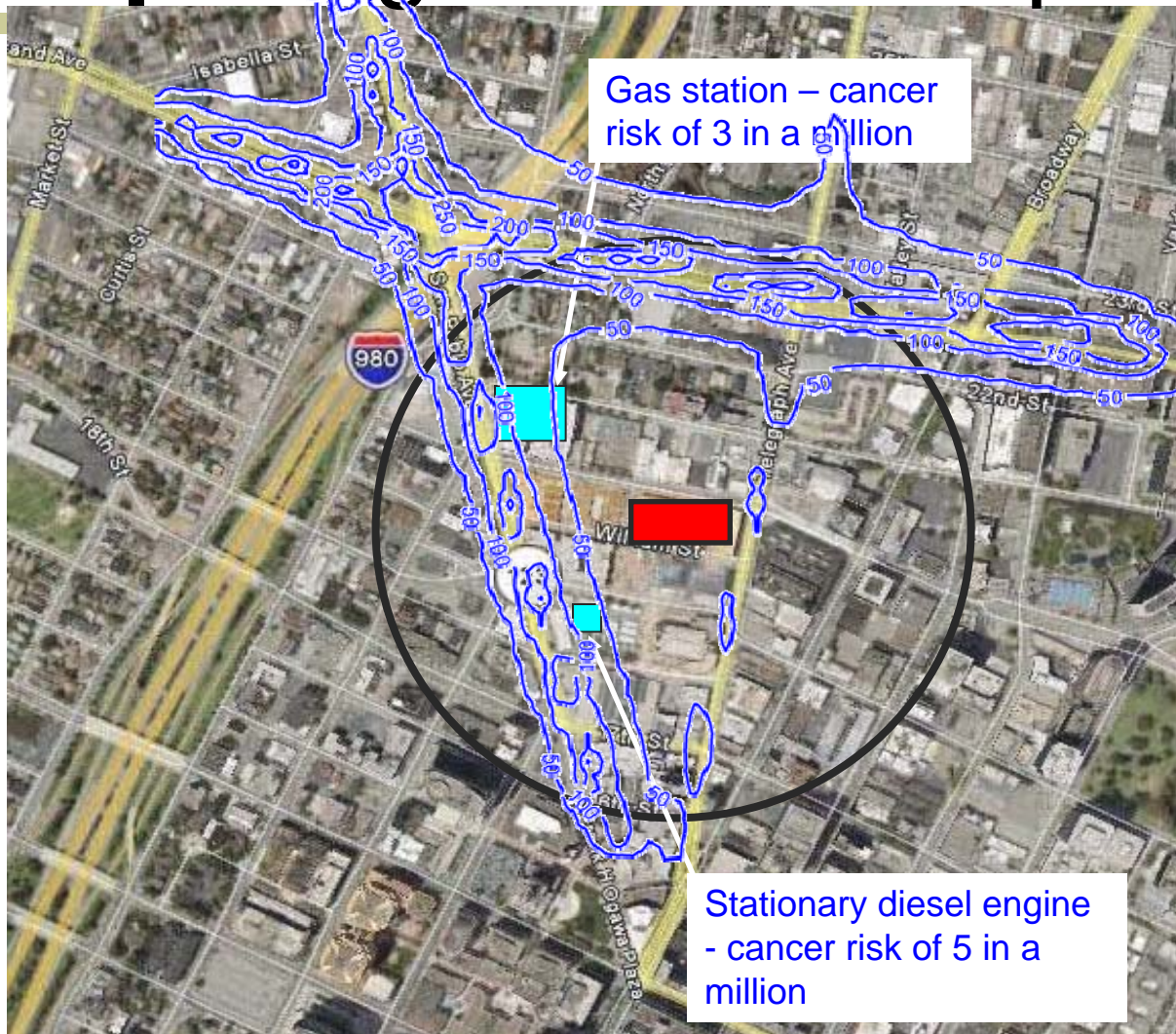
- Evaluate ALL stationary sources

PM2.5 (ug/m3) from All Sources		
Roads	Pt Sources	Total
0.4	2 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 September 25, 2009
- Draft CEQA Guidelines – October 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)

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Questions and Comments