



# Visibility-Reducing Particles

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This page reviewed November 24, 2009.

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## ***What are Visibility-Reducing Particles?***

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

## ***Welfare Effects from Presence of Visibility-Reducing Particles***

The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. A separate standard for visibility-reducing particles that is applicable only in the Lake Tahoe Air Basin is based on reduction in scenic quality.

## ***History of Air Quality Standard for Visibility-Reducing Particles***

- In 1959, the California Department of Public Health adopted an air quality standard for particulates, at the "adverse" level, defined as the "level at which there will be ... reduction in visibility or similar effects." The standard for particulates "sufficient to reduce visibility to less than three mi[les] when relative humidity is less than 70 percent."
- In 1969, the ARB adopted a standard for 'visibility reducing particles', defined as particles "in sufficient amount to reduce the visibility to less than ten miles when relative humidity is less than 70 percent."
- In 1976, the ARB adopted a standard for 'visibility reducing particles' for the Lake Tahoe Air Basin only. This was defined as particles "in sufficient amount to reduce the prevailing visibility to less than 30 miles when relative humidity is less than 70 percent."
- In 1989, the ARB converted both the the general statewide 10-mile standard and the 30-mile Lake Tahoe standards to "instrumental equivalents". The statewide standard, "extinction of 0.23 per kilometer" is equivalent to the standard set in 1969. The Lake Tahoe Air Basin standard, "extinction of 0.07 per kilometer" is equivalent to the standard set in 1976.

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## Ambient Air Quality Standards