

**MARICOPA COUNTY
AIR POLLUTION CONTROL REGULATIONS
REGULATION V – AIR QUALITY STANDARDS AND AREA CLASSIFICATION**

**RULE 510
AIR QUALITY STANDARDS**

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SECTION 100 – GENERAL

- 101 PURPOSE:** To establish ambient air quality standards which are necessary to protect human health and public welfare.
- 102 AVAILABILITY OF INFORMATION:** Copies of materials referenced in Sections 310, 401.1, and 401.2 of this rule are available electronically at www.ecfr.gov; or at the Maricopa County Air Quality Department.

SECTION 200 – DEFINITIONS: For the purpose of this rule, the following definitions shall apply, in addition to those definitions found in Rule 100 (General Provisions and Definitions) of these rules. In the event of any inconsistency between any of the Maricopa County Air Pollution Control rules, the definitions in this rule take precedence.

- 201 PRIMARY AMBIENT AIR QUALITY STANDARDS:** The ambient air quality standards which define levels of air quality necessary, with an adequate margin of safety, to protect the public health, as determined by the Arizona Department of Environmental Quality and United States Environmental Protection Agency, and specified in this rule.
- 202 SECONDARY AMBIENT AIR QUALITY STANDARDS:** The ambient air quality standards which define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant, as determined by the Arizona Department of Environmental Quality and United States Environmental Protection Agency, and specified in this rule.

SECTION 300 – STANDARDS: The following are established as the primary and secondary ambient air quality standards for Maricopa County:

- 301 PARTICULATE MATTER - 2.5 MICRONS OR LESS (PM_{2.5}):**
- 301.1 Primary Ambient Air Quality Standards for PM_{2.5}:** The primary ambient air quality standards for PM_{2.5} shall be 12.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) annual arithmetic mean concentration and 35 $\mu\text{g}/\text{m}^3$ 24-hour average concentration. The primary annual PM_{2.5} standard shall be considered attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 12.0 $\mu\text{g}/\text{m}^3$. The primary 24-hour PM_{2.5} standard shall be considered attained when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 35 $\mu\text{g}/\text{m}^3$.

301.2 Secondary Ambient Air Quality Standards for PM_{2.5}: The secondary ambient air quality standard for PM_{2.5} shall be 15.0 µg/m³ annual arithmetic mean concentration and 35 µg/m³ 24-hour average concentration. The secondary annual standard shall be considered attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 15.0 µg/m³. The secondary 24-hour PM_{2.5} standard shall be considered attained when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 35 µg/m³.

302 PARTICULATE MATTER - 10 MICRONS OR LESS (PM₁₀):

Primary and Secondary Ambient Air Quality Standard for PM₁₀: The primary and secondary ambient air quality standards for PM₁₀ shall be 150 µg/m³ 24-hour average concentration. The standards shall be considered attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³, as determined in accordance with 40 CFR 50, Appendix K, is less than or equal to one.

303 SULFUR OXIDES (SULFUR DIOXIDE):

303.1 Primary Ambient Air Quality Standards for Sulfur Oxides: The primary ambient air quality standard for sulfur oxides (measured as sulfur dioxide) shall be 75 parts per billion (ppb) 1-hour average concentration. The standard shall be considered attained when the three-year average of the annual 99th percentile of the daily maximum 1-hour average concentrations is less than or equal to 75 ppb, as determined in accordance with 40 CFR 50, Appendix T.

303.2 Secondary Ambient Air Quality Standard for Sulfur Oxides: The secondary ambient air quality standard for sulfur oxides (measured as sulfur dioxide) shall be 0.5 ppm (1300 g/m³) 3-hour average. The standard shall be considered attained when the second-highest valid 3-hour average concentration, as determined in accordance with 40 CFR 50.5, is less than 0.5 ppm.

304 OZONE:

Primary and Secondary Ambient Air Quality Standards for Ozone Eight-hour Average Concentration: The primary and secondary ambient air quality standards for ozone shall be 0.070 ppm, daily maximum 8-hour average. The standards shall be considered attained at an ambient air quality monitoring site when the three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration, as determined in accordance with 40 CFR 50, Appendix U, is less than or equal to 0.070 ppm.

305 CARBON MONOXIDE:

305.1 Primary Ambient Air Quality Standards for Carbon Monoxide: The primary ambient air quality standards for carbon monoxide shall be:

- a. **One-hour Average Concentration:** 35 ppm (40 mg/m³). This maximum one-hour average concentration, as determined in accordance with 40 CFR 50.8, shall not be exceeded more than once per year at any one location.

- b. **Eight-hour Average Concentration:** 9 ppm (10 mg/m³). This maximum eight-hour average concentration, as determined in accordance with 40 CFR 50.8, shall not be exceeded more than once per year at any one location.

306 NITROGEN OXIDES (NITROGEN DIOXIDE):

306.1 Primary Ambient Air Quality Standards for Nitrogen Oxides: The primary ambient air quality standards for oxides of nitrogen, measured in the ambient air as nitrogen dioxide, are:

- a. **Annual Average Concentration:** 53 ppb. The annual primary standard is met when the annual average concentration in a calendar year is less than or equal to 53 ppb, as determined in accordance with 40 CFR 50, Appendix S.
- b. **One Hour Average Concentration:** 100 ppb. The one-hour primary standard is met when the three-year average of the annual 98th percentile of the daily maximum one-hour average concentration is less than or equal to 100 ppb, as determined in accordance with 40 CFR 50, Appendix S.

306.2 Secondary Ambient Air Quality Standards for Nitrogen Oxides: The secondary ambient air quality standard for oxides of nitrogen, measured as nitrogen dioxide, is 0.053 parts per million (ppm) (100 µg/m³), annual arithmetic mean. The standard shall be considered attained when the annual arithmetic mean concentration in a calendar year, as determined in accordance with 40 CFR 50.11, is less than or equal to 0.053 ppm

307 LEAD:

Primary and Secondary Ambient Air Quality Standards for Lead: The primary and secondary ambient air quality standards for lead and its compounds shall be 0.15 µg/m³. The standards shall be considered attained when the maximum arithmetic three-month mean concentration for a 3-year period, as determined in accordance with 40 CFR 50, Appendix R, is less than or equal to 0.15 µg/m³.

308 POLLUTANT CONCENTRATION DETERMINATIONS: Pollutant concentrations shall be measured by the following methods:

308.1 Reference Methods:

- a. The concentration of PM_{2.5} in the ambient air shall be measured by a reference method based on 40 CFR 50, Appendix L.
- b. The concentration of PM₁₀ in the ambient air shall be measured by a reference method based on 40 CFR 50, Appendix J.
- c. The concentration of sulfur oxides (measured as sulfur dioxide) in the ambient air shall be measured by a reference method based on 40 CFR 50, Appendix A-1 or A-2.
- d. The concentration of ozone in the ambient air shall be measured in accordance with 40 CFR 50, Appendix D.
- e. The concentration of carbon monoxide in the ambient air shall be measured in accordance with 40 CFR 50, Appendix C.

- f. The concentration of nitrogen dioxide in the ambient air shall be measured in accordance with 40 CFR 50, Appendix F.
- g. The concentration of lead in the ambient air shall be measured in accordance with 40 CFR 50, Appendix G.

308.2 Equivalent Methods and Approved Regional Methods: Pollutant concentrations may also be measured by:

- a. An equivalent method designated by the Administrator in accordance with 40 CFR 53; or
- b. An approved regional method of measurement that, though not designated as a reference or equivalent method, has been approved for use by the Administrator acting pursuant to 40 CFR 58, Appendix C. Such method shall be subject to any restrictions placed on its use by the Administrator.

308.3 Method Withdrawal: The cancellation or supersession of designation of a reference or equivalent method by the Administrator acting pursuant to 40 CFR 53.11 or 53.16 shall also amount to a withdrawal of the authorization for use of that method for purposes of this rule.

309 ADDITIONAL REQUIREMENTS:

309.1 Quality assurance, monitor siting, and sample probe installation procedures shall be in accordance with the procedures described in the Appendices to 40 CFR 58.

309.2 Unless otherwise specified, interpretation of all ambient air quality standards contained in this rule shall be in accordance with 40 CFR 50.

309.3 The evaluation of air quality data in terms of procedure, methodology, and concept is to be consistent with methods described in 40 CFR 50.

310 INCORPORATIONS BY REFERENCE: The CFR references listed below are incorporated by reference in Appendix G of these rules:

310.1 40 CFR 50 – National Primary and Secondary Ambient Air Quality Standards;

310.2 40 CFR 53 – Ambient Air Monitoring Reference and Equivalent Methods; and

310.3 40 CFR 58 – Ambient Air Quality Surveillance.

SECTION 400 – ADMINISTRATIVE REQUIREMENTS

401 REPORTING OF AMBIENT AIR QUALITY MONITORING DATA:

401.1 Annual Air Quality Monitoring Network Plan: The Control Officer shall submit to the Administrator an annual monitoring network plan that at a minimum meets the requirements of 40 CFR 58.10. The annual report will be made available to the public at the Maricopa County Air Quality Department at least 30 days prior to submission to the Administrator.

401.2 Daily Air Quality Index (AQI) Report: The Control Officer shall report to the public on a daily basis an AQI that at a minimum meets the requirements of 40 CFR

58.50 and 40 CFR 58, Appendix G. The AQI will also be made available to the public at the Maricopa County Air Quality Department.

SECTION 500 – MONITORING AND RECORDS (NOT APPLICABLE)