# National Ambient Air Quality Standards (NAAQS)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Primary Standards</th>
<th>Secondary Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>Averaging Time</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9 ppm (10 mg/m³)</td>
<td>8-hour (1)</td>
</tr>
<tr>
<td></td>
<td>35 ppm (40 mg/m³)</td>
<td>1-hour (1)</td>
</tr>
<tr>
<td>Lead</td>
<td>0.15 µg/m³ (2)</td>
<td>Rolling 3-Month</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>1.5 µg/m³</td>
<td>Quarterly Average</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>53 ppb (3)</td>
<td>Annual (Arithmetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average)</td>
</tr>
<tr>
<td></td>
<td>100 ppb</td>
<td>1-hour (4)</td>
</tr>
<tr>
<td>Particulate Matter (PM 10)</td>
<td>150 µg/m³</td>
<td>24-hour (5)</td>
</tr>
<tr>
<td>Particulate Matter (PM 2.5)</td>
<td>15.0 µg/m³</td>
<td>Annual (6) (Arithmetic Average)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24-hour (7)</td>
</tr>
<tr>
<td>Ozone</td>
<td>0.075 ppm (2008 std)</td>
<td>8-hour (8)</td>
</tr>
<tr>
<td></td>
<td>0.08 ppm (1997 std)</td>
<td>8-hour (9)</td>
</tr>
<tr>
<td></td>
<td>0.12 ppm</td>
<td>1-hour (10)</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>0.03 ppm</td>
<td>Annual (Arithmetic Average)</td>
</tr>
<tr>
<td></td>
<td>0.14 ppm</td>
<td>24-hour (1)</td>
</tr>
</tbody>
</table>

Source: EPA Air and Radiation, (Compiled: 05/27/2010).

(1) Not to be exceeded more than once per year.

(2) Final rule signed October 15, 2008.

(3) The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.
(4) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

(5) Not to be exceeded more than once per year on average over 3 years.

(6) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.

(7) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).

(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (Effective May 27, 2008)

(9) (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
    (b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
    (c) EPA is in the process of reconsidering these standards (set in March 2008).

(10) (a) EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").
    (b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.

**Conversion Formula:**

\[
\text{ppm} = \left( \frac{\text{mg/m}^3}{M_r} \times 24.45 \right)
\]

ppm- Parts per million

mg/m^3- milligram per cubic meters

\(M_r\)- Molecular weight of the compound