

What are the Air Quality Standards for PM?

PM in New England

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National air-quality standards for PM were first established in 1971 and were not significantly revised until 1987 when EPA changed the indicator to focus on "inhalable particles", which are particles equal to or smaller than 10 microns (PM₁₀).

In July 1997, after evaluating hundreds of health studies and conducting an extensive peer-review process, EPA established PM standards that specifically addressed particles smaller than 2.5 microns (PM_{2.5}). The annual standard was set at 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), based on the 3-year average of annual mean PM_{2.5} concentrations. The 24-hour standard was set at 65 $\mu\text{g}/\text{m}^3$ based on the 3-year average of the annual 98th percentile concentrations. The 1997 standards retained, but slightly revised, standards for PM₁₀, which limited PM₁₀ concentrations to 50 $\mu\text{g}/\text{m}^3$ based on an annual average, and 150 $\mu\text{g}/\text{m}^3$ based on a 24-hour average.

Since 1997, EPA has evaluated thousands of new studies on PM and, in September, 2006, EPA revised the PM standards by lowering the level of the 24-hour PM_{2.5} standard to 35 $\mu\text{g}/\text{m}^3$ and retaining the level of the annual PM_{2.5} standard at 15 $\mu\text{g}/\text{m}^3$. The Agency retained the 24-hour PM₁₀ standard of 150 $\mu\text{g}/\text{m}^3$. However, the annual PM₁₀ standard was revoked because of a lack of evidence establishing a link between long-term exposure to coarse particles and health problems. The secondary standards continue to be identical to the primary standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The 2006 revised PM standards became effective in December 2006.

In February 2009, the US Court of Appeals for the DC Circuit remanded the 2006 PM_{2.5} standards after a challenge to the standards by several environmental groups and states. By remanding, rather than vacating, the standards, the Court left the standard intact while EPA reconsiders the standard. Under the Clean Air Act, EPA is required to review and, if necessary, revise air-quality standards for criteria pollutants, including PM, every five years. Therefore, reconsideration of the 2006 PM_{2.5} standard was done at the same time as this five-year review.

On December 14, 2012, EPA finalized an update to the National Ambient Air Quality Standard for PM_{2.5}. The annual standard was reduced from 15 µg/m³ to 12 µg/m³. The daily PM_{2.5} standard and standards for PM₁₀ were retained. The revised 2012 PM standard became effective on March 18, 2013.

[Click here for more information on EPA's revisions to the National Ambient Air Quality Standards for particle pollution.](#)

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