

# Bay Area Air Quality Management District

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## CEQA Guidelines Update

CARE Task Force Meeting  
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# CEQA Guidelines Objectives

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- Provide guidance to local Lead Agencies on air quality analyses in CEQA documents.
- Assist in attainment of state and federal standards.
- Protect public health, especially in impacted communities.
- Reduce emissions from land use and transportation.
- Support transit-oriented, smart growth and infill development.



# Reasons to Update Guidelines

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- 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.
- Therefore, provide comprehensive review of thresholds, analytical methods, mitigation strategies.



# New and Revised Thresholds

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- Greenhouse Gases
  - Project Level
  - Plan Level
  - Construction
- Criteria Pollutants (ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>)
- General Plans
- Local Community Risks and Hazards



# GHG – Project Level

Project Level	Operational Related
Non Stationary Sources	Compliance with Qualified Climate Action Plan OR Threshold of 1,100 MT CO <sub>2</sub> e/yr OR 6.7 MT CO <sub>2</sub> e/capita/yr (residential) & 4.6 MT CO <sub>2</sub> 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"><li>• emissions inventory</li><li>• reduction goal consistent with AB 32</li><li>• measures</li><li>• monitoring</li></ul> <p>OR</p> <p>6.7 MT CO<sub>2</sub>e/capita/yr (residential) &amp; 4.6 MT CO<sub>2</sub>e/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.

# Criteria Pollutant - Project Level

<b>Project Level</b>	<b>Construction and Operational (daily)</b>	<b>Operational (annual)</b>
<b>ROG</b>	54 lb/day	10 tpy
<b>NO<sub>x</sub></b>	54 lb/day	10 tpy
<b>PM<sub>10</sub></b>	82 lb/day	15 tpy
<b>PM<sub>2.5</sub></b>	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	
<b>ROG</b>	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.
<b>NO<sub>x</sub></b>	
<b>PM<sub>10</sub></b>	
<b>PM<sub>2.5</sub></b>	

## 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.



# Local Community Risks & Hazards – New Source

## Siting a New Source

### Impacted Communities

- Cancer risk of > 5 in a million
- Chronic non-cancer Hazard Index > 0.5
- Acute non-cancer Hazard Index > 1.0
- PM<sub>2.5</sub> level > 0.2 µg/m<sup>3</sup> annual average

### Elsewhere

- Cancer risk of > 10 in a million
- Non-cancer Hazard Index > 1.0
- PM<sub>2.5</sub> level > 0.3 µg/m<sup>3</sup> 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<sub>2.5</sub> level > 0.3 µg/m<sup>3</sup> annual average

### 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
<p><b>Cumulative Significance Criteria (Source or Receptor)</b></p>	<p><u>All Areas</u></p> <ul style="list-style-type: none"> <li>• Cancer risk of &gt; 100 in a million</li> <li>• Non-cancer Hazard Index &gt; 1.0</li> <li>• PM<sub>2.5</sub> level &gt; 2 µg/m<sup>3</sup> annual average</li> </ul> <p><u>Zone of Influence</u></p> <ul style="list-style-type: none"> <li>• 1,000 foot radius from fence line of source or receptor</li> </ul>

## Why These Thresholds?

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

# Local Community Risks & Hazards– Plan Level

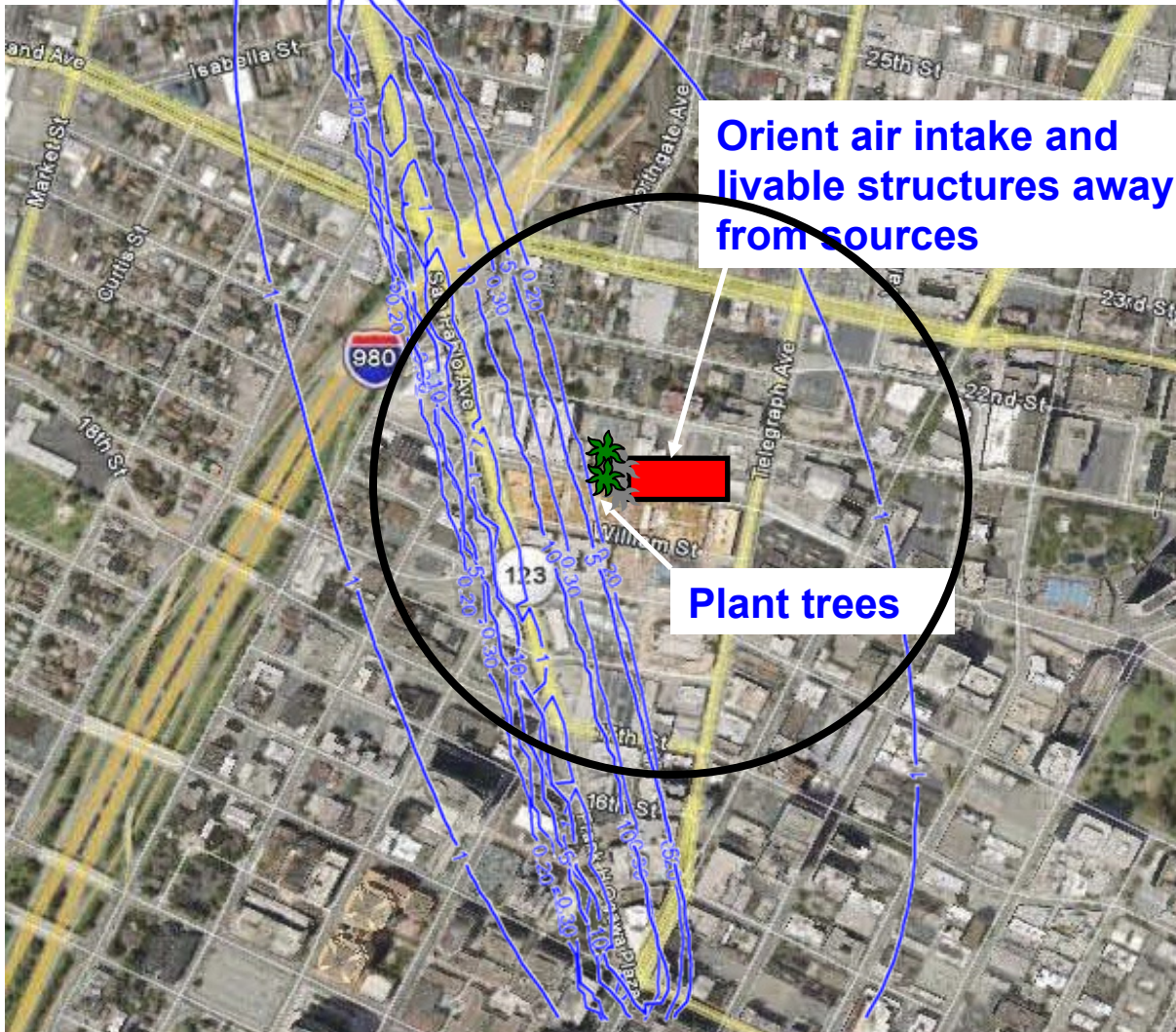
## Risks & Hazards / Odors

- 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 – Recommend  
Toxics Best Practices

Step 2 – Evaluate Single  
Source Contribution

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

PM2.5 (ug/m <sup>3</sup> ) from San Pablo Ave (5300 vehicles per hour)		
200 ft	500 ft*	1000 ft
0.6	0.16	<0.3 ug/m <sup>3</sup>

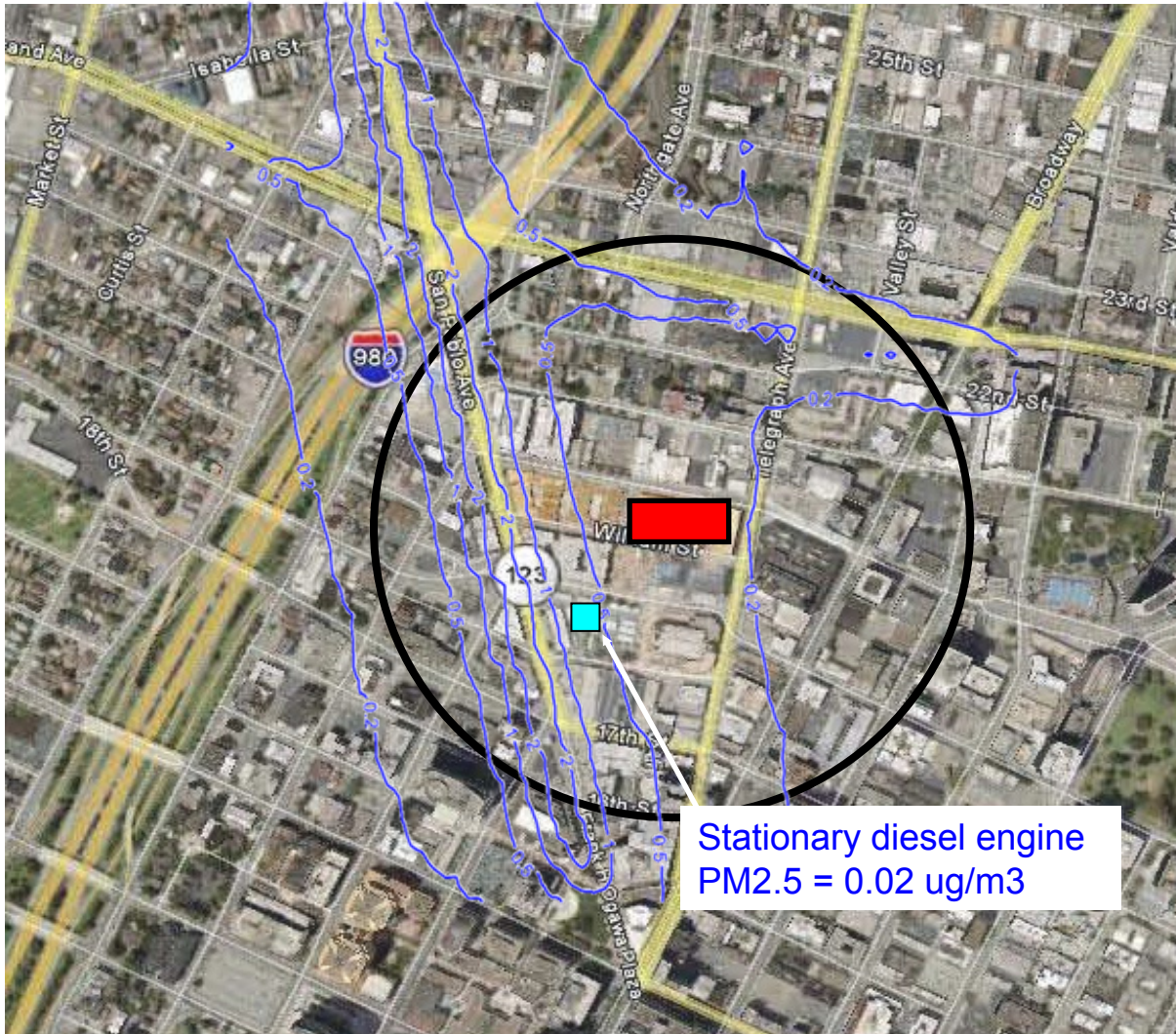
Cancer risk from San Pablo Ave (risk per million)		
200 ft	500 ft*	1000 ft
7	3	<10 in million

– 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

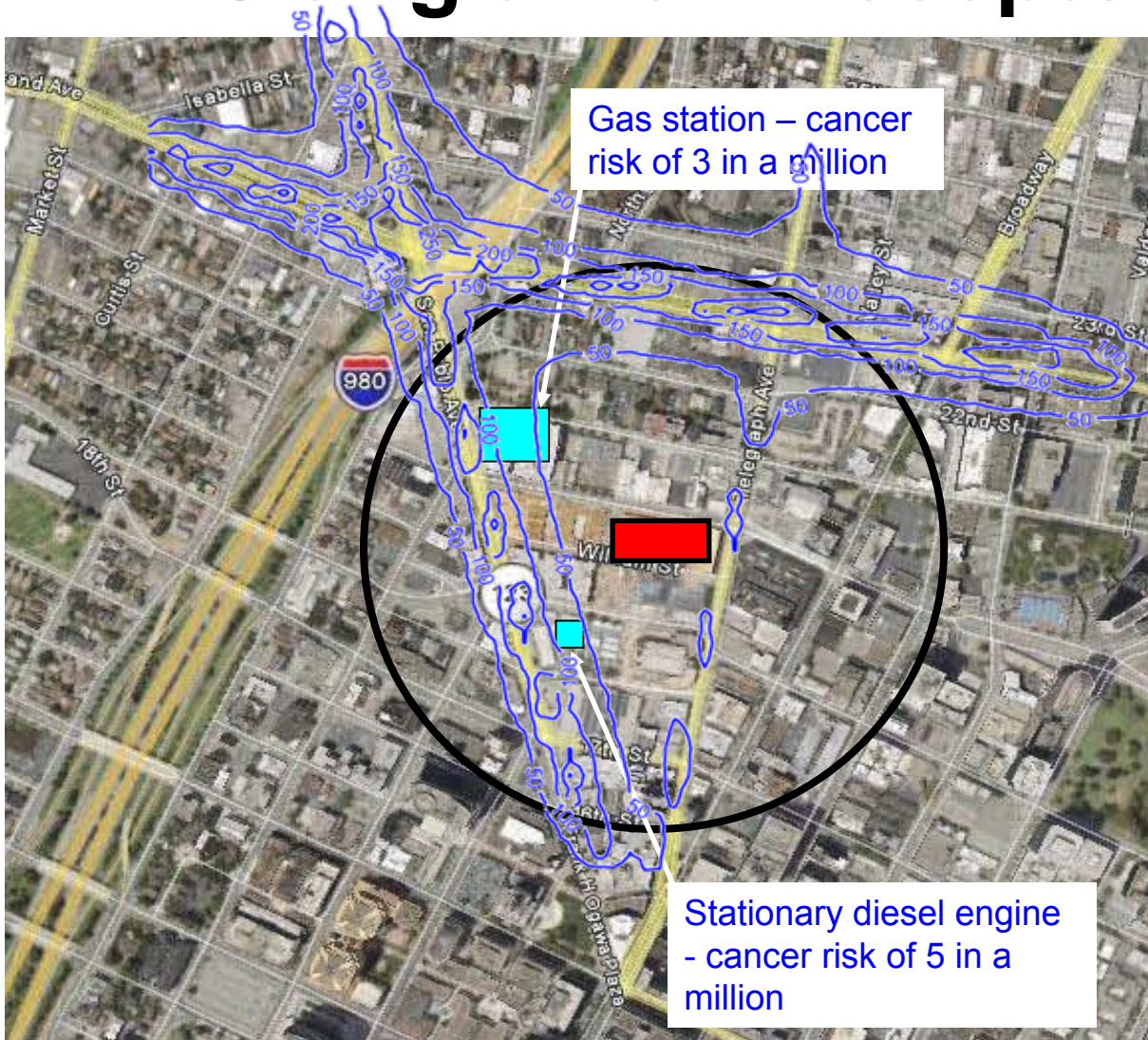
- Evaluate ALL stationary sources

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**

# 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**



# Process - Next Steps

- Public Workshops:
  - February, April, & September/October 2009
- Draft Guidelines posted September 4<sup>th</sup>.
- Propose significance thresholds to Board of Directors Fall 2009.
- Staff provide ongoing support to Lead Agencies.
- Staff review/comment on CEQA documents.