



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Bay Area Air Quality Management District

CEQA Guidelines Update

CARE Task Force Meeting

May 19, 2010

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Bay Area Air Quality Management District



Overview

- Where we are
 - Key milestones
 - Key changes to Dec. 7th CEQA Guidelines
 - Tools and Resources
- Proposed local risks and hazards thresholds
 - Review thresholds
 - Tools and resources
 - Case studies
- Next steps



Key Milestones

- 14 month process with public workshops held in:
 - April 2010
 - Dec 2009
 - Sept/Oct 2009
 - April 2009
 - Feb 2009
- Additional meetings with stakeholders
- Board Hearings
 - Nov 18, Dec 2, and Jan 6
- Draft documents available (Last posted May 3, 2010)
 - Draft CEQA Guidelines
 - Draft Thresholds Report
 - Public comments and responses
 - Tools and resources



Key Changes to Dec 2nd CEQA Guidelines

- Cumulative threshold for hazard index changed from 1 to 10
- GHG efficiency metric limits
- Odor threshold

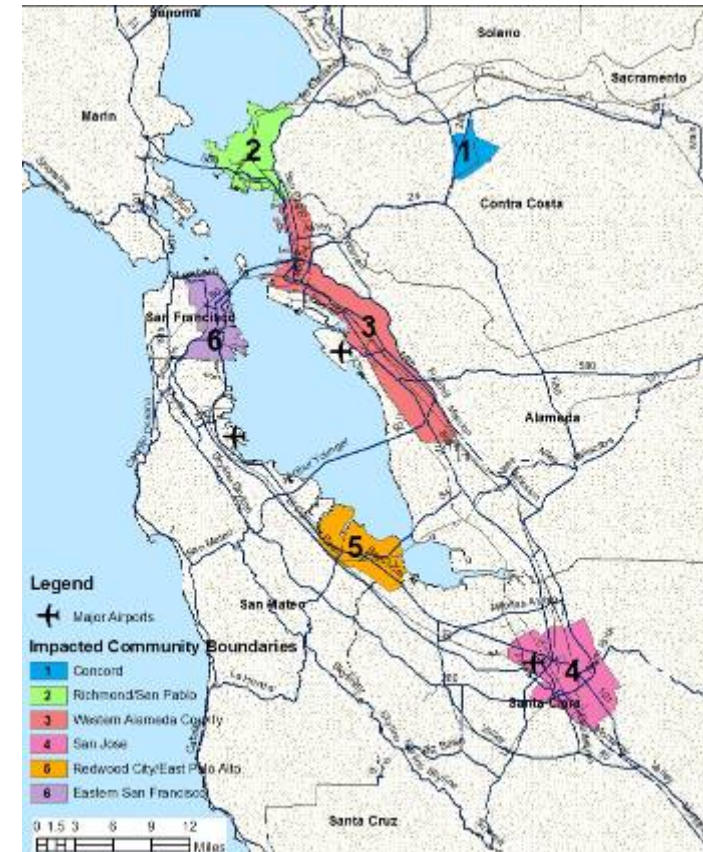


GHG Tools & Resources

- GHG Off-Model Spreadsheet Calculator for Projects
- GHG Reduction Strategy Guidance for Plans
- GHG Mitigation Measure Quantification
- Potential Offsite Mitigation Program
- URBEMIS/GHG off-model training classes
- Technical assistance during project review

Purpose of Community Risks and Hazards Thresholds

- CARE program identifies 6 priority communities in Bay Area
 - High emissions, concentrations of toxics, PM
 - Vulnerable populations
- Seek to reduce impacts from land use, transportation decisions
- Promote infill, while protecting residents
- Address new sources of pollution *and* new receptors near existing sources (e.g., freeways)



Proposed Local Community Risks and Hazards Thresholds

<p>Single source (Source or Receptor)</p>	<p>Compliance with Qualified Risk Reduction Plan OR</p> <ul style="list-style-type: none">• Increased cancer risk >10.0 in a million• Increased non-cancer risk > 1.0 Hazard Index (Chronic or Acute)• Ambient PM_{2.5} increase: > 0.3 µg/m³ annual average <p><u>Zone of Influence</u>: 1,000-foot radius from proposed project</p>
<p>Cumulative (Source or Receptor)</p>	<p>Compliance with Qualified Risk Reduction Plan OR</p> <ul style="list-style-type: none">• Cancer: > 100 in a million (from all local sources)• Non-cancer: > 10.0* Hazard Index (from all local sources) (Chronic)• PM_{2.5}: > 0.8 µg/m³ annual average (from all local sources) <p><u>Zone of Influence</u>: 1,000-foot radius from proposed project</p>

* Threshold proposal revised since December 7, 2009 draft Guidelines



Risk & Hazards Tools & Resources

- Construction risk screening spreadsheet
 - User defined equipment list
 - Estimates risk and PM_{2.5} concentration near site
- Stationary source risk screening tables
 - Database of District permitted sources including location, type of source, emissions, and risks
 - Google Earth application
- Roadway risk screening tables
 - Risks based on distance from all California highways
 - Surface street risks based on vehicle volumes
- Detailed Phased Modeling Methodology
 - Use of site specific inputs in more complex, sophisticated models

Phased Approach for New Sources & Receptors

STEP 1

PROJECT
SUBMISSION

Any Major Roads &
Sources > 1,000 ft?

No

DONE

STEP 2

Use Screening Tables
PM2.5 & Toxics
> CEQA Thresholds?

No

Report Results

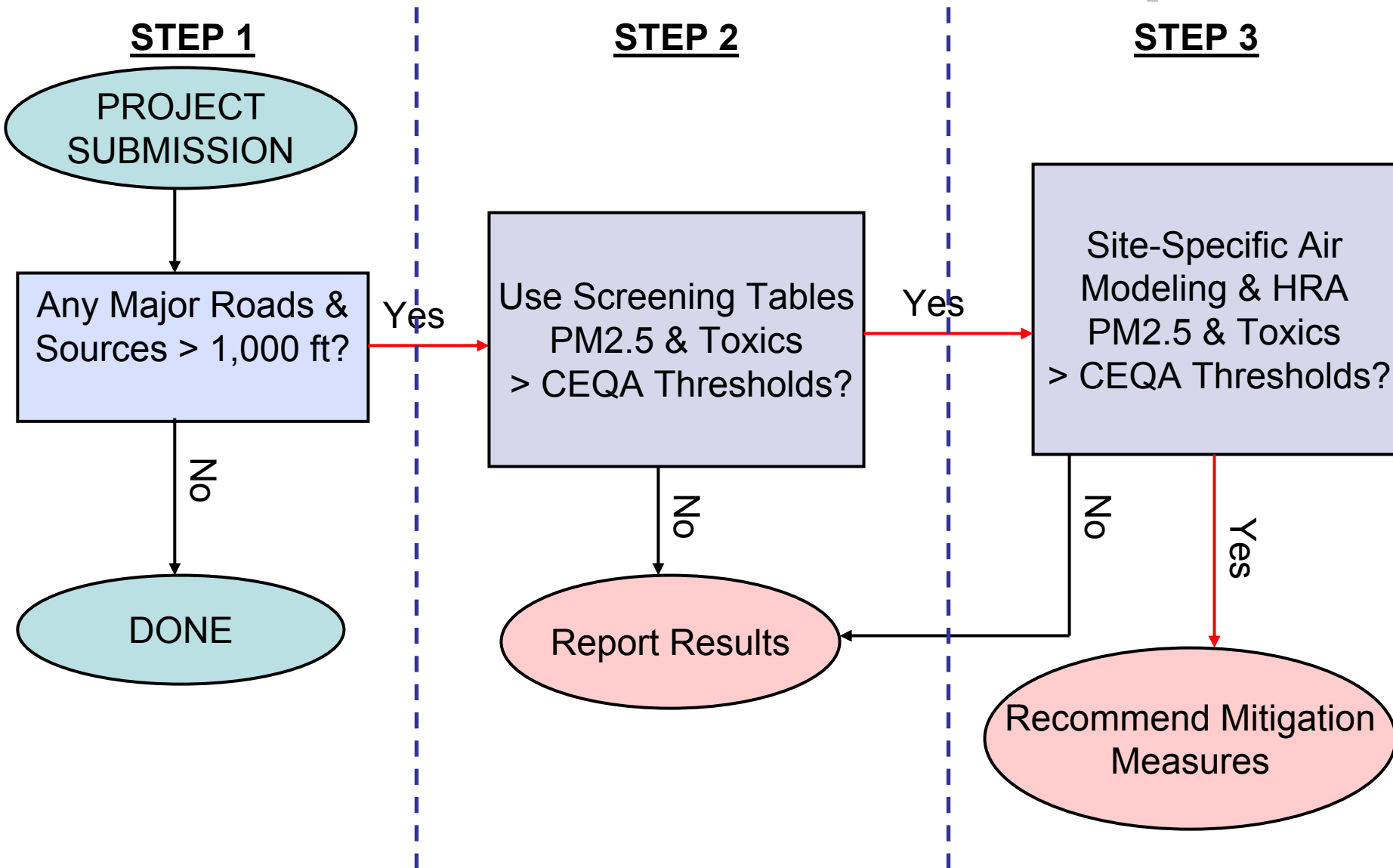
STEP 3

Site-Specific Air
Modeling & HRA
PM2.5 & Toxics
> CEQA Thresholds?

No

Yes

Recommend Mitigation
Measures





Case Studies

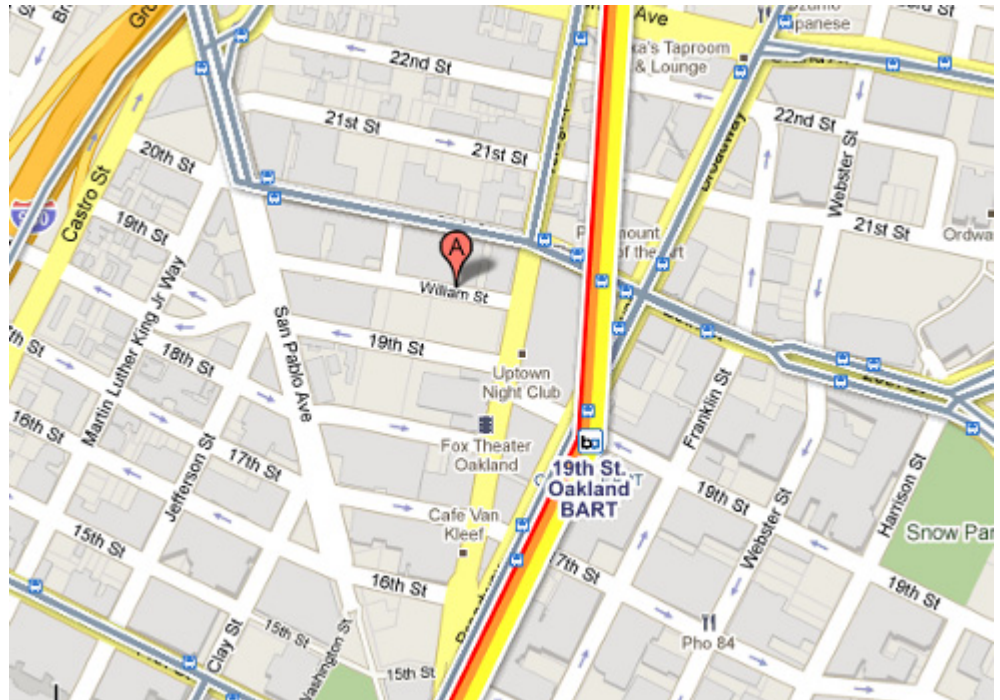
- Case Studies for
 - The Uptown, Oakland
 - North Richmond Specific Plan, Contra Costa County
- Demonstrate Use of Tools and Resources



Case Study: The Uptown, Oakland

Project characteristics:

- Located in downtown Oakland
- 700 multi-family units
- 14,500 sq. ft. retail
- Excellent public transit





Case Study: The Uptown, Oakland



Step 1 – Determine 1,000 foot radius

Step 2 – Identify local roads (>10,000 vehicles/day) and freeways to be evaluated

Step 3 – Identify local permitted sources

Step 4 – Identify other sources

Permitted Source Application through Google Earth

Fly To Find Businesses Directions

Fly to e.g., 37 25' 19.1"N, 122 05' 06"W

Places Add Content

- 1000 foot buffer_Info
- F6B
- F6B_Info
- Japantown Redevelopment
- Japantown Redevelopment_...
- Downtown Berkeley
- Berkeley Downtown Plan, Berkeley Exported with ET
- 1000 foot buffer
- 1000 foot buffer_Info
- Downtown Berkeley
- Downtown Berkeley_Info
- Permitted sources
- Uptown Oakland
- Uptown Development, Oakland Exported with ET GeoWizards
- Permitted sources
- 1000 foot buffer

Layers

- Primary Database
- Borders and Labels
- Places of Interest
- Panorama
- Roads
- 3D Buildings
- Ocean
- Street View
- Weather
- Gallery
- Global Awareness
- More
- Terrain

14301

Permitted_sources_schema FID	8821
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Directions: [To here](#) - [From here](#)

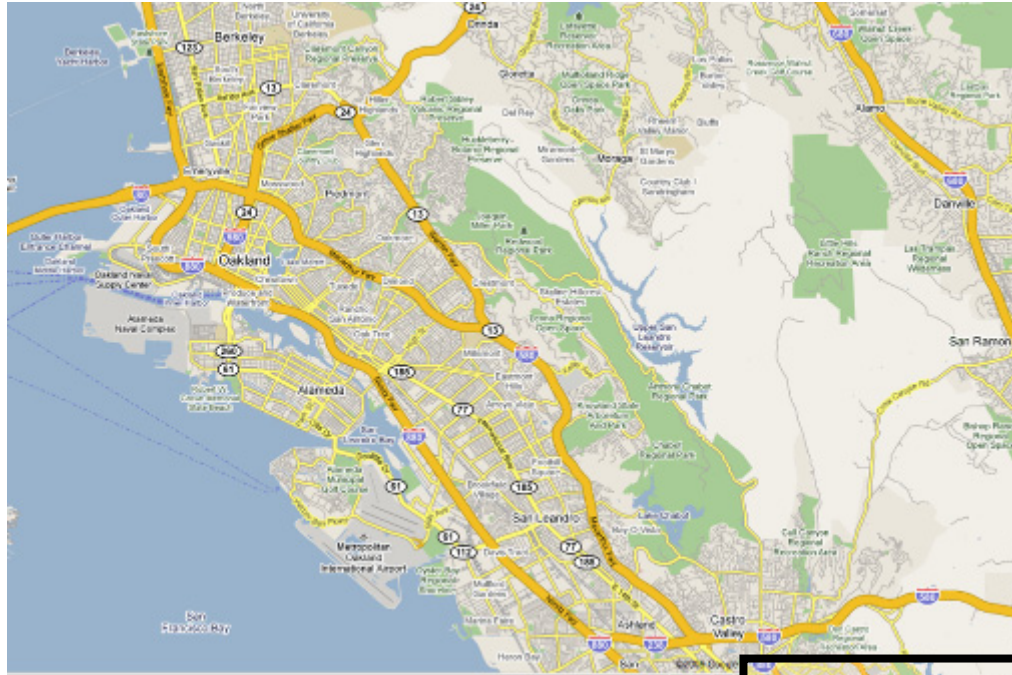
Imagery Date: Aug 25, 2009

10 S. 5640e8.82 m E. 4184970.37 m N. 61ewk10.6 d

Eye alt: 3513 ft

Alameda County Screening Tables

Particulate Matter less than 2.5 microns ($\mu\text{g}/\text{m}^3$) Generated from Roadways

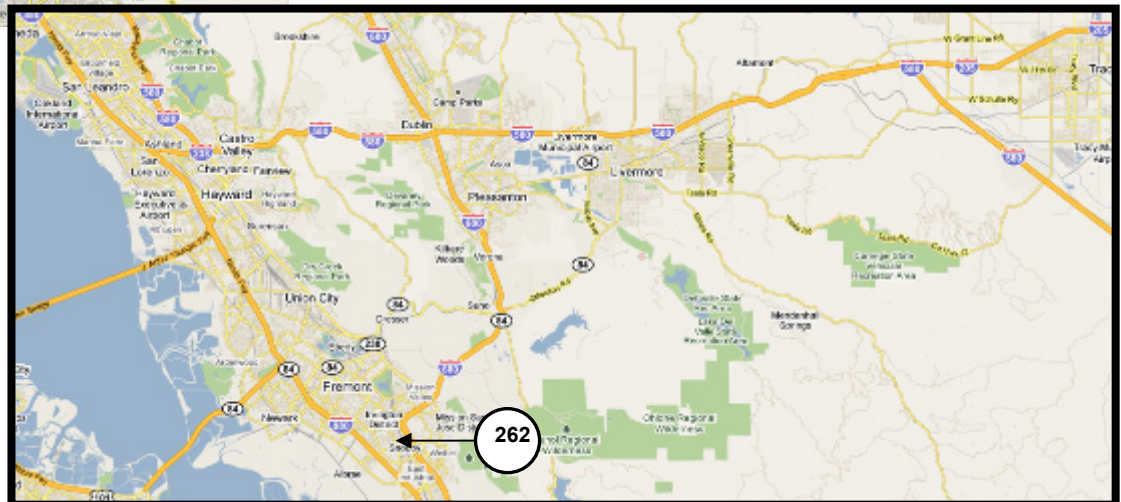


← Northern Alameda County includes:

- Highway 13 (Ashby Avenue)
- Highway 24
- Highway 61
- Highway 77
- Highway 80
- Highway 123 (San Pablo Avenue)
- Highway 185 (International Blvd and East 14th Street)
- Highway 238
- Highway 260
- Highway 580
- Highway 680
- Highway 880
- Highway 980

Southern Alameda County includes:

- Highway 84 (Dumbarton Bridge)
- Highway 92 (San Mateo-Hayward Bridge)
- Highway 205
- Highway 238
- Highway 262



Alameda County Screening Tables

Particulate Matter less than 2.5 microns (ug/m³) Generated from Roadways

How to use the screening tables:

- Distance is from the edge of the nearest highway travel lane to the facility or development
- When two or more highways are within the influence area, sum the contribution from each freeway

Alameda County State Highways			
Highway Number	Average Daily 2-Way Traffic Volumes (vehicles/day)	Start Location	End Location
13 (Ashby Avenue)	74,000	Oakland, Highway 580	Berkeley, Highway 80
24	158,000	Oakland, Highways 580 and 980	Caldecott Tunnel
61	27,000	San Leandro, Highway 112	Alameda, Highway 260 North (Central Avenue/Webster Street)
77	20,000	Oakland, Highway 880	Oakland, East 14th Street
80	294,000	San Francisco - Oakland Bay Bridge/Toll Plaza	Albany, Highway 580, Buchanan Street
84	74,000	Fremont, Dumbarton Bridge Toll Plaza	Highway 580
92	109,000	Hayward, San Mateo-Hayward Bridge Toll Plaza	Hayward, Highway 185 and 238, Mission Boulevard
123 (San Pablo Avenue)	30,500	Oakland, Highway 580	Albany, Solano Avenue
185 (International Boulevard and East 14th Street)	27,500	Hayward, Highways 92 and 238, Jackson Street/Foothill Boulevard	Oakland, High and 12th Streets
205	112,000	Highway 580	San Joaquin County Line
238	131,000	Fremont, Highway 680, Mission Boulevard	San Leandro, Highway 880, Nimitz Freeway
260	56,000	Alameda, Atlantic Avenue	Alameda Posey Tube to Oakland, Highway 880
262	90,000	Fremont, Highway 880	Fremont, Highway 680
580	218,000	Highway 205 East	Albany, Highway 80 North
680	266,000	Fremont, Scott Creek Road	Pleasanton, Highway 580
880	264,000	Fremont, Highway 262 East	Oakland, Highway 80 West
980	97,000	Oakland, Highway 880	Oakland, Highway 580

NORTH OR SOUTH OF ALAMEDA COUNTY HIGHWAY					
Highway	Distance North or South of freeway - PM2.5 Concentrations (ug/m ³)				
	100 feet	200 feet	500 feet	700 feet	1,000 feet
13	0.40	0.28	0.13	0.10	0.074
24	0.90	0.60	0.28	0.20	0.14
61	0.20	0.11	0.056	0.038	0.032
77	0.064	0.046	0.024	0	0
80	0.70	0.60	0.36	0.26	0.19
84	0.34	0.30	0.17	0.12	0.080
92	0.50	0.42	0.26	0.18	0.12
123	0.22	0.13	0.064	0.052	0.036
185	0.19	0.11	0.056	0.038	0.032
205	0.80	0.48	0.24	0.16	0.084
238	1.2	0.50	0.24	0.15	0.10
260	0.30	0.10	0.046	0.034	0.024
262	0.76	0.36	0.17	0.11	0.076
580	0.80	0.60	0.32	0.22	0.16
680	2.0	0.90	0.40	0.30	0.19
880	0.80	0.64	0.34	0.28	0.18
980	0.54	0.36	0.15	0.11	0.076

EAST OR WEST OF ALAMEDA COUNTY HIGHWAY					
Highway	Distance East or West of freeway - PM2.5 Concentrations (ug/m ³)				
	100 feet	200 feet	500 feet	700 feet	1,000 feet
13	0.76	0.44	0.20	0.16	0.11
24	1.6	1.2	0.44	0.34	0.22
61	0.30	0.17	0.068	0.036	0.026
77	0.050	0.040	0.016	0	0
80	0.90	0.84	0.60	0.48	0.34
84	0.34	0.30	0.20	0.15	0.11
92	0.50	0.44	0.30	0.22	0.16
123	0.30	0.20	0.080	0.060	0.036
185	0.38	0.24	0.060	0.036	0.030
205	0.90	0.60	0.26	0.18	0.13
238	1.2	0.50	0.24	0.18	0.12
260	0.22	0.14	0.044	0.032	0.020
262	0.96	0.40	0.18	0.15	0.096
580	1.1	0.96	0.58	0.44	0.34
680	2.8	2.0	0.76	0.56	0.38
880	0.90	0.84	0.56	0.40	0.32
980	0.84	0.60	0.26	0.18	0.12

• Screening tables based on meteorological data collected from Oakland Sewage Treatment Plant in 2000 (Highways 13, 24, 61, 77, 80, 123, 185, 238, 260, 880, and 980), Pleasanton in 2005 (Highways 580 and 680), Union City in 1996 (Highway 84, 92, 238, and 262), and Livermore Laboratory in 2005 (Highway 205). 15

Roadway Screening Tables

Surface Streets Screening Tables Particulate Matter less than 2.5 microns (ug/m³) Generated from Roadways

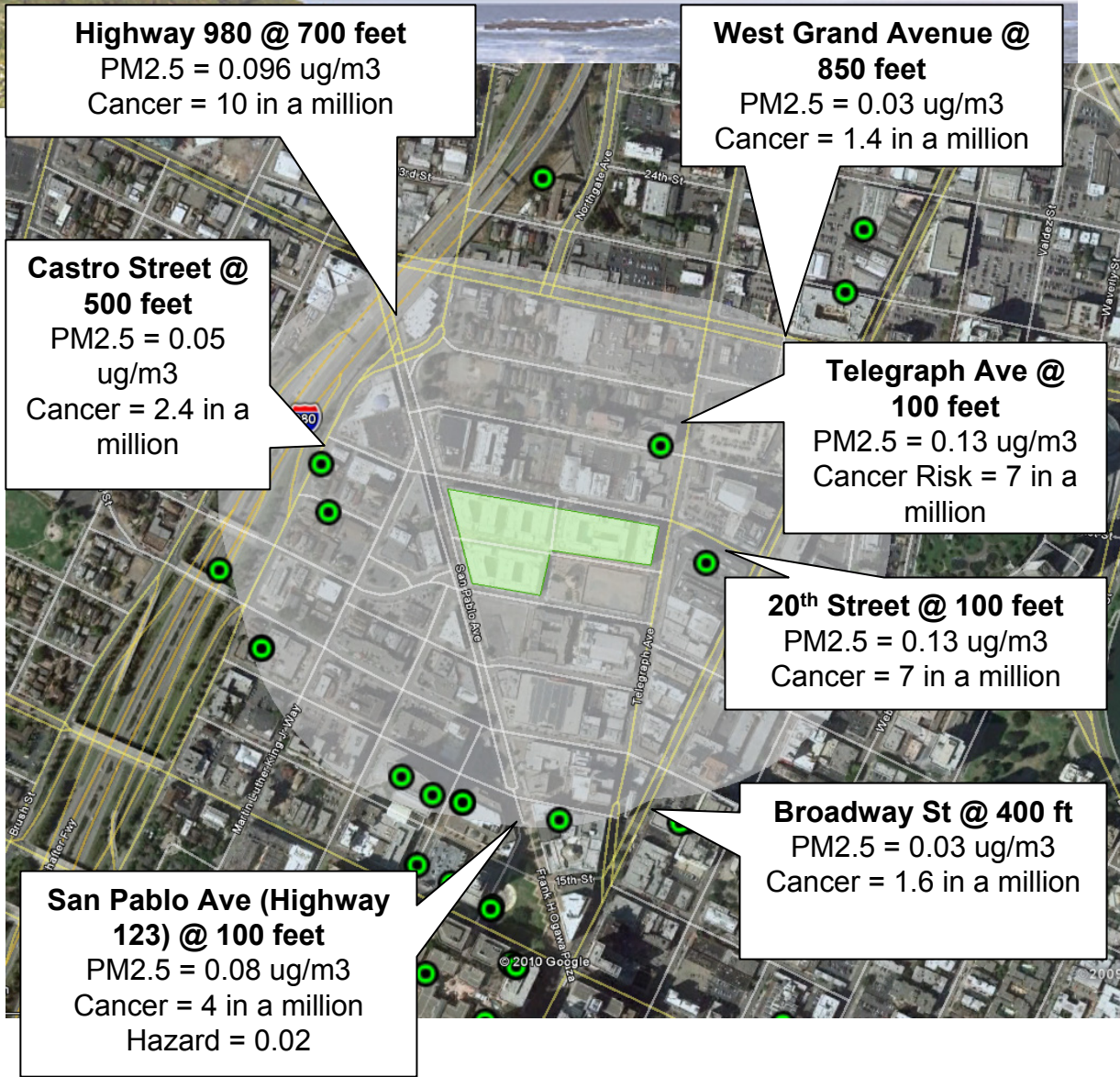
How to use the screening tables:

- Distance is from the edge of the nearest highway travel lane to the facility or development
- When two or more highways are within the influence area, sum the contribution from each freeway

NORTH-SOUTH DIRECTIONAL ROADWAY					
Average Annual Daily Traffic	Distance East or West of Roadway - PM2.5 Concentrations (ug/m ³)				
	100 feet	200 feet	500 feet	700 feet	1,000 feet
1,000	No analysis required				
5,000					
10,000					
20,000	0.14	0.090	0.037	0.029	0.021
30,000	0.21	0.14	0.056	0.043	0.032
40,000	0.28	0.18	0.074	0.057	0.042
50,000	0.35	0.23	0.093	0.071	0.053
60,000	0.42	0.27	0.11	0.086	0.063
70,000	0.49	0.32	0.13	0.10	0.074
80,000	0.56	0.36	0.15	0.11	0.084
90,000	0.63	0.41	0.17	0.13	0.095
100,000	0.70	0.45	0.19	0.14	0.11

EAST-WEST DIRECTIONAL ROADWAY					
Average Annual Daily Traffic	Distance North or South of Roadway - PM2.5 Concentrations (ug/m ³)				
	100 feet	200 feet	500 feet	700 feet	1,000 feet
1,000	No analysis required				
5,000					
10,000					
20,000	0.16	0.10	0.040	0.030	0.018
30,000	0.25	0.17	0.075	0.048	0.028
40,000	0.28	0.21	0.092	0.072	0.046
50,000	0.35	0.26	0.12	0.090	0.070
60,000	0.42	0.31	0.14	0.11	0.084
70,000	0.49	0.36	0.17	0.13	0.10
80,000	0.56	0.42	0.19	0.14	0.11
90,000	0.63	0.47	0.22	0.16	0.13
100,000	0.70	0.52	0.24	0.18	0.14

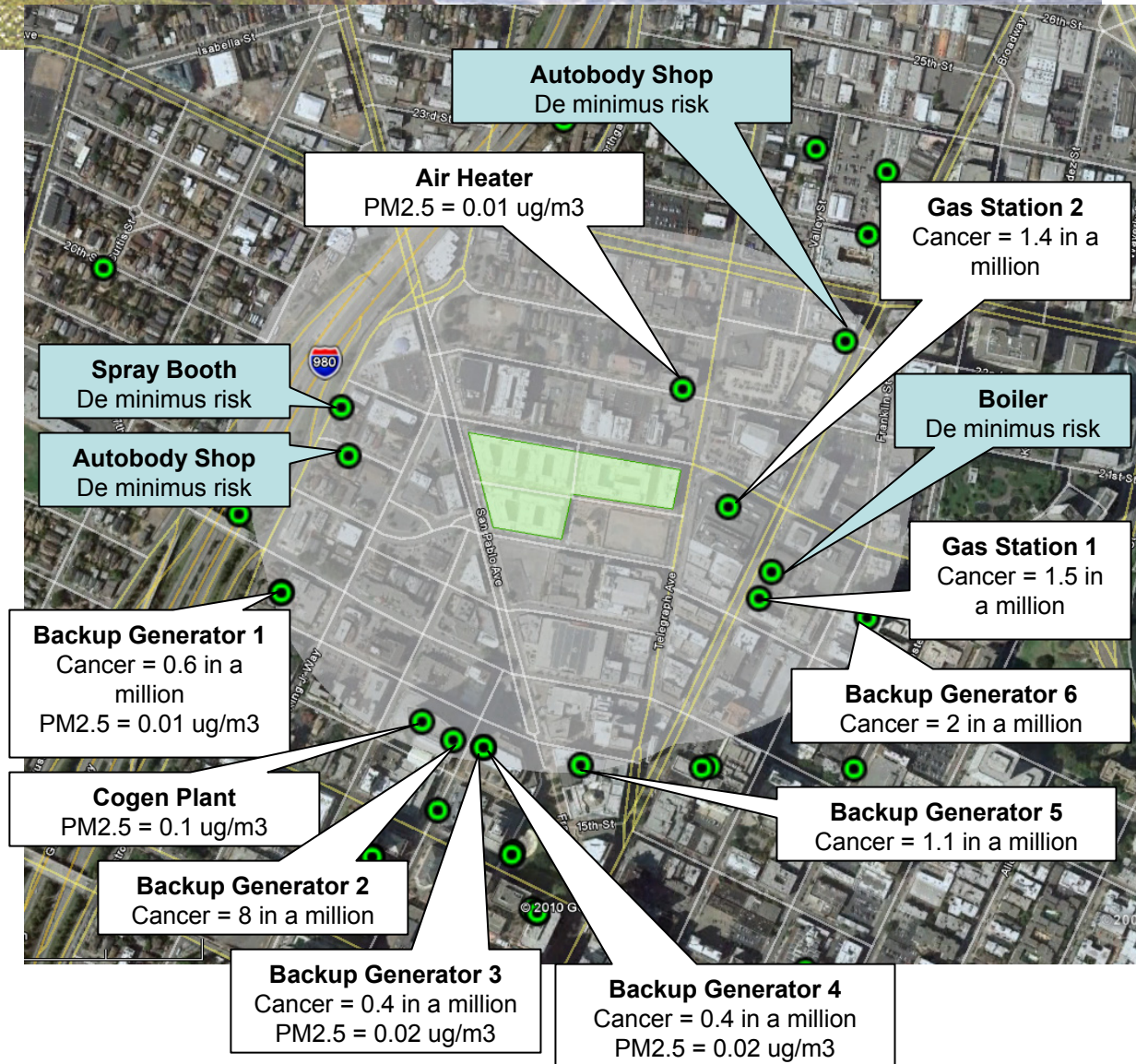
Roadway Impacts Near The Uptown



Roads	PM2.5 (ug/m3)	CEQA Threshold
Highway 980	0.10	0.30
Highway 123	0.08	
Castro St	0.05	
W Grand	0.03	
Telegraph	0.13	
20th St	0.13	
Broadway	0.03	

Roads	Cancer (cases per million)	CEQA Threshold
Highway 980	10	10
Highway 123	4	
Castro St	2.4	
W Grand	1.4	
Telegraph	7	
20th St	7	
Broadway	1.6	

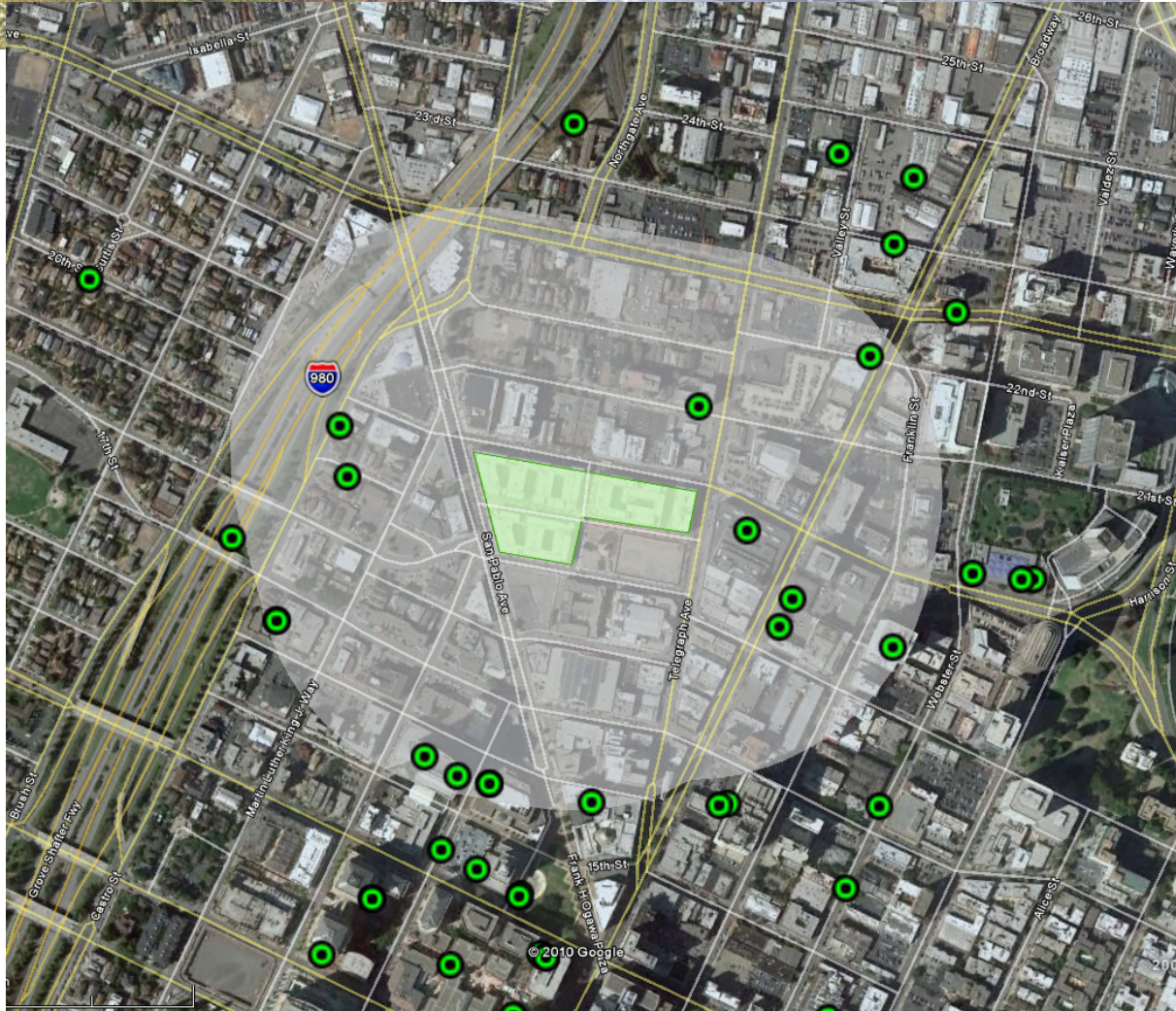
Permitted Sources Near The Uptown



Source	PM2.5 (ug/m3)	CEQA Threshold
Generator 1	0.01	0.30
Cogen	0.1	
Generator 3	0.02	
Generator 4	0.02	
Air Heater	0.01	

Source	Cancer (cases per million)	CEQA Threshold
Generator 1	0.6	10
Generator 2	8	
Generator 3	0.4	
Generator 4	0.4	
Generator 5	1.1	
Generator 6	2	
Gas Station 1	1.5	
Gas Station 2	1.4	

Cumulative Impacts Near The Uptown



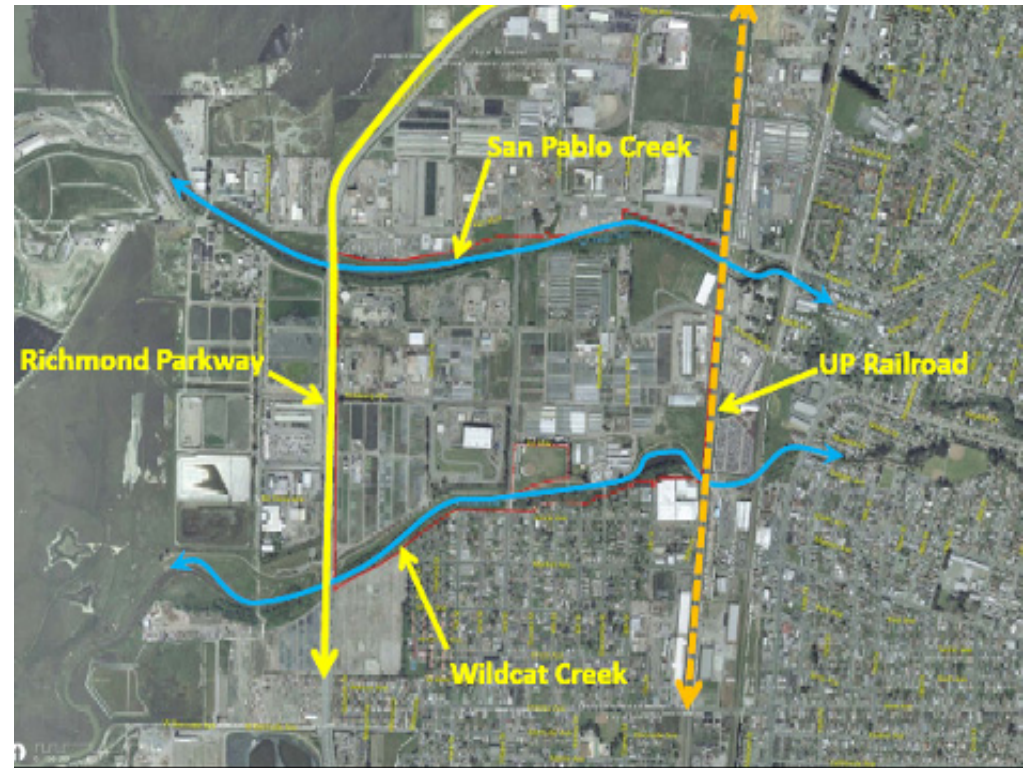
Sources	PM2.5 (ug/m3)	CEQA Threshold
Highway	0.18	0.80
Surface Street	0.37	
Stationary Sources	0.16	
CUMULATIVE	0.71	

Source	Cancer (cases per million)	CEQA Threshold
Highway	14	100
Surface Street	19	
Stationary Sources	16	
CUMULATIVE	49	

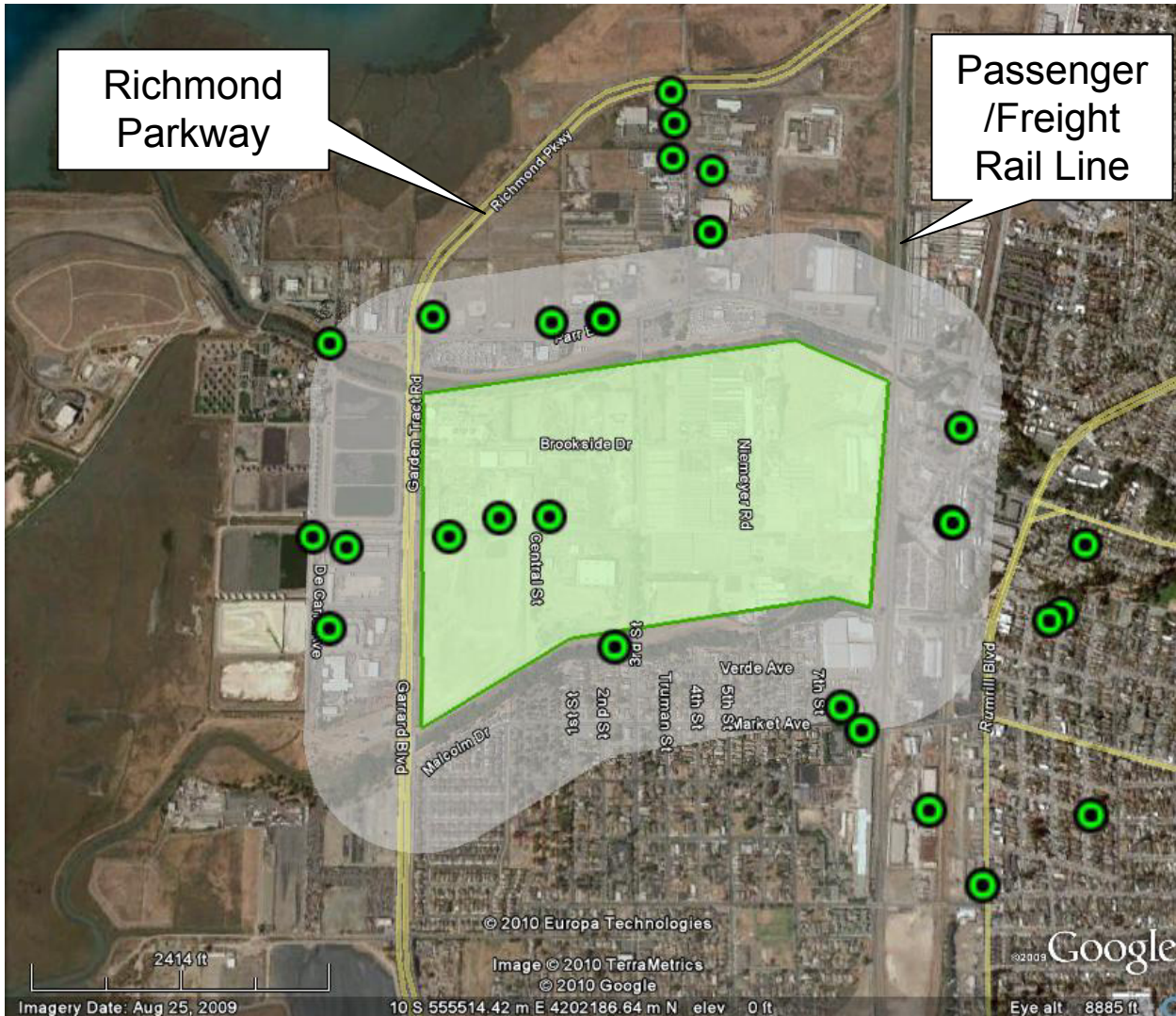
Case Study: North Richmond Specific Plan, Contra Costa County

Project Characteristics:

- 2,100 dwelling units
- ~290,000 sq. ft. of retail center
- ~785,000 sq. ft. of office space
- 71 acres of park/open space
- Several bus stops in Project area



Case Study: North Richmond Specific Plan, Contra Costa County



Step 1 – Determine 1,000 foot radius

Step 2 – Identify local roads (>10,000 vehicles/day) and freeways to be evaluated

- Richmond Parkway (30,000 vehicles/day)

Step 3 – Identify local permitted sources

Step 4 – Identify other sources:

- Passenger/Freight rail lines (9 locomotives/hr)

Preliminary Screening, Conservative Assumptions: North Richmond Specific Plan

Stationary Sources:

Type	Backup Generator	CEQA Threshold
PM2.5	0.04	0.3
Risk	24	10

Roadway:

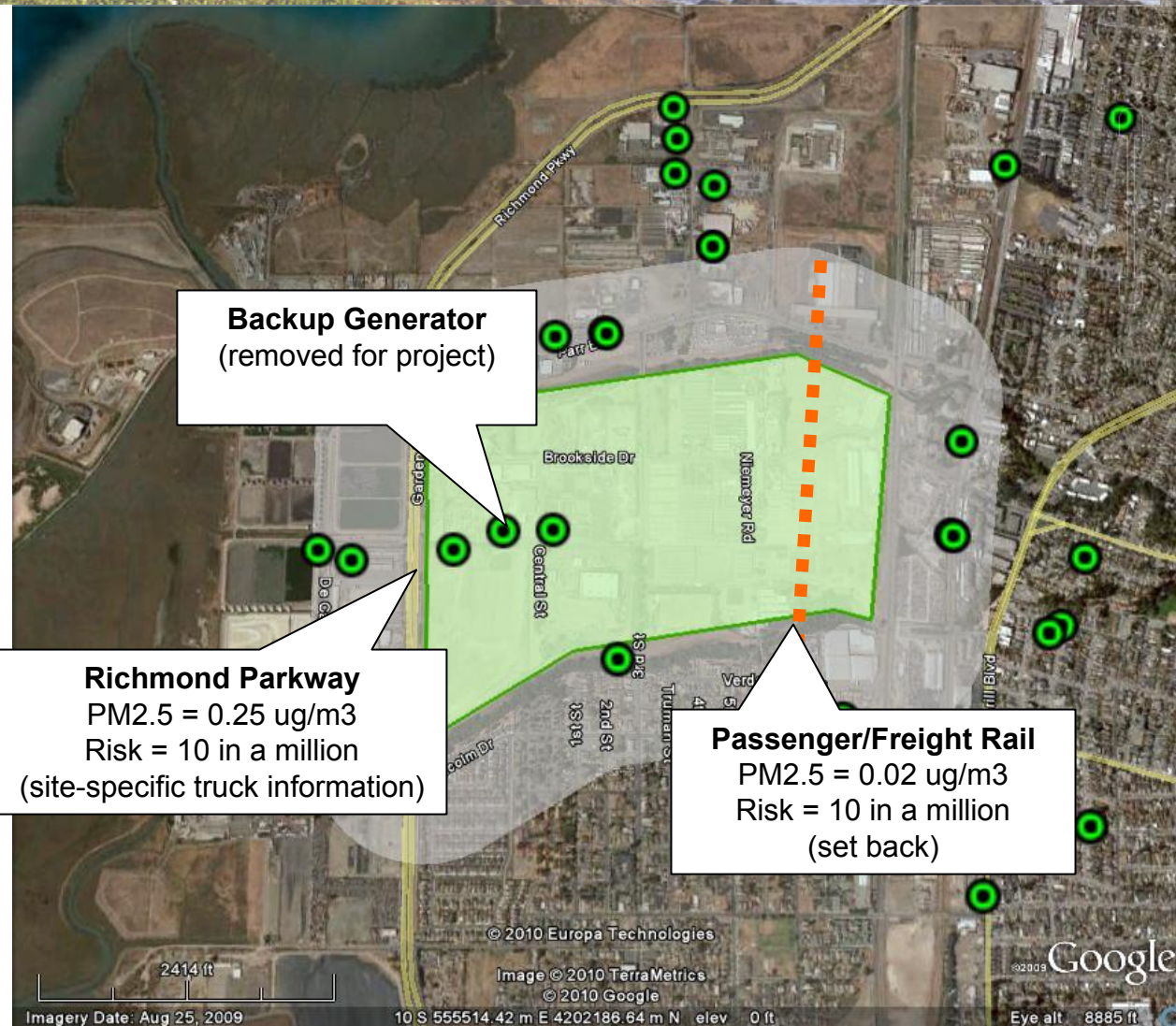
Type	Richmond Parkway	CEQA Threshold
PM2.5	0.25	0.3
Risk	13	10

Railroad:

Type	Rail	CEQA Threshold
PM2.5	0.17	0.30
Risk	81	10



Site Specific Analysis: North Richmond Specific Plan



Backup Generator
(removed for project)

Richmond Parkway
PM2.5 = 0.25 ug/m3
Risk = 10 in a million
(site-specific truck information)

Passenger/Freight Rail
PM2.5 = 0.02 ug/m3
Risk = 10 in a million
(set back)

Roadway:

Type	Richmond Parkway	CEQA Threshold
PM2.5	0.25	0.3
Risk	10	10

Railroad:

Type	Rail	CEQA Threshold
PM2.5	0.02	0.30
Risk	10	10

Preferred Development Concept





Next Steps

- URBEMIS/GHG off-model training – May
- Continue to develop Community Risk Reduction Plans
- Discuss Draft CRRP guidance with stakeholders
- Initiate pilot project CRRPs
- Develop detailed local emissions inventory
- Seek Air District Board approval of significance thresholds in June 2010