

**STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES**

**AIR RESOURCES DIVISION**

**CHAPTER ENV-A 300**

**CHAPTER Env-A 300 AMBIENT AIR QUALITY STANDARDS**

Statutory Authority: RSA 125-C:4, I(b)

**PART Env-A 301 PURPOSE, SCOPE AND DEFINITIONS**

Env-A 301.01 Purpose. The purpose of this chapter is to establish ambient air quality standards to:

(a) Support the policy and purpose articulated in RSA 125-C:1 and as required by §109 of the Clean Air Act (Act), 40 CFR 50, and 40 CFR 53 for various types of pollutants emitted in or transported into the State of New Hampshire; and

(b) Be at least as stringent as the federal primary and secondary ambient air quality standards, respectively.

Env-A 301.02 Applicability. This chapter shall apply to ambient air statewide. The department shall not construe these standards in any manner that would allow the significant deterioration of existing air quality in any portion of the state.

**PART Env-A 302 REFERENCES; DEFINITIONS**

Env-A 302.01 References. For the purpose of this chapter, unless otherwise specified all references to 40 CFR 50 and 40 CFR 53, including appendices, shall be to the July 1, 2021 edition.

Env-A 302.02 Definitions. For the purposes of this chapter, the following definitions shall apply:

(a) “Attainment” means that the primary or secondary ambient air quality standard, as applicable for that pollutant, is met;

(b) “Equivalent method” means “equivalent method” as defined by 40 CFR 50.1(g), reprinted in Appendix B;

(c) “Primary ambient air quality standard” means the level of air quality designated by the administrator of the U.S. Environmental Protection Agency (EPA) that is judged to be necessary to protect public health. For purposes of this definition, “public health” means the overall health and safety of the human population at large;

(d) “Reference method” means “reference method” as defined by 40 CFR 50.1(f), reprinted in Appendix B; and

(e) “Secondary ambient air quality standard” means the level of air quality designated by the EPA administrator that is judged to be necessary to protect public welfare from any known or anticipated adverse effects of a pollutant. For purposes of this definition, “public welfare” means the well-being of animals and vegetation and the maintenance of property.

## PART Env-A 303 AMBIENT AIR QUALITY STANDARDS FOR PARTICULATE MATTER

Env-A 303.01 Primary and Secondary Ambient Air Quality Standards for Particulate Matter (PM). The primary and secondary ambient air quality standards for particulate matter (PM) shall be as follows:

(a) For PM measured in the ambient air as particles having an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM<sub>10</sub>), the primary and secondary ambient air quality standards each shall be 150 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), 24-hour average concentration; and

(b) For PM measured in the ambient air as particles having an aerodynamic diameter less than or equal to a nominal 2.5 micrometers in diameter or smaller (PM<sub>2.5</sub>):

(1) The annual primary ambient air quality standards shall be  $12.0 \mu\text{g}/\text{m}^3$ , annual arithmetic mean concentration;

(2) The annual secondary ambient air quality standards shall be  $15.0 \mu\text{g}/\text{m}^3$ , annual arithmetic mean concentration; and

(3) The 24-hour primary and secondary ambient air quality standards each shall be  $35 \mu\text{g}/\text{m}^3$ , 24-hour average concentration.

Env-A 303.02 Determination of Attainment of PM Standards. The department shall determine the attainment of primary and secondary standards for PM specified in Env-A 303.01 as follows:

(a) For particulate matter measured in the ambient air as PM<sub>10</sub>, the 24-hour primary and secondary ambient air quality standards shall be deemed to be attained when the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$ , as determined in accordance with 40 CFR 50 Appendix K, is equal to or less than one; and

(b) For particulate matter measured in the ambient air as PM<sub>2.5</sub>:

(1) The annual primary ambient air quality standard shall be deemed to be attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR 50 Appendix N, is less than or equal to  $12.0 \mu\text{g}/\text{m}^3$ ;

(2) The annual secondary ambient air quality standard shall be deemed to be attained when the annual arithmetic mean concentration, as determined in accordance with 40 CFR 50 Appendix N, is less than or equal to  $15.0 \mu\text{g}/\text{m}^3$ ; and

(3) The 24-hour primary and secondary ambient air quality standards shall be deemed to be attained when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR 50 Appendix N, is less than or equal to  $35 \mu\text{g}/\text{m}^3$ .

Env-A 303.03 Measurement for PM Attainment Determinations. For the purpose of determining attainment of the primary and secondary ambient air quality standards for PM specified in Env-A 303.01, the following shall apply:

(a) PM<sub>10</sub> in the ambient air shall be measured by either:

(1) A reference method based on 40 CFR 50 Appendix J and designated in accordance with 40 CFR 53; or

- (2) An equivalent method designated in accordance with 40 CFR 53; and
- (b) PM<sub>2.5</sub> in the ambient air shall be measured by either:
  - (1) A reference method based on 40 CFR 50 Appendix L and designated in accordance with 40 CFR 53; or
  - (2) An equivalent method designated in accordance with 40 CFR 53.

#### PART Env-A 304 AMBIENT AIR QUALITY STANDARDS FOR SULFUR DIOXIDE

Env-A 304.01 Primary and Secondary Ambient Air Quality Standards for Sulfur Dioxide (SO<sub>2</sub>). The primary and secondary ambient air quality standards for sulfur dioxide (SO<sub>2</sub>), chemical abstracts service registry number (CAS #) 7446-09-5, shall be as follows:

- (a) The primary ambient air quality standard for SO<sub>2</sub> shall be 75 parts per billion (ppb), 1-hour average concentration; and
- (b) The secondary ambient air quality standard for SO<sub>2</sub> shall be 0.5 parts per million (ppm), 3-hour average concentration.

Env-A 304.02 Determination of Attainment of SO<sub>2</sub> Standards. The department shall determine attainment of the primary and secondary standards for SO<sub>2</sub> specified in Env-A 304.01 as follows:

- (a) The primary ambient air quality standard for SO<sub>2</sub> shall be deemed to be attained when the 3-year average of the annual 99<sup>th</sup> percentile of the daily maximum 1-hour average concentrations, as determined in accordance with 40 CFR 50 Appendix T, is less than or equal to 75 ppb; and
- (b) The secondary ambient air quality standard for SO<sub>2</sub> shall be deemed to be attained when the 3-hour average concentration exceeds 0.5 ppm not more than once per calendar year.

Env-A 304.03 Measurement for SO<sub>2</sub> Attainment Determination. For the purpose of determining attainment of the primary and secondary ambient air quality standards for SO<sub>2</sub> specified in Env-A 304.01, sulfur dioxide in the ambient air shall be measured by either:

- (a) The reference method described in 40 CFR 50 Appendix A-1 or A-2; or
- (b) An equivalent method designated in accordance with 40 CFR 53.

#### PART Env-A 305 AMBIENT AIR QUALITY STANDARDS FOR CARBON MONOXIDE

Env-A 305.01 Primary Ambient Air Quality Standards for Carbon Monoxide (CO). The primary ambient air quality standards for carbon monoxide (CO), CAS # 630-08-0, shall be as follows:

- (a) The 8-hour primary ambient air quality standard for CO shall be 9 ppm, 8-hour average concentration; and
- (b) The 1-hour primary ambient air quality standard for CO shall be 35 ppm, 1-hour average concentration.

Env-A 305.02 Determination of Attainment of CO Standards. The department shall determine attainment of the primary standards for CO specified in Env-A 305.01 as follows:

(a) The 8-hour primary ambient air quality standard for CO shall be deemed to be attained when the 8- hour average concentration exceeds 9 ppm not more than once per calendar year; and

(b) The 1-hour primary ambient air quality standard for CO shall be deemed to be attained when the 1- hour average concentration exceeds 35 ppm not more than once per calendar year.

Env-A 305.03 Measurement for CO Attainment Determination. For the purpose of determining attainment of the primary ambient air quality standards for CO specified in Env-A 305.01, carbon monoxide in the ambient air shall be measured by either:

(a) A reference method based on 40 CFR 50 Appendix C and designated in accordance with 40 CFR 53; or

(b) An equivalent method designated in accordance with 40 CFR 53.

## PART Env-A 306 AMBIENT AIR QUALITY STANDARDS FOR NITROGEN DIOXIDE

Env-A 306.01 Primary and Secondary Ambient Air Quality Standards for Nitrogen Dioxide (NO<sub>2</sub>). The primary and secondary ambient air quality standards for nitrogen dioxide (NO<sub>2</sub>), CAS # 10102-44-0, shall be as follows:

(a) The annual primary ambient air quality standard for NO<sub>2</sub> shall be 53 ppb, annual average concentration;

(b) The 1-hour primary ambient air quality standard for NO<sub>2</sub> shall be 100 ppb, 1-hour average concentration; and

(c) The secondary ambient air quality standard for NO<sub>2</sub> shall be 0.053 ppm, equivalent to 100 µg/m<sup>3</sup>, annual arithmetic mean concentration.

Env-A 306.02 Determination of Attainment of NO<sub>2</sub> Standard.

(a) The annual primary standard for NO<sub>2</sub> specified in Env-A 306.01 shall be deemed to be attained when the annual average concentration in a calendar year, as determined in accordance with 40 CFR 50 Appendix S, is less than or equal to 53 ppb.

(b) The 1-hour primary standard for NO<sub>2</sub> specified in Env-A 306.01 shall be deemed to be attained when the 3-year average of the annual 98th percentile of the daily maximum 1-hour average, as determined in accordance with 40 CFR 50 Appendix S, is less than or equal to 100 ppb.

(c) The annual secondary standard specified in Env-A 306.01 shall be deemed to be attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 ppm, rounded to 3 decimal places, as further described in 40 CFR 50.11(g).

Env-A 306.03 Measurement for NO<sub>2</sub> Attainment Determination. For the purpose of determining attainment of the primary and secondary ambient air quality standards specified in Env-A 306.01, NO<sub>2</sub> in the ambient air shall be measured by either:

(a) A reference method based on 40 CFR 50 Appendix F; or

(b) An equivalent method designated in accordance with 40 CFR 53.

## PART Env-A 307 AMBIENT AIR QUALITY STANDARDS FOR OZONE

Env-A 307.01 Primary and Secondary Ambient Air Quality Standards for Ozone. The primary and secondary ambient air quality standards for ozone, CAS # 10028-15-6, shall be as follows:

- (a) The primary ambient air quality standard for ozone shall be 0.070 ppm, daily maximum 8-hour average; and
- (b) The secondary ambient air quality standard for ozone shall be the same as the annual primary ambient air quality standard for ozone designated in (a), above.

Env-A 307.02 Determination of Attainment of Ozone Standards. The primary and secondary ambient air quality standards for ozone specified in Env-A 307.01 shall be deemed to be attained when the 3-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration, as determined in accordance with 40 CFR 50 Appendix P, is less than or equal to 0.070 ppm.

Env-A 307.03 Measurement for Ozone Attainment Determination. For the purpose of determining attainment of the primary and secondary ambient air quality standards for ozone specified in Env-A 307.01, ozone in the ambient air shall be measured by either of the following:

- (a) A reference method based on 40 CFR 50 Appendix D and designated in accordance with 40 CFR 53; or
- (b) An equivalent method designated in accordance with 40 CFR 53.

## PART Env-A 308 AMBIENT AIR QUALITY STANDARDS FOR LEAD

Env-A 308.01 Primary and Secondary Ambient Air Quality Standards for Lead. The primary and secondary ambient air quality standards for lead and its compounds, CAS # 7439-92-1, shall be as follows:

- (a) The primary ambient air quality standard for lead shall be 0.15  $\mu\text{g}/\text{m}^3$ , 3-month arithmetic mean concentration; and
- (b) The secondary ambient air quality standard for lead shall be the same as the primary ambient air quality standard for lead designated in (a), above.

Env-A 308.02 Determination of Attainment of Lead Standards. The primary and secondary ambient air quality standards for lead specified in Env-A 308.01 shall be deemed to be attained when the maximum arithmetic 3-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  $\mu\text{g}/\text{m}^3$ .

Env-A 308.03 Measurement for Lead Attainment Determination. For the purpose of determining attainment of the primary and secondary ambient air quality standards for lead specified in Env-A 308.01, lead in the ambient air shall be measured by either:

- (a) A reference method based on 40 CFR 50 Appendix G and designated in accordance with 40 CFR 53; or
- (b) An equivalent method designated in accordance with 40 CFR 53.

## Appendix A: State Statute, Federal Statute/Regulations Implemented

Rule Section(s)	State Statutes Implemented	Federal Statutes/Regulations Implemented
Env-A 300 (see parts listed below for additional info)	RSA 125-C:1; RSA 125-C:6	42 U.S.C. §7409; 40 CFR 50; 40 CFR 53
Env-A 302		40 CFR §50.1
Env-A 303		40 CFR §50.6, §50.7; 40 CFR 50 Appendix J, K, L & N
Env-A 304		40 CFR §50.4, §50.5; 40 CFR 50 Appendix A-1 & A-2
Env-A 305		40 CFR §50.8; 40 CFR 50 Appendix C
Env-A 306		40 CFR §50.11; 40 CFR 50 Appendix F & S
Env-A 307		40 CFR §50.9, §50.10; 40 CFR 50 Appendix H & I
Env-A 308		40 CFR §50.12; 40 CFR 50 Appendix G & R

## Appendix B: Definitions from 40 CFR §50.1

### **40 CFR §50.1**

(f) *Reference method* means a method of sampling and analyzing the ambient air for an air pollutant that is specified as a reference method in an appendix to this part, or a method that has been designated as a reference method in accordance with part 53 of this chapter; it does not include a method for which a reference method designation has been cancelled in accordance with §53.11 or §53.16 of this chapter.

(g) *Equivalent method* means a method of sampling and analyzing the ambient air for an air pollutant that has been designated as an equivalent method in accordance with part 53 of this chapter; it does not include a method for which an equivalent method designation has been cancelled in accordance with §53.11 or §53.16 of this chapter.