

SUBJECT: AM-23-07, Authorization for public hearing on proposed revisions to chs. NR 404 and 484, Wis. Adm. Code, pertaining to ambient air quality standards for particulate matter

FOR: August 2007 BOARD MEETING

TO BE PRESENTED BY: Larry Bruss, Chief, Regional Pollutants and Mobile Sources Section

SUMMARY: The EPA has 1) revoked National Ambient Air Quality Standards (NAAQS) for total suspended particulate matter (TSP) and annually-averaged particulate matter less than 10 micrometers in diameter (PM₁₀), and 2) promulgated new NAAQS for particulate matter less than 2.5 micrometers in diameter (PM_{2.5}). Related to these NAAQS changes EPA revised the monitoring requirements. The proposed rule revisions would update the ambient air standards for particulate matter in ch. NR 404, Wis. Adm. Code, and the monitoring requirements in ch. NR 484, Wis. Adm. Code to reflect the NAAQS changes. This would assure that Wisconsin's Administrative Code is consistent with the NAAQS for particulate matter, as required under s. 285.21 (1)(a), Stats., and reflect the science of particle pollution effects on human health.

If any areas in the state are designated as nonattainment for the new air quality standards, the Department is required to develop an air quality state implementation plan to ensure that the ambient air quality standards are attained and maintained in those areas.

If the TSP air standard is repealed, the air permitting process may be shortened since the modeling and analysis for particulate matter impacts would focus solely on PM₁₀ emissions. The fugitive dust provisions in s. NR 415.04, Wis. Adm. Code, would not be directly affected by the repeal of the TSP air standard, since these provisions are not expressly related to having a TSP ambient air standard, but rather are focused on "fugitive dust" as defined in s. NR 415.02(2), Wis. Adm. Code.

RECOMMENDATION: Authorize public hearing on proposed revisions to chs. NR 404 and NR 484, Wis. Adm. Code.

LIST OF ATTACHED MATERIALS:

- | | | | |
|--|---|---|----------|
| No <input type="checkbox"/> | Fiscal Estimate Required | Yes <input checked="" type="checkbox"/> | Attached |
| No <input checked="" type="checkbox"/> | Environmental Assessment or Impact Statement Required | Yes <input type="checkbox"/> | Attached |
| No <input type="checkbox"/> | Background Memo | Yes <input checked="" type="checkbox"/> | Attached |

APPROVED:

 /S/ Kevin Kessler
Bureau Director, Kevin Kessler

 6 / 4 / 07
Date

 /S/ Al Shea
Administrator, Al Shea

 6 / 14 / 07
Date

 /S/ Scott Hassett
Secretary, Scott Hassett

 6 / 15 / 07
Date

- | | | |
|------------------------|------------------------|---------------------|
| cc: Laurie Ross - AD/5 | Kevin Kessler - AM/7 | Bill Adamski - AM/7 |
| Carol Turner - LS/5 | Larry Bruss - AM/7 | |
| Tom Steidl - LS/5 | Bob Eckdale - AM/7 (5) | |

CORRESPONDENCE/MEMORANDUM

DATE: May 15, 2007 FILE REF: 4508-2

TO: Natural Resources Board

FROM: Scott Hassett

SUBJECT: Background memo on public hearing authorization for Order AM-23-07 pertaining to revisions to ambient air quality standards for particulate matter.

1. Background and reasons why the rule revisions are being proposed

The federal Clean Air Act requires the US Environmental Protection Agency (EPA) to promulgate national ambient air quality standards (NAAQS), which are designed to protect public health (primary standards) and public welfare (secondary standards) for certain criteria pollutants such as particulate matter, sulfur dioxide and ozone. The EPA is required to periodically review the current health science in order to evaluate if and how the existing NAAQS need to be adjusted to more accurately protect human health and welfare.

In 1987 EPA repealed the NAAQS for the general category of particulate matter pollution called total suspended particulates (TSP). This NAAQS was replaced with more restrictive NAAQS for smaller particles that are more readily inhaled into the human respiratory system (i.e., those less than 10 micrometers in diameter [PM_{10}]). In 1997 EPA promulgated additional NAAQS for even smaller particles (i.e., those less than 2.5 micrometers in diameter [$PM_{2.5}$]) to more directly address the increasing scientific awareness of serious public health impacts from fine particles.

In 2006 EPA took additional action on the particulate matter standards by lowering (making more restrictive) the 24 hour $PM_{2.5}$ NAAQS to better reflect the scientific understanding of how fine particles affect humans, and revoking the annual PM_{10} NAAQS – citing a lack of evidence linking health problems to long-term exposure to PM_{10} .

The Department is now proposing to revise Wisconsin's ambient air quality standards to reflect the current EPA NAAQS for particulate matter.

By repealing the ambient air standards for TSP and annual PM_{10} as well as adopting the NAAQS for $PM_{2.5}$, Wisconsin's air quality standards would 1) reflect the current health science for protecting human health and welfare related to particulate matter, 2) be fully consistent with EPA's NAAQS for particulate matter, which is required under s. 285.21 (1)(a), Stats., and 3) allow the Department to focus resources on controlling fine particulate emissions [$PM_{2.5}$, PM_{10}], which more directly affect public health than does TSP.

2. Summary of the proposed rule revisions

The proposed rule revisions in AM-23-07 would:

- Repeal ambient air standards for TSP and annual PM_{10} from ch. NR 404, Wis. Adm. Code and federal monitoring requirements for TSP and annual PM_{10} from ch. NR 484, Wis. Adm. Code.
- Adopt EPA-promulgated NAAQS for $PM_{2.5}$ into ch. NR 404, Wis. Adm. Code and incorporate the corresponding federal $PM_{2.5}$ monitoring requirements for that ambient air standard into ch. NR 484, Wis. Adm. Code.

3. Proposed rule revisions – impact on existing policy

A) Proposed promulgation of the PM_{2.5} air standard: Impact on developing a state implementation plan (SIP).

It is possible that EPA in the future may designate some counties in Wisconsin as not attaining the 24 hour PM_{2.5} air standard based upon ambient air monitoring data. The Department's response to a designation of PM_{2.5} NAAQS nonattainment would be the adoption of rules to reduce emissions to bring all counties in the State into attainment of the 24 hour PM_{2.5} air standard. These rules could potentially affect some emissions sources in Wisconsin. If these emission control rules are promulgated to help the entire State attain the 24 hour PM_{2.5} air standard, the Department would work with all affected parties and stakeholders to develop any required State Implementation Plans (SIPs) in order to attain this air standard.

B) Proposed revocation of the TSP air standard: Impact on the air emission fees

There should be no effect on emission fees collected by the Department. Currently, TSP is not specifically listed as a pollutant for which emissions are required to be reported to the Department (s. NR 438.03, Table 1, Wis. Adm. Code). Based upon NR 438 requirements, each facility reports all particulate matter emissions less than 100 micrometers in diameter as particulate matter (PM).

C) Proposed revocation of the TSP air standard: Impact on the air permit review process for particulate matter emission sources

Air permit modeling is currently being done for both TSP and PM₁₀. If the TSP air standard is repealed, the review of air permit applications may be shortened, since the modeling and analysis for PM impacts would be focused solely on PM₁₀ emissions.

D) Proposed revocation of the TSP air standard: Impact on fugitive dust enforcement

The basic fugitive dust provisions in s. NR 415.04., Wis Adm. Code, would not be directly affected by the repeal of the TSP air standard, since most of these provisions are not expressly related to having a TSP ambient air quality standard, but rather are focused on the terms "fugitive dust", "particulate matter", "airborne dust", "air pollution", "fugitive emissions", "visible emissions" or "opacity".

4. Prior involvement of the Natural Resources Board

The Department has periodically revised the ambient air quality standards in ch. NR 404, Wis. Adm. Code, as needed to both reflect current health science and to maintain consistency with national air quality standards.

5. Entities potentially impacted by the proposed rule revisions

As noted in Section 3B, repealing the TSP air quality standard would have the air permit modeling and review process focus on PM₁₀ for those sources that emit particulate matter. This proposed change would expedite the air permit review process, benefiting both the Department and the permit applicant without adversely affecting public health.

6. Environmental review for potential impact

An environmental analysis of the impact of the proposed rule revisions is not needed because these changes are considered to be a Type III action under s. NR 150.03(3), Wis. Adm. Code. A Type III action is one that normally does not 1) have the potential to cause significant environmental effects, 2) significantly affect energy usage and 3) involve unresolved conflicts in the use of available resources.

7. Small business analysis

A) Do these proposed rule revisions impose any compliance and/or reporting requirements on small business?

The proposed rule revisions would modify Wisconsin's ambient air quality standards for particulate matter. These proposed rules contain no new requirements (compliance, reporting, etc..) for any sources, including those classified as small business.

B) Initial regulatory flexibility analysis

These proposed rule revisions are needed to make Wisconsin's ambient air quality standards the same as the federal NAAQS, as required under s.285.21(1)(a), stats. Consequently, the Department has limited flexibility to make any changes to these proposed rule revisions.

The proposed rule revisions pertain to ambient air quality standards, which contain no requirements for reporting, bookkeeping, schedules or other compliance procedures.

Overall, as assessed in Section 3 and summarized in Section 5 - repealing the TSP air quality standard could have a modest effect on certain sources subject to the air permit review process. Some of these facilities may be sources which meet the definition of a small business.

Fiscal Estimate — 2007 Session

<input checked="" type="checkbox"/> Original <input type="checkbox"/> Updated <input type="checkbox"/> Corrected <input type="checkbox"/> Supplemental	LRB Number Bill Number	Amendment Number if Applicable Administrative Rule Number NR 404 and 484
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Subject

Proposed rules to make Wisconsin ambient air quality standards for particulates consistent with federal regulations for these air quality standards.

Fiscal Effect

State: No State Fiscal Effect
 Indeterminate

Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation.

- | | |
|--|---|
| <input type="checkbox"/> Increase Existing Appropriation | <input type="checkbox"/> Increase Existing Revenues |
| <input type="checkbox"/> Decrease Existing Appropriation | <input type="checkbox"/> Decrease Existing Revenues |
| <input type="checkbox"/> Create New Appropriation | |

Increase Costs — May be possible to absorb within agency's budget.

Yes No

Decrease Costs

Local: No Local Government Costs

Indeterminate

1. Increase Costs
 Permissive Mandatory
2. Decrease Costs
 Permissive Mandatory

3. Increase Revenues
 Permissive Mandatory
4. Decrease Revenues
 Permissive Mandatory

5. Types of Local Governmental Units Affected:

- Towns Villages Cities
 Counties Others
 School Districts WTCS Districts

Fund Sources Affected

- GPR FED PRO PRS SEG SEG-S

Affected Chapter 20 Appropriations

Assumptions Used in Arriving at Fiscal Estimate

Summary:

The proposed rule revisions are designed to make Wisconsin's ambient air quality standards for particulates consistent with the federal air quality standards and to reflect current health science. Specifically, these proposed rule changes would repeal the ambient air quality standards for total suspended particulates (TSP) and annually-averaged particles of less than 10 micrometers in diameter (PM₁₀) from ch. NR 404, Wis. Adm. Code and the corresponding monitoring requirements from ch. NR 484, Wis. Adm. Code; and adopt federal air quality standards for particulate matter less than 2.5 micrometers in diameter (PM_{2.5}) into ch. NR 404, Wis. Adm. Code, and the corresponding monitoring requirements into ch. NR 484, Wis. Adm. Code.

Fiscal Estimate:

The proposed modifications to Wisconsin's air quality standards for particulates would not have a fiscal effect on government and may have only a minor, positive effect on private entities.

Wisconsin is already subject to the federal air quality standards, so no fiscal effect is expected for addition of the new 24-hour PM_{2.5} ambient air standard.

Repealing the TSP air standard may ease permitting and reduce the cost of installing emission controls for particulate matter. The rule change would affect a few new TSP emission sources. Any cost savings are expected to be relatively minor compared to the overall cost of permitting and installing new equipment.

Long-Range Fiscal Implications

Prepared By:	Telephone No.	Agency
Joe Polasek	266-2794	Department of Natural Resources
Authorized Signature	Telephone No.	Date (mm/dd/ccyy)
/S/ Joe Polasek	266-2794	05 / 16 / 2007

Fiscal Estimate Worksheet — 2007 Session
 Detailed Estimate of Annual Fiscal Effect

- Original Updated
 Corrected Supplemental

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number NR 404 and 484

Subject

Proposed rules to make Wisconsin ambient air quality standards for particulates consistent with federal regulations for these air quality standards.

One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):

Annualized Costs:		Annualized Fiscal Impact on State Funds from:	
		Increased Costs	Decreased Costs
A. State Costs by Category			
State Operations — Salaries and Fringes		\$	\$ -
(FTE Position Changes)		(FTE)	(FTE)
State Operations — Other Costs			-
Local Assistance			-
Aids to Individuals or Organizations			-
Total State Costs by Category		\$	\$ -
B. State Costs by Source of Funds			
GPR		\$	\$ -
FED			-
PRO/PRS			-
SEG/SEG-S			-
State Revenues	Complete this only when proposal will increase or decrease state revenues (e.g., tax increase, decrease in license fee, etc.)	Increased Revenue	Decreased Revenue
GPR Taxes		\$	\$ -
GPR Earned			-
FED			-
PRO/PRS			-
SEG/SEG-S			-
Total State Revenues		\$	\$ -

Net Annualized Fiscal Impact

	State	Local
Net Change in Costs	\$ _____	\$ _____
Net Change in Revenues	\$ _____	\$ _____

Prepared By: Joe Polasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature /S/ Joe Polasek	Telephone No. 266-2794	Date (mm/dd/ccyy) 05 / 16 / 2007

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

The Wisconsin Natural Resources Board proposes an order to **repeal** NR 404.02(10) and (11), 404.04(3) and 484.04(3); to **amend** NR 404.04(8), 484.03(5) and 484.04(6); to **create** NR 404.02(4e), 404.04(9) and 484.04(6m) relating to ambient air quality standards and affecting small business.

AM-23-07

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 rescinded the NAAQS for total suspended particulates (TSP) and promulgated NAAQS for particulate matter of less than 10 micrometers in diameter (PM₁₀) because PM₁₀ 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_{2.5}) because PM_{2.5} was demonstrated to significantly impact the human respiratory system. In 2006 the EPA both lowered (made more restrictive) the 24 hour PM_{2.5} NAAQS to better reflect the scientific understanding of fine particle effects on humans, and revoked the annual PM₁₀ NAAQS – citing a lack of evidence linking health problems to long-term exposure to PM₁₀.

The Department is proposing to amend ch. NR 404, Wis. Adm. Code and ch. NR 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 standards for TSP and annual PM₁₀ from ch. NR 404, Wis. Adm. Code; B) repeal the sections on TSP and annual PM₁₀ federal monitoring requirements from ch. NR 484, Wis. Adm. Code; and C) adopt the PM_{2.5} NAAQS into ch. NR 404, Wis. Adm. Code, and the corresponding monitoring requirements into ch. NR 484, Wis. Adm. Code.

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 fully 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 fully consistent with federal NAAQS, which are effective and enforced throughout the United States. Consequently, these proposed rules would be the same as the ambient air standard regulations in effect in the adjacent 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. Several air permit engineers and modelers in the Department provided expertise on how revoking the state's TSP air quality standard would affect the air permitting process.

10. Effect on small business: The promulgation of the PM_{2.5} ambient air quality standards would not have any direct effect on businesses, including those defined as small business. Once the PM_{2.5} 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_{2.5} 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.

If the TSP air standard is repealed, the air permitting process may be shortened since the modeling and analysis for PM impacts would focus solely on PM₁₀ emissions.

11. Agency contact person:

Bill Adamski: 608-266-2660 william.adamski@wisconsin.gov

12. Place where comments are to be submitted and deadline for submission:

Written comments may be submitted at the public hearings, by regular mail, fax or email to:

Bill Adamski
Bureau of Air Management
Wisconsin Dept of Natural Resources

P.O. Box 7921
Madison, WI 53707
608-266-2660
william.adamski@wisconsin.gov

Written comments may also be submitted to the Department using the Wisconsin Administrative Rules Internet Web site at <http://adminrules.wisconsin.gov>.

Hearing dates and submission deadline are to be determined.

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

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

NR 404.02(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 L of 40 CFR part 50, incorporated by reference in s. NR 484.04(3), 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 404.02(10) and (11) are repealed.

SECTION 3. NR 404.04(3) is repealed.

SECTION 4. NR 404.04(8) is amended to read:

NR 404.04(8) PM₁₀: PRIMARY AND SECONDARY STANDARDS. (a) The primary and secondary standards for PM₁₀ 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 PM₁₀ 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)~~ (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 5. NR 404.04(9) is created to read:

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

(b) The 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(6m).

SECTION 6. NR 484.03(5) 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 7. NR 484.04(3) is repealed.

SECTION 8. NR 484.04(6) 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 9. NR 484.04(6m) is created to read:

CFR Appendix Referenced	Title	Incorporated by Reference For
NR 484.04 (6m) 40 CFR part 50 Appendix N	Reference Method for the Determination of Particulate Matter as PM _{2.5} in the Atmosphere	NR 404.02(4e) NR 404.04(9)(c)

SECTION 10. 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 11. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN

DEPARTMENT OF NATURAL RESOURCES

By _____

Scott Hassett, Secretary

(SEAL)