

Particulate Matter (PM) and PM Planning: Frequently Asked Questions

What is PM?

The term “particulate matter” describes a wide range of tiny particles (liquid droplets or solids) suspended in the air we breathe. PM_{2.5}, often referred to as “fine PM,” describes particles with a diameter of 2.5 microns or less. (One micron equals one millionth of a meter.) PM₁₀ describes larger particles with a diameter of 10 microns or less. (By comparison, a human hair has a diameter of approximately 70 microns.) PM - and the chemicals that combine to form PM – are emitted by a wide range of sources, including combustion of fossil fuels, wood-burning, industrial processes, and cooking.

What are the negative impacts of PM?

Health studies indicate that fine particulate matter (PM) is the air pollutant that poses the greatest health risk to Bay Area residents. Exposure to PM may cause a variety of adverse health impacts, both acute (short-term) and chronic (long-term), including aggravated asthma, bronchitis, decreased lung function, heart attack, and premature death. Children, the elderly, and people with respiratory illnesses are most vulnerable to health effects from fine PM. PM can also reduce visibility, damage natural ecosystems, and contribute to climate change.

Who is responsible for protecting air quality in the San Francisco Bay Area?

The Bay Area Air Quality Management District (Air District) has primary responsibility for protecting air quality in the San Francisco Bay Area. In collaboration with its regional agency partners, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), the Air District is responsible for preparing and implementing plans to attain State and national air quality standards, including PM standards.

What has the Air District been doing to reduce PM and protect public health?

The Air District regulates emissions of PM from stationary sources (such as factories and refineries). The District also regulates residential wood-burning through its Winter Spare the Air Program. The *Bay Area 2010 Clean Air Plan* laid out a comprehensive control strategy to reduce multiple air pollutants, including PM. For additional information on the Air District’s program to reduce PM, see the PM webpage at www.baaqmd.gov/Divisions/Planning-and-Research/Particulate-Matter.aspx. The Air District’s PM control program, in combination with a comprehensive effort by the California Air Resources Board (CARB) to reduce PM emissions from diesel engines, has significantly reduced PM levels and the negative health impacts related to PM exposure over the past decade.

What is the Bay Area's status in terms of State and national PM air quality standards?

US EPA designated the Bay Area as “non-attainment” for the 24-hour PM_{2.5} national ambient air quality standard (NAAQS) in December 2009, based on air quality monitoring data for the three-year period 2006-2008. The Bay Area exceeded the 24-hour PM_{2.5} standard during the 2006-2008 period, but only by a slight margin. Since then, Bay Area PM_{2.5} levels have declined. Air quality monitoring data shows that the Bay Area attained the national 24-hour PM_{2.5} standard during the three-year period from 2008 through 2010.

State and national air quality standards and Bay Area attainment status are summarized at:

http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm

What type of PM plan will be developed?

Areas designated as “non-attainment” for the 24-hour PM_{2.5} standard are required to prepare a State Implementation Plan (SIP) and submit the SIP to US EPA by fall 2012. The SIP should demonstrate how the area will attain the 24-hour PM_{2.5} standard by December 2014. US EPA guidelines provide that areas which currently attain the PM_{2.5} standard (such as the Bay Area) can fulfill federal PM_{2.5} SIP requirements by preparing a “clean data” SIP. Key elements of a “clean data” SIP include:

- Amendments to the Air District's New Source Review (NSR) regulation to address PM_{2.5}
- Emissions inventory for PM_{2.5} (both direct emissions, as well as precursors to secondary PM formation)

Even though air quality monitoring data shows that the Bay Area currently attains the 24-hour PM_{2.5} standard, the Air District is committed to further reducing the impacts of PM on public health.

Therefore, to complement the “clean data” PM_{2.5} SIP described above, Air District staff will develop a PM research agenda to define its long-term efforts to analyze and reduce PM.

What is the timeline for developing the PM_{2.5} SIP?

Air District staff plans to issue draft versions of both the PM_{2.5} SIP and the PM research agenda for public review and comment in spring 2012. After the draft PM_{2.5} SIP is released, public workshops will be presented to gather comments and suggestions on the draft plan. Staff intends to present proposed final versions of the “clean data” PM_{2.5} SIP and the PM research agenda for review and approval by the Air District Board of Directors in summer 2012. The Air District must submit the PM_{2.5} SIP to the CARB by September 2012. CARB will review the PM_{2.5} SIP and forward the plan to US EPA by December 2012.

For additional information regarding Bay Area PM planning, please see:

www.baaqmd.gov/Divisions/Planning-and-Research/Plans/PM-Planning.aspx