ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD REPEALING, RENUMBERING,
RENUMBERING AND AMENDING, AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board adopts an order to **repeal** NR 400.02(61m), 405.02(5), 405.04(3), 415.09(1)(a) to (e), 417.06(3), 417.07(6)(a)1. to 5. and (b) to (d) and (9), 418.025(2)(intro.) and (a) to (e), 418.03(2)(intro.) and (a) to (e), 418.04(2)(a) to (e), 418.05(2), (3)(a) to (e), 418.06(2)(b) to (e), 418.07(2)(intro.) and (a) to (e), 421.04(4), 422.05(3), 422.09(2)(c), (3)(a), (c), (e), (f) and (h) and (4)(a), (c) and (e), 423.03(6)(b)1. to 5., 424.03(2)(b)1. and 2., 425.03(2)(a)1. to 5. and (b), (3)(a)1. to 7., (c)2., (d)1. to 4., (e)1. to 6. and (f), (4)(a)1. to 5. and (b), (5)(a)1. to 4., (b) and (c) and (6)(b)1. to 3., 439.095(2)(a) and (b), 447.02(4), 484.03(5) and (6), 484.11(1)(c), 485.045(1)(a), 488.06(1)(d) Note and 493.02(2); to **renumber** NR 400.02(100)(u), 411.02(6) and Note, 418.06(2)(f), 419.02(1m), (1p), (1s), (1t), (1u), (2), (3), (3c), (3e), (3m), (4), (6), (6m) and (7), 420.02(28), 421.02(2e) to (13), 422.02(1e) to (6), (7m) to (11m), (12d) to (33j), (34) to (47e), (48) to (52) and 499.07(2)(a) to (m); to **renumber and amend** NR 417.07(6)(a)(intro.), 418.025(2)(f), 418.03(2)(f), 418.07(2)(f), 419.02(8), 422.02(7), (12), (33m) and (47m), 424.03(2)(b)(intro.), 425.03(2)(a)(intro.), (4)(a)(intro.) and (5)(a)(intro.) and 499.07(2)(n)(intro.); to **amend** NR 30.03(2)(f), 30.04(2)(f), 400 Note, 400.02(41), (77), (79), (90) and (100)(t), 400.03(2), 401.04, 404.04(2)(a)1. and 2. and (6), 404.06(1)(a) and (4)(b), 405.01(2) Note, 405.02(1)(d), (2)(intro.), (3)(intro.) and (a), (4)(a)(intro.), 1. and 2. and (b)1. and 2., (7), (12), (21)(intro.), (b)3. and 5.a. and b., 6. and 8.a., (22)(a)1. and 2., (24)(d), (25g)(b) and (d), (25m)(a) and (c), (25s)(intro.) and (a), (27)(c) and (28), 405.04(1)(a) and (e), (4)(intro.) and (a), 405.05(1), (4)(intro.), (5) and (6), 405.07(3), (4)(intro.) and (b)27. and (5), 405.08(3), 405.10(4), 405.14(1), (2) and (4) 405.15(2)(d), 406.04(1)(intro.), (g), (h), (j) and (2)(intro.), (c), (f)3m., (h) and (i), (4)(a)6., 406.11(1)(f), 407.03(1)(g), (h), (o), (2)(b) and (4), 407.05(4)(c)1. and Table 2 footnote 8, 407.09(4)(a)3.c., 408.02(4), (20)(e)5.a. and b. and (21)(intro.), 409.02(76)(intro.), 409.06(8)(d), 415.02(5), 415.04(1)(b), (2)(a)(intro.), (b)(intro,) and (c)(intro.), (3)(a) and (4)(b), 415.05(2), 415.07(1)(a)(intro.), (b)(intro.) and 2., 415.075(2)(a)5., 415.08(1), 415.09(1)(intro.) and (3), 417.01(1), 417.02(intro.), 417.06(1) and (2), 417.07(7)(a)(intro.) and 1. to 3., 418.01(1), 418.04(1)(a)2. and (2)(intro.), 418.05(3)(intro.) and (4)(intro.), 418.06(2)(intro.), 419.02(intro.), 420.02(intro.), 420.03(1)(b), 420.035(2)(b) and (3)(c), 420.04(2)(a)(intro.) and 2., 420.045(1)(a), (b)(title), (c), (d)1.(intro.) and (e) and (10)(intro.), 421.02(intro.), 421.05(2)(a)(intro.), (2)(e)1. and 2., 421.06(2)(e)1. and 2., 422.03(intro.), (2), (3), (4), (4m)(b) and (c) and (5)(intro.), 422.04(1)(a), (2)(intro.) and (3)(b)(intro.), 422.132(1)(intro.) and (2)(b), 422.14(2)(c)(intro.), 423.02(intro.), 423.03(4)(intro.) and (m), (5)(intro.), (6)(a)(intro.) and (b)(intro.) and (9), 424.03(1)(a)3. and 4., 425.03(3)(a)(intro.), (b), (d)(intro.), (e)(intro.), (6)(b)(intro.), (7)(e), (7m)(intro.) and (a) and (8), 425.035(2)(f) and (3)(a)3. Note, 425.04(1)(b), 426.04, 429.02(intro.) and (1), 436.02(intro.), 436.05(2)(b) and (5), 438.03(1)(b) and Table 1, 439.03(1)(c) and (4)(a)(intro.), 439.075(2)(a)(intro.) and 4., 439.095(2)(intro.), 445.01(1), 445.02(intro.), (2) and (6), 445.04(3)(c)6., (4r)(a)Note and (b)4., (6)(a)(intro.), (b)4. and Tables 2, 3 and 5, 445.05(3)(a) and (c)7., (4r)(b)4. and (6)(bm)4.(intro.), (c) and (e), 447.02(intro.), (16) and (18) Note, 447.07(3)(a) and (d)(intro.), 447.12(3)(b) Note, 447.16(2) 447.18(1) Note, 448.02(intro.), 448.04(2), 449.02(intro.), 449.09(6)(a)3. and 4., (d)2. and (e)1.(intro.), 449.12(3)(a) and (b)5., 484.04(18), 484.05(3), 484.11(1)(a), 488.02(2) Note, 488.03(3)(b) Note, 488.04(3) Note, 488.08, 488.11(1)(b), 493.02(intro.), 493.04(2) and (3), 499.06(2)(intro.), (e) and (g) and 499.07(2)(intro.); and to **create** NR 400.02(53s) Note, (100)(u) and (v), 405.02(21m), (22m), 406.04(7), 419.02(10), 421.05(2)(e)3., 421.06(2)(e)3., 422.03(7), 424.03(2)(c), 425.03(14), 436.05(2)(bm) and 484.04(18m) relating to clarification and cleanup changes in NR 30 and throughout the NR 400 series.

AM-9-95

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 144.31(1)(a), 144.391(6) and 227.11(2)(a), Stats.

Statutes interpreted: s. 144.31(1)(f), Stats. The State Implementation Plan developed under that provision is revised.

These rule changes affect Wisconsin's existing environmental protection air pollution control rules. Changes affecting most elements of the air pollution control program are made, including; definition of terms, permitting, compliance schedules, emission testing, emission limitations, emission monitoring and incorporation by reference. These changes also affect diverse source categories and pollutants. However, these changes are of a cleanup nature, and are intended to correct errors in content or style, or to improve consistency or clarify existing policy or procedures.

The consent of the Attorney General and the Revisor of Statutes will be sought for the incorporation by reference of two appendicies in Title 40 of the Code of Federal Regulations containing test methods and the incorporation by reference of a previously approved document from the American Conference of Governmental Industrial Hygienists for two additional citations.

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SECTION 12. NR 404.04(2)(a)1. and 2. and (6) are amended to read:

1. 80 micrograms per cubic meter (~~.03~~ 0.03 ppm) - annual arithmetic mean.

2. 365 micrograms per cubic meter (~~.14~~ 0.14 pm) - maximum 24-hour average concentration, not to be exceeded more than once per year.

(6) NITROGEN DIOXIDE: PRIMARY AND SECONDARY STANDARDS. The primary and secondary standards for nitrogen dioxide are: 100 micrograms per cubic meter (~~.05~~ 0.05 ppm) - annual arithmetic mean.

SECTION 13. NR 404.06(1)(a) and (4)(b) are amended to read:

NR 404.06(1)(a) The department and any person conducting ambient air quality monitoring on its behalf shall use only reference or equivalent methods as specified in sub. (2) or (3) for all ambient air quality monitoring for any air contaminant identified in s. NR 404.04. The ambient monitoring shall conform with the department's ~~handbooks~~ guidebooks, plans and procedures for air monitoring quality assurance.

(4)(b) The department shall publish, revise and maintain quality assurance plans and ~~handbooks~~ guidebooks which describe the activities and procedures of the quality assurance and quality control systems.

Draft #8
9/13/94

ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
REPEALING, AMENDING AND CREATING RULES

IN THE MATTER of repealing NR 405.10(5) and 484.05(6) and (7), amending NR 400.02(39m), 404.05(2)(intro.) and (a), (3)(intro.) and (a) and (4)(intro.) and (a), 405.02(1)(b), (2)(a), (3)(intro.), (7), (21)(b)6, (24)(d) and (25m)(b) and (c), 405.07(8)(a)3, 405.08(1), 405.10(1) to (3), 405.14(4) and creating NR 484.04(9) and footnote 1 to 484.04 Table 2 of the Wisconsin Administrative Code, pertaining to Prevention of Significant Deterioration and associated particulate matter increments.

AM-27-94

Analysis Prepared by the Department of Natural Resources

Statutory authority: ss. 144.31(1)(a) and (f), 144.375(2) and 227.11(2)(a), Stats.

Statutes interpreted: ss. 144.31(1)(a) and (f) and 144.375(2), Stats. The state implementation plan developed under s. 144.31(1)(f), Stats., is revised.

On January 4, 1994, the USEPA published a notice of disapproval of the State's Prevention of Significant Deterioration (PSD) State Implementation Plan (SIP) submittal, citing several minor discrepancies under 40 CFR 51.166. These discrepancies are addressed in this rule revision. Section 144.375(2), Stats., requires that PSD ambient air increments as promulgated by the Department shall be consistent with the corresponding federal increments, with certain exceptions. The USEPA, on June 3, 1993, promulgated new PSD particulate matter increments which are subject to this statute.

The purpose of this rule is to address the deficiencies in Wisconsin's PSD SIP and to add the new federal PSD increments for particulate matter into Wisconsin's rules. The $PM_{10}$ basis for particulate matter measurement, new particulate matter increments and the revised annual concentration averaging procedure for Class I, II and III PSD areas are incorporated in s. NR 404.05. The changes in s. NR 404.05(3)(a) are also incorporated in s. NR 405.14(4), which pertains to the granting of Class I variances. Other changes to incorporate the federal $PM_{10}$ rules are in ss. NR 405.02(24)(d) and 405.07(8)(a)3. Deficiencies in the PSD SIP submittal delineated in the disapproval notice of January 4, 1994, are rectified in ss. NR 400.02(39m), 405.02(1)(b), (2)(a), (21)(b)6, 405.08, 405.10(1) and (2) and 484.04 and by the repeal of ss. NR 405.10(5) and the amendment of ss. NR 484.04 and 484.05 (as affected by Clearinghouse Rule 94-104).

SECTION 1. NR 400.02(39m) is amended to read:

NR 400.02(39m) "Federally enforceable" means all limitations and conditions which are enforceable by the administrator of the U.S. environmental protection agency, including those requirements developed pursuant to chs. NR 440 and 446 to 449, and under ss. 111 and 112 of the act (42 USC 7411 and 7412), requirements within any applicable state implementation plan, any permit requirements established pursuant to ch. NR 405, requirements in construction permits issued under ch. NR 406 or 408 and requirements in operation permits issued pursuant to ch. NR 407 and title V of the ~~federal clean air~~ act which are designated as federally enforceable.

SECTION 2. NR 404.05(2)(intro.) and (a), (3)(intro.) and (a) and (4)(intro.) and (a) are amended to read:

NR 404.05(2)(intro.) CLASS I INCREMENTS. In any area of this state classified under the federal clean air act as a class I area, the ambient air increments of particulate matter measured as $PM_{10}$, sulfur dioxide and nitrogen dioxide may not exceed the following amounts:

(a) ~~Particulate matter~~$PM_{10}$.

1. Annual ~~geometric~~ arithmetic mean.....~~5~~ 4 micrograms per cubic meter

2. Twenty-four hour maximum.....~~10~~ 8 micrograms per cubic meter

(3)(intro.) CLASS II INCREMENTS. In any area of this state classified under the federal clean air act as a class II area, the ambient air increments of particulate matter measured as $PM_{10}$, sulfur dioxide and nitrogen dioxide may not exceed the following amounts:

(a) ~~Particulate matter~~$PM_{10}$.

1. Annual ~~geometric~~ arithmetic mean.....~~19~~ 17 micrograms per cubic meter

2. Twenty-four hour maximum.....~~37~~ 30 micrograms per cubic meter

(4)(intro.) CLASS III INCREMENTS. In any area of this state classified under the federal clean air act as a class III area, the ambient air increments of particulate matter measured as $PM_{10}$, sulfur dioxide and nitrogen dioxide may not exceed the following amounts:

(a) ~~Particulate matter~~$PM_{10}$.

1. Annual ~~geometric~~ arithmetic mean.....~~37~~ 34 micrograms per cubic meter

2. Twenty-four hour maximum.....~~75~~ 60 micrograms per cubic meter

# Chapter NR 404

## AMBIENT AIR QUALITY



**Note:** Chapter NR 155 as it existed on March 31, 1972 was repealed and a new chapter NR 155 was created, Register, March, 1972, No. 195, effective April 1, 1972. Chapter NR 155 was renumbered chapter NR 404, Register, July, 1985.

**Note:** Air standards are definitions of the characteristics of ambient air quality which, in terms of present day knowledge, need to be maintained in order to protect the public health and welfare and our environment from adverse effects of air pollution.

The purpose of air standards should be viewed as goals or objectives to be achieved by these and other rules of the department, by regional implementation plans, and by enforcement programs of both state and local governments as population, industrial activity and land use changes.

The standards are meaningful for pollution control when applied to achieve and maintain desired air quality as expressed by the standards.

Because of variation in population, transportation, and industrial densities, in addition to variation in terrain and meteorology, equal air quality may not be achieved throughout a region or area.

These standards conform to national ambient air quality standards. They are subject to review as knowledge of the effects of air pollution on health, plant and animal life, property, visibility, and our environment increases.

These standards are promulgated pursuant to ch. 285, Stats., which directs the department of natural resources to undertake a comprehensive program to manage and protect the state's air resources. These rules are one part of that program.

**NR 404.01 Applicability; purpose. (1)** APPLICABILITY. The air standards of this chapter apply to the entire state without exception. The ambient air increments of this chapter apply to all attainment areas of the state.

**(2)** PURPOSE. This chapter is adopted under ss. 285.11, 285.13 and 285.21, Stats., to establish geographic air regions, air standards and ambient air increments, to specify the methods to be used to measure air quality and to interpret air quality data and to establish guidelines for the application of air standards.

**History:** Cr. Register, September, 1986, No. 369, eff. 10–1–86; corrections made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1996, No. 492.

**NR 404.02 Definitions.** ~~The definitions contained in ch.~~ NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

**(3)** "Equivalent method" means a monitoring method which has been designated as an equivalent method by the department and which has been published in a list by the department under s. NR 404.06 (4) (a).

**(4)** "Monitoring method" means a method for sampling and analyzing or for continuously monitoring a discrete parcel of ambient air for an air contaminant. Monitoring methods include reference methods and equivalent methods.

**(4e)** "$PM_{2.5}$" means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by a reference method based on Appendix N of 40 CFR part 50, incorporated by reference in s. NR 484.04 (6g), and designated in accordance with 40 CFR part 53, incorporated by reference in s. NR 484.03 (5), or by an equivalent method.

**(4m)** "$PM_{10}$" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on Appendix J of 40 CFR part 50, incorporated by reference in s. NR 484.04, and designated in accordance with 40 CFR part 53, incorporated by reference in s. NR 484.03, or by an equivalent method.

**(5)** "Primary air standard" means the level of air quality which provides protection for public health with an adequate margin of safety.

**(6)** "Quality assurance system" means the system of activities which provides evidence that the quality control systems are performing adequately.

**(7)** "Quality control system" means the system of activities which are used to control the quality of ambient monitoring or air emissions data, including all activities involved in the collection, processing and analysis of such data.

**(8)** "Reference method" means a method of sampling and analyzing the ambient air for an air pollutant that is specified as a reference method in 40 CFR part 50, Appendices A to N, incorporated by reference in s. NR 484.04 (2), a method that has been designated as a reference method in accordance with 40 CFR part 53, or a method that has been so designated by the department. It does not include a method for which a reference method designation has been canceled in accordance with 40 CFR 53.11 or 53.16.

**(9)** "Secondary air standard" means the level of air quality which may be necessary to protect public welfare from unknown or anticipated adverse effects.

**(10)** "Suspended particulate matter" means any solid or liquid particle dispersed and suspended in air which is capable of being trapped on the filter of a high volume air particulate sampler.

**(11)** "Total suspended particulates" means particulate matter as measured by the method described in Appendix B of 40 CFR part 50, incorporated by reference in s. NR 484.04.

**History:** Cr. Register, March, 1972, No. 195, eff. 4–1–72; cr. (intro.), Register, August, 1981, No. 308, eff. 9–1–81; renum. from NR 155.01, r. (5) to (7), renum. (4) to (5) and am., am. (1) to (3), cr. (4) and (6) to (13), Register, July, 1985, No. 355, eff. 8–1–85; renum. from NR 404.01 and am. (intro.), r. (3) and (5), renum. (4) to (13) to be (3), (4), NR 400.02 (64), (5) to (10), Register, September, 1986, No. 369, eff. 10–1–86; cr. (4m) and (11), am. (8), Register, December, 1988, No. 396, eff. 1–1–89; am. (intro.), (4m), (8) and (11), renum. (1) to be NR 400.02 (5s) and am., Register, May, 1992, No. 437, eff. 6–1–92; am. (4m), (8) and (11), Register, December, 1995, No. 480, eff. 1–1–96; am. (intro.), Register, October, 1999, No. 526, eff. 11–1–99; CR 03–066: renum. (2) to be NR 400.02 (19m), am. (8) Register May 2005 No. 593, eff. 6–1–05; **CR 07–082: cr. (4e) Register September 2009 No. 645, eff. 10–1–09.**

**NR 404.03 Air quality control regions.** The following air quality control regions, which include counties in Wisconsin, have been designated:

**(1)** INTERSTATE AIR QUALITY CONTROL REGIONS. (a) The Duluth (Minnesota) — Superior (Wisconsin) Interstate Air Quality Control Region includes the counties of Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor, and Washburn in Wisconsin, and the counties of Aitkin, Carlton, Cook, Itasca, Koochicing, Lake, and St. Louis in Minnesota.

(b) The Southeast Minnesota — La Crosse (Wisconsin) Interstate Air Quality Control Region includes the counties of Barron, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, La Crosse, Monroe, Pepin, Pierce, Polk, St. Croix, Trempealeau, and Vernon in Wisconsin, and the counties of Blue Earth, Brown, Dodge, Faribault, Fillmore, Freeborn, Goodhue, Houston, LeSueur, Martin, Mower, Nicollet, Olmsted, Rice, Sibley, Steele, Wabasha, Waseca, Watonwan, and Winona in Minnesota.

(c) The Metropolitan Dubuque Interstate Air Quality Control Region includes Grant county in Wisconsin and Clayton, Dubuque, and Jackson counties in Iowa.

(d) The Rockford (Illinois) — Janesville–Beloit (Wisconsin) Interstate Air Quality Control Region includes Rock county in Wisconsin, and Boone, DeKalb, Ogle, Stephenson, and Winnebago counties in Illinois.

**(2)** INTRASTATE AIR QUALITY CONTROL REGIONS. (a) The Lake Michigan Intrastate Air Quality Control Region consists of the counties of Brown, Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Sheboygan, Waupaca, Waushara, and Winnebago. For purposes of applying rules and regulations the Lake Michigan Air Region is divided into 2 subregions. Winnebago, Outagamie and Brown counties constitute subregion I. Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Shawano, Sheboygan, Waupaca, and Waushara counties constitute subregion 2.

(b) The Southeastern Wisconsin Intrastate Air Quality Control Region consists of the counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington and Waukesha.

(c) The Southern Wisconsin Intrastate Air Quality Control Region consists of the counties of Columbia, Dane, Dodge, Green, Iowa, Jefferson, Lafayette, Richland and Sauk.

(d) The North Central Wisconsin Intrastate Air Quality Control Region consists of the counties of Adams, Forest, Florence, Juneau, Langlade, Lincoln, Marathon, Oneida, Portage, Vilas and Wood.

**History:** Cr. Register, March, 1972, No. 195, eff. 4–1–72; r. and recr. Register, July, 1985, No. 355, eff. 8–1–85; renum. from NR 404.02, Register, September, 1986, No. 369, eff. 10–1–86.

**NR 404.04 Ambient air quality standards. (1)** APPLICABILITY OF AIR STANDARDS. The air standards apply to the entire state without exception.

**(2)** SULFUR OXIDES. (a) *Primary standards.* The primary standards for sulfur oxides, measured as sulfur dioxide, are:

1. 0.030 ppm — annual arithmetic mean.

2. 0.14 ppm — maximum 24–hour average concentration, not to be exceeded more than once per year.

(b) *Secondary standard.* The secondary standard for sulfur oxides, measured as sulfur dioxide, is: 0.5 ppm — maximum 3–hour average concentration, not to be exceeded more than once per year.

**(3)** PARTICULATE MATTER: SECONDARY STANDARD. The secondary standard for particulate matter measured as total suspended particulates is 150 micrograms per cubic meter — maximum 24–hour average concentration, not to be exceeded more than once per year.

**(4)** CARBON MONOXIDE: PRIMARY AND SECONDARY STANDARDS. The primary and secondary standards for carbon monoxide are:

(a) 10 milligrams per cubic meter (9 ppm) — maximum 8–hour average concentration, not to be exceeded more than once per year.

(b) 40 milligrams per cubic meter (35 ppm) — maximum 1–hour concentration, not to be exceeded more than once per year.

**(5)** OZONE: PRIMARY AND SECONDARY STANDARDS. The primary and secondary standards for ozone are:

(a) 0.12 ppm (235 micrograms per cubic meter) — maximum 1–hour average concentration. The 1–hour ozone standards are attained when the expected number of days per calendar year with maximum hourly average concentrations above the designated level is equal to or less than one, as determined by the methodology of 40 CFR part 50, Appendix H, incorporated by reference in s. NR 484.04 (4).

(b) 0.08 ppm — maximum 8–hour concentration. The 8–hour ozone standards are attained when the arithmetic mean of the fourth highest daily maximum 8–hour concentration at an ambient air quality monitoring site is less than or equal to 0.08 ppm, as determined by the methodology of 40 CFR part 50, Appendix I, incorporated by reference in s. NR 484.04 (4m).

**(6)** NITROGEN DIOXIDE: PRIMARY AND SECONDARY STANDARDS. The primary and secondary standards for nitrogen dioxide are: 0.053 ppm (100 micrograms per cubic meter) — annual arithmetic mean.

**(7)** LEAD: PRIMARY AND SECONDARY STANDARDS. The primary and secondary standards for lead and its compounds, measured as elemental lead, are: 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter, as a constituent of suspended particulate matter.

**(8)** $PM_{10}$: PRIMARY AND SECONDARY STANDARDS. (a) The primary and secondary standards for $PM_{10}$ are 150 micrograms per cubic meter ($\mu g/m^3$) — maximum 24–hour average concentration.

(b) The $PM_{10}$ standards are attained when the expected number of days per calendar year with a 24–hour average concentration above 150 $\mu g/m^3$, the level designated in par. (a), is equal to or less than one.

(c) The expected concentrations and number of days shall be determined by the methodology contained in 40 CFR part 50, Appendix K, incorporated by reference in s. NR 484.04 (6).

**(9)** $PM_{2.5}$: PRIMARY AND SECONDARY STANDARDS. (a) The primary and secondary standards for $PM_{2.5}$ are:

1. 15.0 micrograms per cubic meter ($\mu g/m^3$) — annual arithmetic mean concentration.

2. 35 micrograms per cubic meter ($\mu g/m^3$) — 24–hour average concentration.

(b) The $PM_{2.5}$ standards are attained when all of the following are met:

1. The annual arithmetic mean concentration is less than or equal to 15.0 $\mu g/m^3$, the level designated in par. (a) 1.

2. The ninety–eighth percentile 24–hour average concentration is less than or equal to 35$\mu g/m^3$, the level designated in par. (a) 2.

(c) The calculated concentrations shall be determined by the methodology contained in 40 CFR part 50, Appendix N, incorporated by reference in s. NR 484.04 (6r).

**History:** Cr. Register, March, 1972, No. 195, eff. 4–1–72; r. (1) (b)1. and 2., renum. (1) (b) 3., to be 1., Register, June, 1975, No. 234, eff. 7–1–75; am. (4), Register, August, 1981, No. 308, eff. 9–1–81; reprinted to correct error in (3), Register, November, 1981, No. 311; cr. (7), Register, April, 1983, No. 328, eff. 5–1–83; r. (5), Register, November, 1983, No. 335, eff. 12–1–83; am. Register, July, 1985, No. 355, eff. 8–1–85; renum. from NR 404.03, Register, September, 1986, No. 369, eff. 10–1–86; r. (3) (a), renum. (3) (b) to be (3) and am., cr. (8), Register, September, 1989, No. 405, eff. 10–1–89; am. (5) and (8) (b) 3., Register, May, 1992, No. 437, eff. 6–1–92; am. (5) and (8) (b) 3., Register, December, 1995, No. 480, eff. 1–1–96; am. (8) (b), Register, December, 1996, No. 492, eff. 1–1–97; CR 03–066: am. (2) (a) 1. and 2. and (b), (5) and (6), cr. (5) (b) Register May 2005 No. 593, eff. 6–1–05; **CR 07–082: am. (8), cr. (9) Register September 2009 No. 645, eff. 10–1–09.**

**NR 404.05 Ambient air increments. (1)** SCOPE. The ambient air increments apply to all attainment areas of the state.

**(2)** CLASS I INCREMENTS. In any area of this state classified under the federal clean air act as a class I area, the ambient air increments of particulate matter measured as $PM_{10}$, sulfur dioxide and nitrogen dioxide may not exceed the following amounts:

(a) *$PM_{10}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 4 micrograms per cubic meter |
| 2. Twenty–four hour maximum | 8 micrograms per cubic meter |

(b) *Sulfur dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 2 micrograms per cubic meter |
| 2. Twenty–four hour maximum | 5 micrograms per cubic meter |
| 3. Three hour maximum | 25 micrograms per cubic meter |

(c) *Nitrogen dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 2.5 micrograms per cubic meter |

# Chapter NR 404

## AMBIENT AIR QUALITY



**Note:** Chapter NR 155 as it existed on March 31, 1972 was repealed and a new chapter NR 155 was created, Register, March, 1972, No. 195, effective April 1, 1972. Chapter NR 155 was renumbered chapter NR 404, Register, July, 1985.

**Note:** Air standards are definitions of the characteristics of ambient air quality which, in terms of present day knowledge, need to be maintained in order to protect the public health and welfare and our environment from adverse effects of air pollution.

The purpose of air standards should be viewed as goals or objectives to be achieved by these and other rules of the department, by regional implementation plans, and by enforcement programs of both state and local governments as population, industrial activity and land use changes.

The standards are meaningful for pollution control when applied to achieve and maintain desired air quality as expressed by the standards.

Because of variation in population, transportation, and industrial densities, in addition to variation in terrain and meteorology, equal air quality may not be achieved throughout a region or area.

These standards conform to national ambient air quality standards. They are subject to review as knowledge of the effects of air pollution on health, plant and animal life, property, visibility, and our environment increases.

These standards are promulgated pursuant to ch. 285, Stats., which directs the department of natural resources to undertake a comprehensive program to manage and protect the state's air resources. These rules are one part of that program.

**NR 404.01 Applicability; purpose. (1)** APPLICABILITY. The air standards of this chapter apply to the entire state without exception. The ambient air increments of this chapter apply to all attainment areas of the state.

**(2)** PURPOSE. This chapter is adopted under ss. 285.11, 285.13 and 285.21, Stats., to establish geographic air regions, air standards and ambient air increments, to specify the methods to be used to measure air quality and to interpret air quality data and to establish guidelines for the application of air standards.

**History:** Cr. Register, September, 1986, No. 369, eff. 10−1−86; corrections made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1996, No. 492.

**NR 404.02 Definitions.** The definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

**(3)** "Equivalent method" means a monitoring method which has been designated as an equivalent method by the department and which has been published in a list by the department under s. NR 404.06 (4) (a).

**(4)** "Monitoring method" means a method for sampling and analyzing or for continuously monitoring a discrete parcel of ambient air for an air contaminant. Monitoring methods include reference methods and equivalent methods.

**(5)** "Primary air standard" means the level of air quality which provides protection for public health with an adequate margin of safety.

**(6)** "Quality assurance system" means the system of activities which provides evidence that the quality control systems are performing adequately.

**(7)** "Quality control system" means the system of activities which are used to control the quality of ambient monitoring or air emissions data, including all activities involved in the collection, processing and analysis of such data.

**(8)** "Reference method" means a method of sampling and analyzing the ambient air for an air pollutant that is specified as a reference method in 40 CFR part 50, Appendices A to N, incorporated by reference in s. NR 484.04 (2), a method that has been designated as a reference method in accordance with 40 CFR part 53, or a method that has been so designated by the department. It does not include a method for which a reference method designation has been canceled in accordance with 40 CFR 53.11 or 53.16.

**(9)** "Secondary air standard" means the level of air quality which may be necessary to protect public welfare from unknown or anticipated adverse effects.

**(10)** "Suspended particulate matter" means any solid or liquid particle dispersed and suspended in air which is capable of being trapped on the filter of a high volume air particulate sampler.

**History:** Cr. Register, March, 1972, No. 195, eff. 4−1−72; cr. (intro.), Register, August, 1981, No. 308, eff. 9−1−81; renum. from NR 155.01, r. (5) to (7), renum. (4) to (5) and am., am. (1) to (3), cr. (4) and (6) to (13), Register, July, 1985, No. 355, eff. 8−1−85; renum. from NR 404.01 and am. (intro.), r. (3) and (5), renum. (4) to (13) to be (3), (4), NR 400.02 (64), (5) to (10), Register, September, 1986, No. 369, eff. 10−1−86; cr. (4m) and (11), am. (8), Register, December, 1988, No. 396, eff. 1−1−89; am. (intro.), (4m), (8) and (11), renum. (1) to be NR 400.02 (5s) and am., Register, May, 1992, No. 437, eff. 6−1−92; am. (4m), (8) and (11), Register, December, 1995, No. 480, eff. 1−1−96; am. (intro.), Register, October, 1999, No. 526, eff. 11−1−99; CR 03−066: renum. (2) to be NR 400.02 (19m), am. (8) Register May 2005 No. 593, eff. 6−1−05; CR 07−082: cr. (4e) Register September 2009 No. 645, eff. 10−1−09; CR 10−050: renum. (4e), (4m) to be NR 400.02 (123e), (123s) and am. Register November 2010 No. 659, eff. 12−1−10; CR 07−082: r. (11) Register November 2011 No. 671, eff. 12−1−11.

**NR 404.03 Air quality control regions.** The following air quality control regions, which include counties in Wisconsin, have been designated:

**(1)** INTERSTATE AIR QUALITY CONTROL REGIONS. (a) The Duluth (Minnesota) — Superior (Wisconsin) Interstate Air Quality Control Region includes the counties of Ashland, Bayfield, Burnett, Douglas, Iron, Price, Rusk, Sawyer, Taylor, and Washburn in Wisconsin, and the counties of Aitkin, Carlton, Cook, Itasca, Koochicing, Lake, and St. Louis in Minnesota.

(b) The Southeast Minnesota — La Crosse (Wisconsin) Interstate Air Quality Control Region includes the counties of Barron, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, La Crosse, Monroe, Pepin, Pierce, Polk, St. Croix, Trempealeau, and Vernon in Wisconsin, and the counties of Blue Earth, Brown, Dodge, Faribault, Fillmore, Freeborn, Goodhue, Houston, LeSueur, Martin, Mower, Nicollet, Olmsted, Rice, Sibley, Steele, Wabasha, Waseca, Watonwan, and Winona in Minnesota.

(c) The Metropolitan Dubuque Interstate Air Quality Control Region includes Grant county in Wisconsin and Clayton, Dubuque, and Jackson counties in Iowa.

(d) The Rockford (Illinois) — Janesville−Beloit (Wisconsin) Interstate Air Quality Control Region includes Rock county in Wisconsin, and Boone, DeKalb, Ogle, Stephenson, and Winnebago counties in Illinois.

**(2)** INTRASTATE AIR QUALITY CONTROL REGIONS. (a) The Lake Michigan Intrastate Air Quality Control Region consists of the counties of Brown, Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Sheboygan, Waupaca, Waushara, and Winnebago. For purposes of applying rules and regulations the Lake Michigan Air Region is divided into 2 subregions. Winnebago, Outagamie and Brown counties constitute subregion I. Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manito-

eff. 8−1−85; renum. from NR 404.03, Register, September, 1986, No. 369, eff. 10−1−86; r. (3) (a), renum. (3) (b) to be (3) and am., cr. (8), Register, September, 1989, No. 405, eff. 10−1−89; am. (5) and (8) (b) 3., Register, May, 1992, No. 437, eff. 6−1−92; am. (5) and (8) (b) 3., Register, December, 1995, No. 480, eff. 1−1−96; am. (8) (b), Register, December, 1996, No. 492, eff. 1−1−97; CR 03−066: am. (2) (a) 1. and 2. and (b), (5) and (6), cr. (5) (b) Register May 2005 No. 593, eff. 6−1−05; CR 07−082: am. (8), cr. (9) Register September 2009 No. 645, eff. 10−1−09; CR 09−088: cr. (5) (c), (7) (a) and (b), renum. (7) to be (7) (intro.) and am. Register May 2010 No. 653, eff. 6−1−10; CR 07−082: r. (3) Register November 2011 No. 671, eff. 12−1−11; **CR 15−033: am. (2) (a) (title), renum. (a) (intro.) to (a) and am., r. 1. and 2., r. and recr. (6) Register July 2016 No. 727, eff. 8−1−16.**

**NR 404.05 Ambient air increments. (1)** SCOPE. The ambient air increments apply to all attainment areas of the state.

**(2)** CLASS I INCREMENTS. In any area of this state classified under the Act as a class I area, the ambient air increments for $PM_{10}$, $PM_{2.5}$, sulfur dioxide, and nitrogen dioxide may not exceed the following amounts:

(a) *$PM_{10}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 4 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 8 micrograms per cubic meter |

(am) *$PM_{2.5}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 1 microgram per cubic meter |
| 2. Twenty−four hour maximum | 2 micrograms per cubic meter |

(b) *Sulfur dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 2 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 5 micrograms per cubic meter |
| 3. Three hour maximum | 25 micrograms per cubic meter |

(c) *Nitrogen dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 2.5 micrograms per cubic meter |

**(3)** CLASS II INCREMENTS. In any area of this state classified under the Act as a class II area, the ambient air increments for $PM_{10}$, $PM_{2.5}$, sulfur dioxide, and nitrogen dioxide may not exceed the following amounts:

(a) *$PM_{10}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 17 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 30 micrograms per cubic meter |

(am) *$PM_{2.5}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 4 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 9 micrograms per cubic meter |

(b) *Sulfur dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 20 micrograms per cubic meter |
| 2. Twenty−four maximum | 91 micrograms per cubic meter |
| 3. Three hour maximum | 512 micrograms per cubic meter |

(c) *Nitrogen dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 25 micrograms per cubic meter |

**(4)** CLASS III INCREMENTS. In any area of this state classified under the Act as a class III area, the ambient air increments for $PM_{10}$, $PM_{2.5}$, sulfur dioxide, and nitrogen dioxide may not exceed the following amounts:

(a) *$PM_{10}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 34 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 60 micrograms per cubic meter |

(am) *$PM_{2.5}$.*

| | |
|---|---|
| 1. Annual arithmetic mean | 8 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 18 micrograms per cubic meter |

(b) *Sulfur dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 40 micrograms per cubic meter |
| 2. Twenty−four hour maximum | 182 micrograms per cubic meter |
| 3. Three hour maximum | 700 micrograms per cubic meter |

(c) *Nitrogen dioxide.*

| | |
|---|---|
| 1. Annual arithmetic mean | 50 micrograms per cubic meter |

**(5)** EXCEPTION FOR NON−ANNUAL CONCENTRATIONS. Notwithstanding subs. (2) (intro.), (3) (intro.) and (4) (intro.), the ambient air increment of an air contaminant based on concentrations for any period other than an annual period may be exceeded during one such period per year.

**(6)** MAXIMUM CONCENTRATION. The maximum allowable concentration of any air contaminant in any attainment area may not exceed a concentration for such contaminant for each period of exposure equal to the maximum concentrations permitted under the primary or secondary air standards in s. NR 404.04.

**History:** Cr. Register, April, 1983, No. 238, eff. 5−1−83; renum. from NR 155.035, Register, July, 1985, No. 355, eff. 8−1−85; renum. from NR 404.04, Register, September, 1986, No. 369, eff. 10−1−86; am. (2) (intro.), (3) (intro.) and (4) (intro.), cr. (2) (c), (3) (c) and (4) (c), Register, May, 1992, No. 437, eff. 6−1−92; am. (2) (intro.), (a), (3) (intro.), (a), (4) (intro.), (a), Register, April, 1995, No. 472, eff. 5−1−95; am. (3) (intro.) and (4) (intro.), Register, December, 1996, No. 492, eff. 1−1−97; **CR 15−077: am. (2) (intro.), cr. (2) (am), am. (3) (intro.), cr. (3) (am), am. (4) (intro.), cr. (4) (am) Register July 2016 No. 727, eff. 8−1−16.**

**NR 404.06 Measurement of ambient air quality. (1)** APPLICABILITY. (a) The department and any person conducting ambient air quality monitoring on its behalf shall use only reference or equivalent methods as specified in sub. (2) or (3) for all ambient air quality monitoring for any air contaminant identified in s. NR 404.04. The ambient monitoring shall conform with the department's guidebooks, plans and procedures for air monitoring quality assurance.

(b) Any person required by the department to conduct ambient air quality monitoring shall use only reference or equivalent methods for sampling and analysis as specified in sub. (2) or (3) and shall comply with quality assurance and quality control procedures and the data reporting format which are specified and approved by the department for the collection, analysis, processing and reporting of ambient air quality monitoring data.

(c) Any person who voluntarily conducts ambient air quality monitoring in Wisconsin may request the department to determine that the data being collected are comparable to the air quality data collected under par. (a) or (b). The department may determine that the data are comparable if the voluntary ambient air quality monitoring and the data meet the requirements specified in par. (b).

(d) The department may determine that air quality data submitted to the department for purposes of demonstrating compliance with existing regulations under chs. NR 400 to 499 or in support of a permit or permit application are unacceptable if such monitoring was not conducted in compliance with pars. (a) to (c).

**(2)** REFERENCE METHODS. Ambient air quality monitoring which utilizes a reference monitoring method shall use monitoring methods which conform to the federal reference methods which are specified in 40 CFR part 50, Appendices A to T, incorporated by reference in s. NR 484.04 (2), or which have been so designated by the department.

**(3)** EQUIVALENT METHODS. (a) Ambient air quality monitoring which utilizes an equivalent monitoring method shall use moni-