



## MEMORANDUM

To: File

From: Planning, DPH

Date: April 9, 2014

Re: 2014 Air Pollutant Exposure Zone Map

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To create the 2014 Air Pollutant Exposure Zone Map, SF Planning and SFDPH utilized dispersion modeling and feedback from outreach conducted in stakeholder communities. As a result of the feedback from environmental groups, neighborhood groups, and developers, we reevaluated the Air Pollutant Exposure Zone Map to incorporate additional criteria for the proposed updates to Article 38.

Initially, the City utilized modeling<sup>1</sup> prepared by BAAQMD and DPH to provide evidence in support of the Community Risk Reduction Plan and proposed updates to air quality ordinances. This work determined that evidence supports identifying city lots within the “Air Pollutant Exposure Zone” based on whether modeled air pollution exceeded either: (1) a cancer risk of greater than 100 per one million exposed, and/or (2) PM<sub>2.5</sub> concentrations in excess of 10 µg/m<sup>3</sup> (including ambient).

Based on feedback during our outreach, we further modified our “Air Pollutant Exposure Zone” criteria as follows:

1. Added a “health vulnerability layer” based on the Air District’s evaluation of health vulnerability in the Bay Area. For those zip codes in the worst quintile of Bay Area Health Vulnerability scores (94102, 94103, 94105, 94124, and 94130) we lowered the standard for identifying city lots in the Air Pollutant Exposure Zone to: (1) excess cancer risk greater than 90 per one million persons exposed, and/or (2) PM<sub>2.5</sub> concentrations in excess of 9 µg/m<sup>3</sup>. Note: some city lots within these zip codes were already within the Air Pollutant Exposure Zone based on the initial criterion.
2. We identified city lots within a 500-foot buffer around each freeway to protect sensitive uses from air pollutants in these areas. There is substantial evidence that, notwithstanding

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<sup>1</sup> “The San Francisco Community Risk Reduction Plan: Technical Support Documentation”  
[http://ftp.baaqmd.gov/pub/CARE/SFCRRP/SF\\_CRRP\\_Methods\\_and\\_Findings\\_v9.pdf](http://ftp.baaqmd.gov/pub/CARE/SFCRRP/SF_CRRP_Methods_and_Findings_v9.pdf)

modeling results, sensitive uses in an area within a 500-foot buffer of any freeway are at significant increased health risk related to their air pollutant exposures.<sup>2</sup> Note: some city lots within 500 feet of freeways were already within the Air Pollutant Exposure Zone based on the initial and health vulnerability criteria.

In our outreach, we answered questions about the details of the map, including:

- Areas within the identified Air Pollutant Exposure Zone that are zoned Industrial may currently hold residential dwelling units which are considered existing non-conforming uses and will continue to be allowed until the use is either changed or demolished. Over time these uses will change and eventually conform to current zoning.
- Modeling took into account all known and identifiable sources of emissions (roadways, permitted stationary sources, port and maritime sources, Caltrain, and the Transit Center/Transbay Terminal bus depot). The map shows several noncontiguous parcels which are generally the result of one or more of the following conditions:
  - 19th Avenue and Lincoln Way are included because at this intersection, where there is heavier traffic and diesel bus lines compared to other cross streets along 19th Avenue, the modelling results show that PM<sub>2.5</sub> exceeds the general criteria of 10 µg/m<sup>3</sup>.
  - Lake Merced exceedance is because the Oceanside Wastewater Treatment Plant (permitted source, exceeds PM<sub>2.5</sub> criteria of 10 µg/m<sup>3</sup>)
  - North of the Panhandle is because of the St. Mary's Medical Center (permitted source, exceeds excess cancer risk criteria of 100)
  - North of Twin Peaks exceedance is because of the UCSF Parnassus Campus (permitted source, exceeds PM<sub>2.5</sub> criteria of 10 µg/m<sup>3</sup>)
  - The Lombard Street exceedances are because of the heavier traffic along this roadway (roadway, exceeds PM<sub>2.5</sub> criteria of 10 µg/m<sup>3</sup> and/or excess cancer risk criteria of 100)
  - "Freeway" is defined using the definition in the SF General Plan, Transportation Element, and the mapping includes some areas just outside the Presidio such as the north end of Park Presidio Boulevard and by the Palace of Fine Arts.
  - The Air Pollutant Exposure Zone Map does not display all city lots that overlap with the aforementioned criterion because certain city lots are substantially large (e.g., Golden Gate Park, Lake Merced, Presidio, Balboa Park, City College of San Francisco) and identifying the entire city lot, although only one or a few receptor points within the large parcel exceed the criterion, could be misleading. In these instances, only the receptor point(s) is shown.

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<sup>2</sup> California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Available online at: <http://www.arb.ca.gov/ch/landuse.htm>.

- Even though the criteria for inclusion in the Air Pollutant Exposure Zone is lower in vulnerable zip codes, many stakeholders were surprised that more city lots in the Bayview neighborhood were not included in the Air Pollutant Exposure Zone Map.
  - In response to these concerns, we verified that modelled results and monitoring data are accurate and that the PM<sub>2.5</sub> levels in much of this neighborhood do not exceed 9 µg/m<sup>3</sup>, demonstrating the improvements to air quality that resulted from the decommissioning of the Hunter's Point and Bayview Power Plants. Indeed, we hope that through our collaborative efforts framed by the Community Risk Reduction Plan<sup>3</sup> future reductions in air pollutant levels throughout the city will support revision of the map to exclude other areas where air pollutant sources are reduced. For this reason, the revisions to Article 38 specify that the Air Pollutant Exposure Zone Map be updated in accordance with specific timeline and methods.

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<sup>3</sup> We are continuing to pursue the Community Risk Reduction Plan. Our outreach efforts have focused on both the legislative changes and the CRRP. In 2014 we will be making revisions to the previous CRRP draft in consultation with the Air District with the goal to release a "Draft For Public Review".