

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

The Wisconsin Natural Resources Board adopts an order to **amend** NR 404.04(8), 484.03(5) and 484.04(6); and to **create** NR 404.02(4e), 404.04(9) and 484.04(6g) and (6r) relating to ambient air quality standards and affecting small business.

AM-23-07A

Summary Prepared by the Department of Natural Resources

1. **Statute interpreted:** s. 285.21(1)(a), Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.
2. **Statutory authority:** ss. 285.11(1) and (6) and 285.21(1)(a), Stats.
3. **Explanation of agency authority:** The Department is required under s. 285.21(1)(a), Stats., to promulgate by rule ambient air standards similar to, but not more restrictive than the national ambient air quality standards (NAAQS). The Department is also authorized under s. 285.11(6), Stats., to promulgate rules in order to prepare and implement the State Implementation Plan for the prevention, abatement and control of air pollution in the state.
4. **Related statute or rule:** There are no related statutes that are not identified above.
5. **Plain language analysis:** Chapter NR 404, Wis. Adm. Code, contains ambient air standards which are intended to be the same as the federal NAAQS promulgated by EPA, as is required under s. 285.21(1)(a), Stats. Chapter NR 484, Wis. Adm. Code, incorporates by reference the federal air pollution monitoring requirements related to the ambient air standards that are employed by the Department. In 1987, 1997 and 2006 the EPA reviewed the then-current science of air particulate pollution impacts on human health to evaluate how to refine particulate NAAQS to better protect human health. In 1987, the EPA promulgated NAAQS for particulate matter of less than 10 micrometers in diameter (PM<sub>10</sub>) because PM<sub>10</sub> was found to be noticeably detrimental to the human respiratory system. In 1997, the EPA promulgated NAAQS for particles less than 2.5 micrometers in diameter (PM<sub>2.5</sub>) because PM<sub>2.5</sub> was demonstrated to significantly impact the human respiratory system. In 2006, the EPA both lowered (made more restrictive) the 24 hour PM<sub>2.5</sub>NAAQS to better reflect the scientific understanding of fine particle effects on humans, and revoked the annual PM<sub>10</sub> NAAQS – citing a lack of evidence linking health problems to long-term exposure to PM<sub>10</sub>.

The Department is proposing to amend chs. NR 404 and 484, Wis. Adm. Code, to fully address the above-noted NAAQS changes to better reflect the current understanding of how particulate matter affect human health and to maintain consistency with the federal NAAQS. Specifically, the proposed rule revisions would: A) repeal the ambient air quality standard for annual PM<sub>10</sub> from ch. NR 404, Wis. Adm. Code; B) repeal the monitoring requirements incorporated by reference in ch. NR 484, Wis. Adm. Code, corresponding to the annual PM<sub>10</sub> standard; and C) adopt the PM<sub>2.5</sub>NAAQS into ch. NR 404, Wis. Adm. Code, and incorporate by reference the corresponding monitoring requirements into ch. NR 484, Wis.

Adm. Code.

A request for the Natural Resources Board to adopt Order AM-23-07 was originally scheduled for the Board's February 2008 meeting. After the close of the public comment period in October, 2007, concerns were expressed by several citizens and the Board regarding the proposed repeal of the air quality standard for total suspended particulates (TSP). This proposed repeal was included in the original Order AM-23-07 taken to public hearing. Consequently, this updated Order AM-23-07A has been bifurcated to not include the proposed repeal of the TSP air standard. This regulatory issue will be addressed at a future time.

**6. Summary of, and comparison with, existing or proposed federal regulation:** The federally-enforced NAAQS are contained in Title 40, Part 50 of the Code of Federal Regulations (40 CFR Part 50). The purpose of these proposed rules is to make the State-enforced ambient air standards for particulate matter in ch. NR 404, Wis. Adm. Code consistent with the corresponding federal NAAQS, as required under s. 285.21(a), Stats.

**7. Comparison with rules in adjacent states:** These proposed rule revisions are designed to make Wisconsin's ambient air quality standards consistent with federal NAAQS, which are effective and enforced throughout the United States.

**8. Summary of factual data and analytical methodologies:** The EPA, through its Clean Air Scientific Advisory Committee (CASAC) has conducted exhaustive reviews and assessments on the health science of air pollution impacts to human health and welfare. This research has yielded NAAQS that are based upon sound health science designed to protect public health and welfare. The Department is accepting this extensive federal research as this order's factual data and analytical methodologies.

**9. Analysis and supporting documents used to determine effect on small business or in preparation of economic impact report:** In light of the statutory requirement to promulgate by rule new ambient air quality standards similar to the federal standards, the Department relies on the federal data and the analytical methodologies EPA used to develop and promulgate the national ambient air quality standards.

**10. Effect on small business:** The promulgation of the PM<sub>2.5</sub> ambient air quality standards would not have any direct effect on businesses, including those defined as small business. Once the PM<sub>2.5</sub> air standards are promulgated the EPA will determine if any areas in the state should be designated as nonattainment for any of the new air standards. The Department is required to develop an air quality management state implementation plan (SIP) to ensure that all ambient air quality standards are attained and maintained in all areas of the state. The future development of that SIP to address PM<sub>2.5</sub> may result in emission limitations being developed for specific source categories or implementing emission control technologies which may affect businesses, including small businesses. Any prospective SIP revisions would occur through the development of additional rules, which would include analyses of the rules' potential effects on the private sector, including small businesses.

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The consent of the Attorney General will be requested for the incorporation by reference of new test methods in ch. NR 484.

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SECTION 1. NR 404.02(4e) is created to read.

NR 404.02(4e) "PM<sub>2.5</sub>" 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.

SECTION 2. NR 404.04(8) is amended to read:

NR 404.04(8) PM<sub>10</sub>: PRIMARY AND SECONDARY STANDARDS. (a) The primary and secondary standards for PM<sub>10</sub> are

- ~~1. 50 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) - annual arithmetic mean concentration.~~
- ~~2. 150 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) - maximum 24-hour average concentration.~~

(b) The PM<sub>10</sub> standards are attained when ~~all of the following are met:~~

- ~~1. The expected annual arithmetic mean concentration is less than or equal to  $50 \mu\text{g}/\text{m}^3$ , the level designated in par. (a)1.~~
- ~~2. The the expected number of days per calendar year with a 24-hour average concentration above  $150 \mu\text{g}/\text{m}^3$ , the level designated in par. (a)2, is equal to or less than one.~~

~~3. (c) The expected concentrations and number of days ~~are~~ shall be determined by the methodology contained in 40 CFR part 50, Appendix K, incorporated by reference in s. NR 484.04(6).~~

SECTION 3. NR 404.04(9) is created to read:

NR 404.04(9) PM<sub>2.5</sub>: PRIMARY AND SECONDARY STANDARDS. (a) The primary and secondary standards for PM<sub>2.5</sub> are:

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

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

(b) The  $\text{PM}_{2.5}$  standards are attained when all of the following are met:

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

2. The ninety-eighth percentile 24-hour average concentration is less than or equal to  $35 \mu\text{g}/\text{m}^3$ , 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).

SECTION 4. NR 484.03(5) in Table 1 is amended to read:

CFR Reference	Title	Incorporated by Reference For
NR 484.03 (5) 40 CFR part 53	Ambient Air Monitoring Reference and Equivalent Methods	NR 404.02(4e) and (4m) NR 404.06(3)(b)

SECTION 5. NR 484.04(6) in Table 2 is amended to read:

CFR Appendix Referenced	Title	Incorporated by Reference For
NR 484.04 (6) 40 CFR part 50 Appendix K	Interpretation of the National Ambient Air Quality Standards for Particulate Matter	NR 404.04(8)(b)3. (c)

SECTION 6. NR 484.04(6g) and (6r) in Table 2 are created to read:

CFR Appendix Referenced	Title	Incorporated by Reference For
NR 484.04 (6g) 40 CFR part 50 Appendix L	Reference Method for the Determination of Particulate Matter as $\text{PM}_{2.5}$ in the Atmosphere	NR 404.02(4e)
(6r) 40 CFR part 50 Appendix N	Interpretation of the National Ambient Air Quality Standards for	NR 404.04(9)(c)

SECTION 7. Nonsubstantive Terminology Changes. The phrase “, secretary of state and revisor of statutes” as used in notes to introductions for the following sections is replaced with “and legislative reference bureau”:

- s. NR 484.03
- s. NR 484.04
- s. NR 484.05
- s. NR 484.06
- s. NR 484.10
- s. NR 484.11

SECTION 8 EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

SECTION 9 BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 23, 2008.

Dated at Madison, Wisconsin July 29, 2009.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By /S/ Matthew J. Frank

Matthew J. Frank, Secretary

(SEAL)