

An aerial photograph of a coastal city, likely San Francisco, showing the city's buildings and streets extending to the water's edge. The background features a range of mountains under a clear sky. The text is overlaid on the right side of the image.

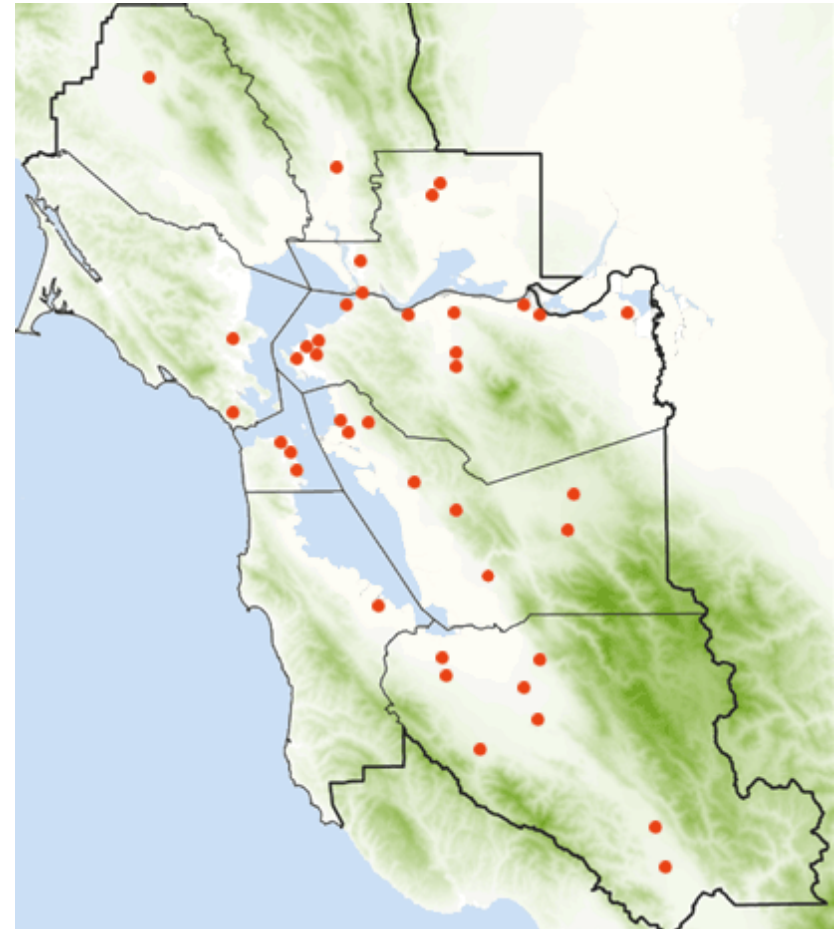
Reducing Community Air Pollution Risks

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**Presentation to the California Air
Resources Board
December 10, 2018**

Gaps in Community Air Pollution Protection

- Human scale monitoring
- Health based standards
- Control of unregulated/distributed sources
- Cumulative exposure



Many Unregulated Air Pollution Sources

- Roadways
- Logistics / distribution
- Small scale industry
- Restaurants
- Construction / demolition



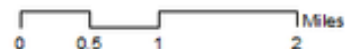
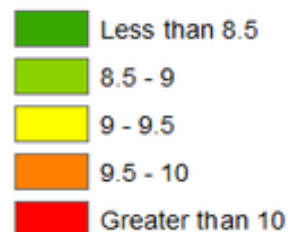
Approach to Addressing Land Use Air Quality Conflicts in San Francisco

- Model air pollutants cumulatively at a street scale
- Identify Locations with High Air Pollution Health Risks Health
- Establish Quantitative Threshold for Mitigations
- Require Mitigation for New Development



Average Annual PM 2.5 Concentration from All Sources (ug/m3)

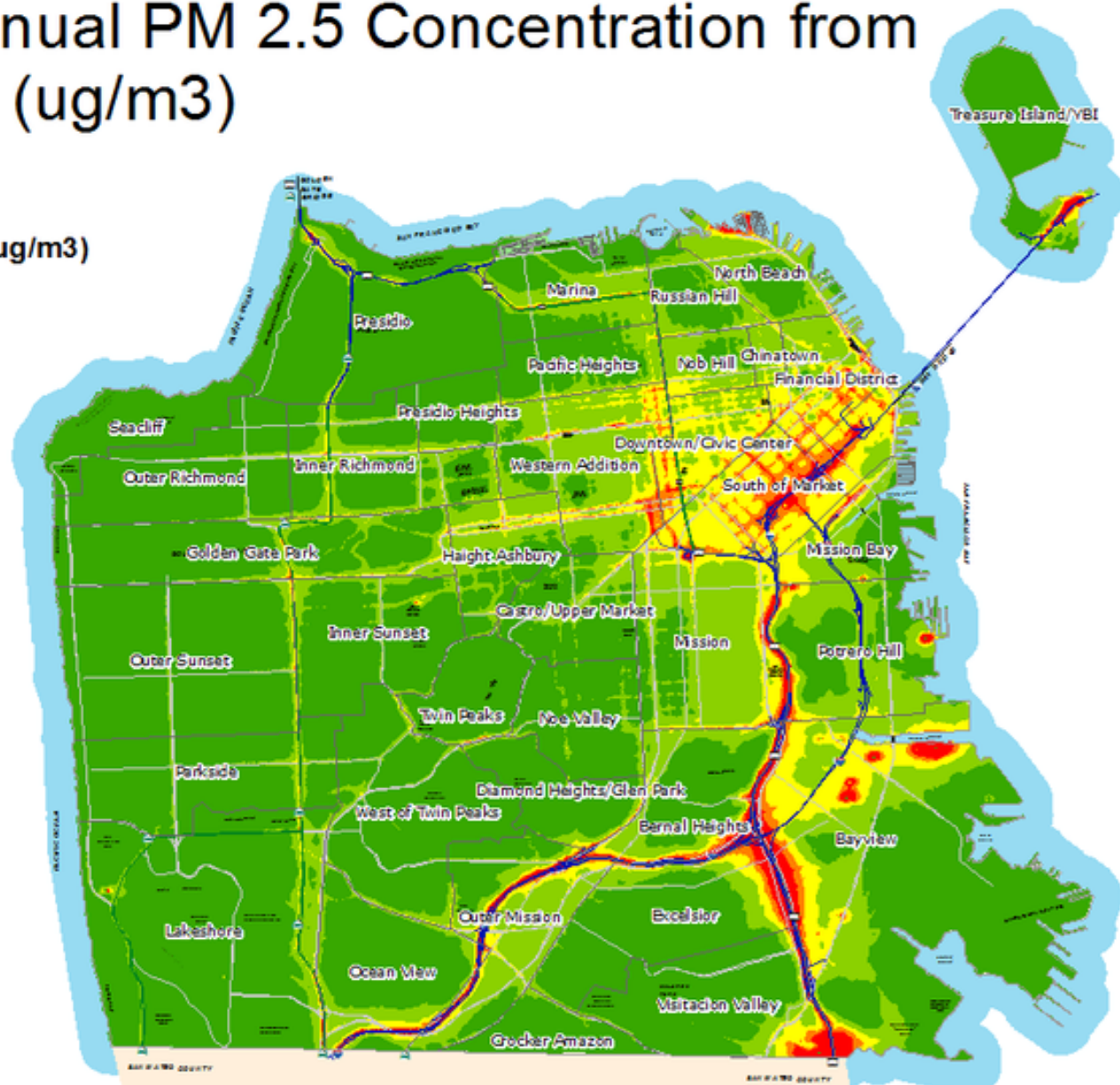
PM 2.5 Concentration (ug/m3)



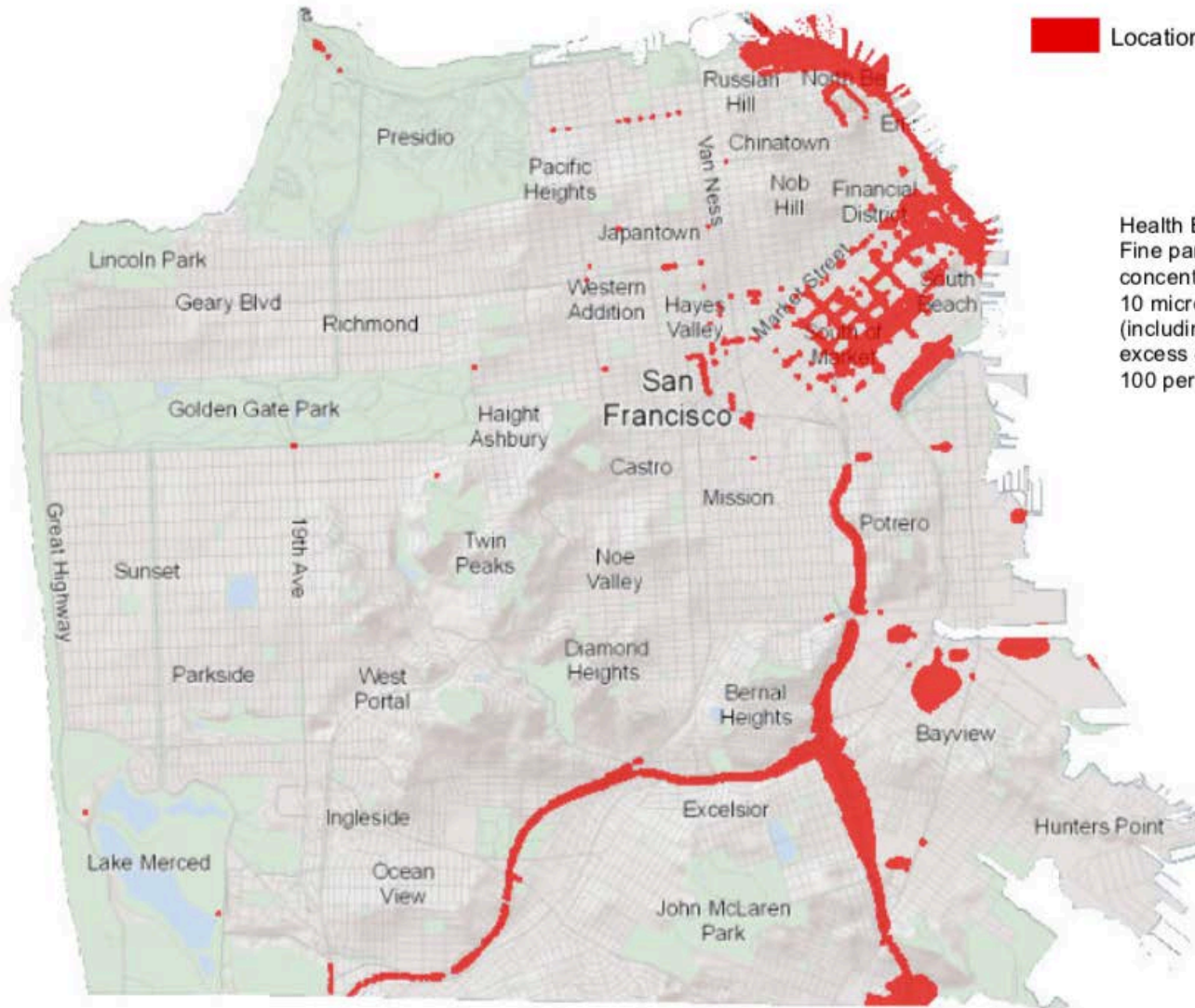
Source: SFDPH - Bay Area Air Quality Management District

City and County of San Francisco
Department of Public Health
Environmental Health Section

Available at www.thehdmtd.org



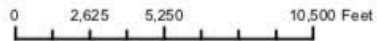
Air Pollution Hot Spot Map



Locations Exceeding Health Standards

Health Based Standards:
Fine particulate matter (PM2.5)
concentrations greater than
10 micrograms per cubic meter
(including background levels) and
excess cancer risk greater than
100 per one million people exposed

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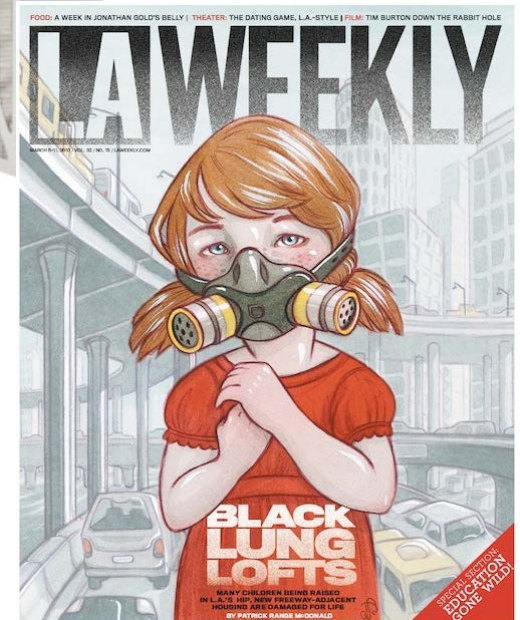


Benefits

- Inexpensive / feasible
- Integrated into planning rules
- Mitigated conflicts
- Secondary benefits from ventilation / filtration

Limitations

- Did not change source / emissions
- Did not protect existing sensitive uses!



Spectrum of Local Risk Reduction Activities

Emissions

- Traffic reduction programs and incentives
- Targeting clean vehicle deployment
- Site specific Clean Construction Rules
- Diesel Generator Monitoring / Replacement
- Mobile source enforcement (Diesel Idling, Truck Routes)
- Use of permit authority (e.g. restaurants)

Exposure Management

- Ventilation Standards
- Targeted weatherization programs

Lessons for Community Risk Reduction Plans



- Use modeling and distributed monitoring as complimentary
- Design data to feed anticipated programs and rules
- Adopt local standards for cumulative health risk
- Identify feasible mitigations
- Target existing local programs