

NATURAL RESOURCES BOARD AGENDA ITEM

SUBJECT:

Adoption of Order AM-23-07A, proposed rules affecting chs. NR 404 and 484 pertaining to ambient air quality standards for particulate matter.

FOR: APRIL, 2008 BOARD MEETING

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

SUMMARY:

The EPA has 1) revoked the National Ambient Air Quality Standard (NAAQS) for 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}). EPA also revised the monitoring requirements related to these NAAQS changes. 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 better reflects 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.

Wisconsin Manufacturers and Commerce and the Wisconsin Paper Council provided the only public comments on these proposed rule revisions. Both of these business associations fully support the proposed rule changes. No comments were received at the public hearing on Order AM-23-07.

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, the original order has been bifurcated. Those proposed changes related to the repeal of the TSP standard have been removed from this part. Order AM-23-07A. but may be brought before the Natural Resources Board at a future time.

RECOMMENDATION: That the Board adopt Order AM-23-07A.

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

3 / 19 / 08
Date

/S/ Al Shea
Administrator, Al Shea

3 / 19 / 08
Date

/S/ Matthew J Frank
Secretary, Matthew J. Frank

4 / 01 / 08
Date

- | | | | |
|------------------------|-----------------------|----------------------|--------------------|
| cc: Laurie Ross - AD/5 | K. Kessler - AM/7 | Bill Adamski- AM/7 | Larry Bruss – AM/7 |
| Carol Turner - LS/5 | R. Eckdale - AM/7 (2) | Marney Hoefler- LS/5 | |

CORRESPONDENCE/MEMORANDUM

DATE: March 12, 2008

FILE REF: 4508-2

TO: Natural Resources Board

FROM: Matthew J. Frank

SUBJECT: Background memo on proposed adoption of Order AM-23-07A 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 promulgated 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 particulate 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 better reflect the current EPA NAAQS for particulate matter, which are as follows: 24-hour PM_{10} : 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), 24-hour $PM_{2.5}$: 35 $\mu\text{g}/\text{m}^3$, Annual $PM_{2.5}$: 15.0 $\mu\text{g}/\text{m}^3$.

By repealing the ambient air standard for 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 more 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 directly affects public health.

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, the original order has been bifurcated. Those proposed changes related to the repeal of the TSP standard have been removed from this part, Order AM-23-07A, but may be brought before the Natural Resources Board at a future time.

2. Summary of the proposed rule revisions

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

- Repeal the ambient air standard for annual PM₁₀ from ch. NR 404, Wis. Adm. Code and the corresponding monitoring requirements incorporated by reference in ch. NR 484, Wis. Adm. Code.
- Adopt the EPA-promulgated NAAQS for PM_{2.5} into ch. NR 404, Wis. Adm. Code and incorporate by reference the corresponding federal PM_{2.5} monitoring requirements into ch. NR 484, Wis. Adm. Code.

3. Proposed rule revisions – impact on existing policy

In the future, EPA may designate some counties in Wisconsin as not attaining the 24-hour PM_{2.5} air standard based upon ambient air monitoring data. In this event, the Department may adopt rules to reduce PM_{2.5} precursor emissions to bring all areas in the State into attainment with the 24-hour PM_{2.5} air quality standard. The Department would work with affected parties and stakeholders to develop any rules necessary to attain the PM_{2.5} air quality standards.

4. Synopsis: Public hearing and written comments

A public hearing was held in Madison on October 12, 2007. The only individual from the general public present at the hearing did not provide any comment on the proposed rules.

The only written public comments received on the original Order AM-23-07 were from two trade organizations that represent certain Wisconsin business sectors whose members are subject to DNR air pollution requirements. These trade organizations are 1) the Wisconsin Paper Council (WPC), which currently represents 21 separate entities in the pulp, paper and allied industry, and 2) Wisconsin Manufacturers and Commerce (WMC) which currently represents nearly 4,000 companies in the state. Both the WPC and WMC expressed full support of the proposed rule revisions in Order AM-23-07.

The Legislative Council Rules Clearinghouse (LCRC) submitted a report on Order AM-23-07 (Clearinghouse Rule # 07-082) on September 17, 2007. The only LCRC comment provided on this rules package was for “clarity, grammar, punctuation and use of plain language”. LCRC commented that two definitions repealed in the original Order AM-23-07 (i.e., “total suspended particulates” and “suspended particulate matter”) are used in ss. NR 404.04(3) (“Particulate Matter: Secondary Standard”) and NR 404.04(7), Wis. Adm. Code (airborne lead), respectively.

As noted in Section 1, the Department has decided to bifurcate the original Order AM-23-07. The current version (Order AM-23-07A) is moving forward at this time without a proposal to repeal the ambient 24 hour air quality standard for TSP [NR 404.04(3), Wis Adm. Code], its definitions, as well its monitoring methods incorporated by reference. With this action, the Department has made moot the LCRC concerns pertaining to the continued use of ss. NR 404.04(3) and NR 404.04(7), Wis. Adm. Code.

No further changes to the updated Order AM-23-07A were necessary in response to the LCRC comment.

5. 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.

6. Final regulatory flexibility 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.

Fiscal Estimate — 2007 Session

<input type="checkbox"/> Original <input checked="" type="checkbox"/> Updated <input type="checkbox"/> Corrected <input type="checkbox"/> 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.

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 particulate matter consistent with the federal air quality standards and to reflect current health science. Specifically, these proposed rule changes would repeal the ambient air quality for 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.

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, the original order has been bifurcated. Those proposed changes related to the repeal of the TSP standard have been removed from this part, Order AM-23-07A but may be brought before the Natural Resources Board at a future time.

Fiscal Estimate:

The proposed modifications to Wisconsin's air quality standards for particulate matter 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.

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	03 / 12 / 2008

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) 03 / 12 / 2008

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 (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 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 PM₁₀ 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 PM₁₀ standard; and C) adopt the PM_{2.5} 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_{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.

11. Agency contact person:

Bill Adamski
Telephone: 606.266.2660
Fax: 608.267.0560
E-mail: william.adamski@wisconsin.gov

The consent of the Attorney General 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 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) 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) 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_{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 µg/m³, the level designated in par. (a)1.

2. The ninety-eighth percentile 24-hour average concentration is less than or equal to 35 µg/m³, 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 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 PM _{2.5}	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 _____.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____

Matthew J. Frank, Secretary

(SEAL)