

NATURAL RESOURCES BOARD AGENDA ITEM

SUBJECT: Request authorization for public hearings on amendments to ch. NR 140, Wis. Adm. Code (Groundwater Quality)

FOR: MARCH 2007 BOARD MEETING

TO BE PRESENTED BY: Michael D. Lemcke

SUMMARY:

Amendments are proposed to NR 140 to establish state public health groundwater quality standards for Alachlor ethane sulfonic acid (Alachlor-ESA). These proposed amendments to NR 140 continue the existing policy of protecting Wisconsin's groundwater by establishing numerical groundwater quality standards for substances of public health or welfare concern in accordance with the provisions of ch. 160, Stats.

Alachlor-ESA is a degradation product of the herbicide Alachlor that has been found extensively in Wisconsin groundwater. Groups likely to be impacted or interested in these proposed amendments include agricultural users of herbicides, herbicide manufacturers and environmental protection organizations.

The last Department NR 140 rulemaking effort, completed in 2006, originally included groundwater quality standards for Alachlor-ESA. These standards were developed by the Department of Health and Family Services, in accordance with the procedures specified in ch. 160, Stats., and the Natural Resources Board unanimously approved their adoption on three occasions. During Legislative review of the proposed rule, however, objections were raised to the proposed Alachlor-ESA standards and the statutory time limit for completing rulemaking on those standards expired. These proposed amendments to NR 140 begin again the process for establishing state groundwater quality standards for Alachlor-ESA.

RECOMMENDATION: Authorize the Department to hold public hearings on proposed amendments to ch. NR 140, 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/	2/26/07
_____	_____
Bureau Director,	Date
/s/	2/26/07
_____	_____
Administrator,	Date
/s/	2/27/07
_____	_____
Secretary, Scott Hassett	Date

cc: Laurie J. Ross - AD/5
Jill Jonas - DG/2

Carol Turner - LS/5
Mike Lemcke - DG/2

Mike Scott - LS/5

DATE: **February 26, 2007** FILE REF: NR 140

TO: **Members, Natural Resources Board**

FROM: **Scott Hassett, Secretary**

SUBJECT: **Background Memo - Proposed amendments to Wisconsin Administrative Code Chapter NR 140, Groundwater Quality**

1. Why rule is being proposed

Amendments are being proposed to Wisconsin Administrative Code Chapter NR 140, Groundwater Quality, to add state groundwater quality standards for Alachlor ethane sulfonic acid (Alachlor-ESA). Chapter NR 140, Wis. Adm. Code, establishes Wisconsin state groundwater quality standards for both substances of public health concern and for substances of public welfare concern. Amendments to NR 140 are proposed to add groundwater quality standards for Alachlor-ESA, a substance of public health concern.

Chapter NR 140 was adopted by the Natural Resources Board in 1985 to comply with Wisconsin Statute Chapter 160. Chapter 160, Stats., was created in May of 1984, as part of the 1983 Wisconsin Act 410 (The Groundwater Bill), and requires the Department to develop groundwater quality standards for substances detected in, or having a reasonable probability of entering, the groundwater resources of the state.

Chapter NR 140 establishes groundwater quality standards at two levels: preventive action limit (PAL) and enforcement standard (ES). In accordance with ch. 160, Stats., ES groundwater quality standards are established based on recommendations received from the Department of Health and Family Services (DHFS). PAL groundwater quality standards for substances of public health concern are set at either 20% of the concentration of the established ES, or at 10% of the concentration of the established ES if the substance has carcinogenic, mutagenic or teratogenic properties or interactive effects.

The Department consults with other state agencies to establish a list of substances for possible groundwater quality standard setting. State agencies, such as the Department of Agriculture, Trade and Consumer Protection (DATCP), identify substances related to the facilities, activities and practices they regulate that have been found in, or have a reasonable probability of entering, the groundwater of the state. These substances are added to the Department's list of substances and the Department consults with DHFS to determine which substances on the list are of potential public health concern and which are potentially of concern with respect to human welfare.

DHFS staff review existing regulatory and toxicological information for substances of potential health concern. If a federal number, such as a federal drinking water standard maximum contaminant level (MCL) or cancer risk level has been established for a substance, this number is used by DHFS as the recommended NR 140 enforcement standard. If no federal number (or state drinking water standard) exists, DHFS calculates a recommended NR 140 enforcement standard, as specified in ch. 160, Stats., based on an assessment of the potential human health effects of the substance.

In accordance with ch. 160, Stats., the Department is required to propose rules establishing the recommendations from DHFS as groundwater quality standards in ch. NR 140. DHFS recommendations for groundwater standards, along with any other proposed revisions to ch. NR 140, are drafted as amendments to the code and the Department requests authorization from the Natural Resources Board to hold public hearing on these amendments.

2. Summary of the rule

Amendments to Chapter NR 140 are being proposed to add groundwater quality standards for Alachlor ethane sulfonic acid as indicated below:

<u>Substance</u>	<u>Current Standards (in µg/L)</u>		<u>Proposed Standards (in µg/L)</u>	
	<u>ES</u>	<u>PAL</u>	<u>ES</u>	<u>PAL</u>
Alachlor ESA	no standard	no standard	20	4

New ch. NR 140 public health based groundwater quality standards are proposed for Alachlor ethane sulfonic acid (Alachlor-ESA). Alachlor-ESA is a degradation product of the broadleaf herbicide Alachlor. Alachlor has been used in Wisconsin on corn and soybeans.

Alachlor-ESA has been found extensively in Wisconsin groundwater. The substance was detected in approximately 28% of the private water supply wells sampled in a 2000 DATCP Wisconsin groundwater survey. It has also been detected in a significantly high percentage of water supply wells in other sampling done in the state. DHFS has recommended an ES of 20 µg/L for Alachlor-ESA. A concentration of 20 µg/L has been used as an interim health advisory level for Alachlor-ESA in Wisconsin since 1993.

3. How proposal affects existing policy

The proposed amendments continue the existing policy of protecting Wisconsin's groundwater by utilizing the procedures in ch. 160, Stats., to establish state groundwater quality standards for Alachlor-ESA, a substance of public health concern. The Department is required to develop groundwater quality standards for substances detected in, or having a reasonable probability of entering, the groundwater resources of the state. Alachlor-ESA has been detected in an estimated 28 % of the private water supply wells in Wisconsin. There are currently NR 140 groundwater quality standards established for 130 substances of public health or welfare concern. The addition of new standards will not affect how regulatory programs respond to ES and PAL exceedances for substances listed in ch. NR 140.

4. Previous Board action

The last Department NR 140 rulemaking effort, completed in 2006, originally included groundwater quality standards for Alachlor-ESA. These standards were developed by DHFS, in accordance with the procedures specified in ch. 160, Stats., and the Natural Resources Board unanimously approved their adoption on three occasions. During Legislative review of the proposed rule, however, objections were raised to the proposed Alachlor-ESA standards and the statutory time limit for completing rulemaking on

those standards expired. These proposed amendments to NR 140 begin again the process for establishing state groundwater quality standards for Alachlor-ESA.

Chapter NR 140 was initially adopted by the Natural Resources Board in 1985 to comply with ch. 160, Stats. This code established groundwater quality standards for 36 substances of public health concern and 10 substances of public welfare concern, and created a framework for implementation of the standards by the Department. The Board approved amendments to ch. NR 140 in 1988, 1990, 1991, 1993, 1995, 1996, 1998, 1999, 2003 and 2006, to add standards for additional substances and to clarify the rule language. There are now groundwater standards for 122 substances of public health concern, 8 substances of public welfare concern and 15 indicator parameters in ch. NR 140.

5. Who is impacted by the proposed rule

The proposed groundwater standards would apply to all regulated facilities, practices and activities which may impact groundwater quality. If the proposed groundwater quality standards are adopted, state agencies are required to review their administrative codes and make any necessary changes to comply with the standards.

The proposed groundwater standards would apply to all regulated facilities, practices and activities which may impact groundwater quality. The Department of Agriculture, Trade and Consumer Protection (DATCP) regulates pesticide use, handling and storage. DATCP may be affected by proposed Alachlor-ESA standards, as more monitoring for this substance may be warranted. Agricultural users of Alachlor might also potentially be affected by these rules as management practice or use restriction regulations could be adopted if Alachlor-ESA was found extensively in groundwater above proposed standards.

The Department has proposed groundwater quality standards for Alachlor-ESA in the past. At that time the manufacturer of Alachlor, the Monsanto Co., expressed concerns related to how the Dept. of Health and Family Services followed the statutory process for developing groundwater quality standards.

6. Environmental Analysis

Section NR 150.03, Wis. Adm. Code, (Environmental Analysis and Review Procedures for Department Actions) describes the appropriate categories for various proposed Departmental actions. The Department has determined that this rule proposal is a Type III action. Type III actions normally do not have the potential to cause significant environmental effects, normally do not significantly affect energy usage and normally do not involve unresolved conflicts in the use of available resources. This rule proposal is not expected to cause any of these effects. In accordance with s. 150.20, Wis. Adm. Code, Type III actions do not require an environmental assessment (EA) or environmental impact statement (EIS).

7. Small Business Regulatory Flexibility Analysis

The Department does not believe that the proposed rule will have a significant economic impact on a substantial number of small businesses. The compliance and reporting requirements in ch. NR 140 are not changed by the proposed amendments. If a groundwater quality standard is exceeded, the owner or operator of a facility, practice or activity, including any small business, must report the violation to the appropriate regulatory agency. With this proposed rule there would be one new substances for which a facility may have to monitor and report exceedances.

Chapter 160, Stats., requires establishment of both design and performance standards. Individual regulatory programs (DATCP, COMM, DNR-Waste Management, DNR-Watershed Management, etc.) establish design and operational standards in their individual program rules. Performance standards (groundwater quality standards) are contained in ch. NR 140. Chapter 160, Stats., does not allow for less stringent schedules, deadlines or reporting requirements, or for exemptions to remedial action, when a groundwater quality standard is attained or exceeded, based on the size of the business causing the contamination.

There would be adverse impacts on public health, welfare, safety and the environment if small businesses were not required to meet regulatory reporting requirements and implement remedial responses. The more quickly contamination can be evaluated and responses initiated, the less likely that public health safety and welfare will be adversely affected. If small businesses were exempt from these requirements groundwater contamination would continue unabated at least until the Department could appropriate sufficient resources to undertake this work. The delay, or possibility that nothing would be done, would lead to adverse impacts on public health, welfare, safety and the environment.

The type of small businesses that are typically impacted by ch. NR 140 include dry cleaners, small manufacturers, agricultural cooperatives, farmers, underground storage tank owners, small solid waste disposal facilities, small wastewater treatment operations, as well as others. In effect, any small business that has a permitted or unpermitted discharge of a substance exceeding the health or welfare groundwater quality standards listed in ch. NR 140 is responsible for responding to the release consistent with the requirements of ch. NR 140.

Under these proposed rules there will be additional new groundwater quality standards established for one new substance. These groundwater standards would be used as a design and compliance standards, and as clean up standards in the event of a spill or unpermitted discharge. If remedial action or other response is necessary, the individual programs which regulate the facility, practice or activity would determine the appropriate level of clean-up required. As the cost of remedial options varies, the cost of remediation of groundwater contamination for small businesses will vary, depending on the complexity of the site and contamination at the facility, practice or activity, and federal and state laws that are being used to guide the remedial action.

The substance for which new groundwater quality standards are proposed has already been detected in groundwater at one or more sites in Wisconsin. The adoption of design, compliance and clean-up standards for this substance may aid small businesses in a number of ways. The standards will provide specifications for facility and activity design purposes, inform whether a substance detected in groundwater does or does not exceed a standard and, if it does, let a small business know when the clean-up efforts are finished based on standards being met. When substances are detected in groundwater for which a standard does not exist in ch. NR 140, the Department may require clean-up of the groundwater "to the extent practicable" which may be overly conservative depending upon the actual toxicity of the substance detected.

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 140, Wis. Adm. Code
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Subject
 Amendments to ch. NR 140, Wis. Adm. Code (Groundwater Quality)

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 OF RULE - Chapter NR 140, Wis. Adm. Code, establishes Wisconsin state groundwater quality standards and creates a framework for implementing those standards in compliance with Wis. Stat. Ch. 160. These proposed amendments to NR 140 add a new enforcement standard (ES) and preventive action limit (PAL) for Alachlor ethane sulfonic acid (Alachlor ESA). In accordance with Wis. Stat. Ch. 160, these proposed amendments to NR 140 groundwater quality standards are based on recommendations from the Department of Health and Family Services (DHFS).

Chapter NR 140 currently contains groundwater standards for 122 substances of public health concern, 8 substances of public welfare concern and 15 indicator parameters. The proposed groundwater standards would apply to all regulated facilities, practices and activities which may impact groundwater quality. Regulated facilities, practices and activities, which are sources of the substances for which groundwater standards are proposed, are, for the most part, likely sources of substances for which groundwater standards already exist. Consequently, there should be few cases where the proposed standards would be exceeded where existing standards are not currently being exceeded. Thus, the Department does not anticipate significant additional costs to the regulated community associated with revising these NR 140 standards. Also, any additional monitoring costs to the regulated community should be minimal, and the workload of state regulatory agencies should not change substantially.

FISCAL IMPACT - Although additional monitoring costs may be imposed upon the state or local government entities that are within the regulated community, the extent of such monitoring and any costs associated with it--while too speculative to quantify at this time--are not expected to be significant. Thus, the Department believes it is unlikely that there will be additional costs to state and local governments resulting from adopting these groundwater standards.

Long-Range Fiscal Implications

None.

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

Fiscal Estimate — 2007 Session

Page 2 Assumptions Narrative Continued

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number

Assumptions Used in Arriving at Fiscal Estimate – Continued

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 140, Wis. Adm. Code

Subject
 Amendments to ch. NR 140, Wis. Adm. Code (Groundwater Quality)

One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):
 None

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		Increased Costs	Decreased Costs
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

	<u>State</u>	<u>Local</u>
Net Change in Costs	\$ _____	\$ _____
Net Change in Revenues	\$ _____	\$ _____

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

**ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
AMENDING RULES**

.....
The Wisconsin Natural Resources Board proposes an order .
to amend NR 140.10 Table 1 and Appendix 1, relating to .
groundwater quality standards .

DG-18-07

.....

Analysis Prepared by the Department of Natural Resources

1. Statutes interpreted: In promulgating this rule, ss. 281.12(1), 281.15, 281.19(1) and 299.11, Stats., and ch. 160, Stats., have been interpreted as authorizing the department to modify and create rules relating to development of numerical groundwater quality standards.

2. Statutory authority: Sections 281.12(1), 281.15, 281.19(1) and 299.11, Stats., and ch. 160, Stats.

3. Explanation of agency authority to promulgate the proposed rules under the statutory authority: Section 281.12(1), Stats., grants the Department the authority to carry out planning, management and regulatory programs necessary to protect, maintain and improve the quality and management of the waters of the state, ground and surface, public and private. Section 281.15, Stats., states that the Department shall promulgate rules setting standards of water quality, applicable to the waters of the state, that protect the public interest, including the protection of public health and welfare, and the present and prospective future use of such waters for public and private water systems. Section 281.19(1), Stats., grants the Department the authority to issue general orders and adopt rules applicable throughout the state for the construction, installation, use and operation of practicable and available systems, methods and means for preventing and abating pollution of the waters of the state.

In accordance with ch. 160, Stats., the reliability of sampling data is to be considered when determining the range of responses that a regulatory agency may take, or require, to address attainment or exceedance of a state groundwater quality standard at an applicable "point of standard application". Section 299.11, Stats., authorizes the Department, in conjunction with the Department of Agriculture Trade and Consumer protection, to establish uniform minimum criteria for laboratories certified to conduct water analysis testing, and to establish accepted methodologies to be followed in conducting tests and sampling protocols and documentation procedures to be followed when collecting water samples for testing.

Chapter 160, Stats., establishes an administrative process for developing numerical state groundwater quality standards to be used as criteria for the protection of public health and welfare by all state groundwater regulatory programs. Chapter 160, Stats., directs the Department to use this administrative process to establish numeric groundwater quality standards for substances of public health or welfare concern, found in, or having a reasonable probability of being detected in, the groundwater resources of the state.

4. Related statute or rule: Chapter 280, Stats., authorizes the Department to prescribe, publish and enforce minimum standards and rules to be pursued in the obtaining of pure drinking water for human consumption. Chapter NR 809, Wis. Adm. Code, establishes minimum state drinking water standards for the protection of public health safety and welfare. This administrative code contains numeric water quality protection standards applicable to public water supply systems in Wisconsin. Wisconsin state

drinking water standards, applicable to public drinking water systems, have not yet been established for Alachlor ethane sulfonic acid (Alachlor-ESA).

5. Plain language analysis of the proposed rule: Chapter 160, Stats., requires the Department to develop numerical groundwater quality standards, consisting of enforcement standards and preventive action limits. Chapter NR 140, Wis. Adm. Code, establishes groundwater standards and creates a framework for implementation of the standards by the Department. The proposed amendments to ch. NR 140 would add groundwater quality standards for one additional substance. In accordance with ch. 160, Stats., amendments to ch. NR 140 groundwater quality standards are based on recommendations from the Department of Health and Family Services. New public health related groundwater quality standards are proposed for Alachlor ethane sulfonic acid (Alachlor-ESA).

6. Summary of and preliminary comparison with any existing or proposed federal regulation: The United States Environmental Protection Agency (US EPA) establishes health based drinking water maximum contaminant levels (MCLs) and health advisory levels (HALs). Federal MCLs are established based on scientific risk assessments and, in some cases, economic and technological considerations. Federal HALs are developed based on established reference doses (RfDs). No federal MCL, HAL or RfD has yet been established for Alachlor-ESA. Alachlor-ESA is currently on the US EPA Contaminant Candidate List (CCL). The CCL is the US EPA's list of unregulated contaminants which may require national drinking water regulation in the future.

7. Comparison of similar rules in adjacent states (Minnesota, Iowa, Illinois and Michigan): The proposed amendments to ch. NR 140, Wis. Adm. Code, would add numeric groundwater quality standards for Alachlor-ESA. The groundwater quality standards contained in ch. NR 140 are used in Wisconsin by state regulatory agencies as state groundwater protection standards. These standards are used as contamination site cleanup levels, design and management criteria for regulated activities and as minimum public health and welfare protection standards for contaminants in groundwater.

The states surrounding Wisconsin - Minnesota, Michigan, Illinois and Iowa, also use groundwater protection standards in their regulation of practices and activities that may impact the quality of groundwater resources. Some of the states surrounding Wisconsin have promulgated individual state groundwater protection standards and some utilize established federal standards (federal drinking water maximum contaminant levels, lifetime health advisory levels and established cancer risk levels) as their state groundwater protection standards.

Groundwater protection quality standards are usually developed based on health risk assessments. States are often required to follow state specific health risk assessment methodology when establishing groundwater protection quality standards. States may use state specific health risk assessment factors and methodology in calculating and developing their groundwater protection standards. This use of different health risk assessment factors and methodologies has led to the establishment of different state groundwater protection standard levels for the same substance. For example, the groundwater protection quality standard for naphthalene used by the states surrounding Wisconsin varies by state - the standard used in Minnesota is 300 parts per billion (ppb), the standard used in Michigan is 520 ppb and the standard used in Iowa is 100 ppb, the federal lifetime health advisory level.

The state of Minnesota has established state groundwater protection "Health Risk Limits" (HRLs) under Minnesota Statutes Section 103H.201. There is no established Minnesota state HRL for Alachlor-ESA. The Minnesota Department of Health has calculated "Health Based Values" (HBVs) for some groundwater contaminants. Minnesota HBVs are not standards that have been promulgated by rule but are calculated concentrations that may be used as advisory levels by Minnesota state groundwater and

environmental protection programs. The Minnesota HBV for Alachlor-ESA is 40 micrograms per liter (ug/L).

The state of Michigan has established state groundwater protection quality standards. Michigan "Drinking Water Criteria and Risk Based Screening Levels (RBSLs)" are Michigan state groundwater protection standards authorized in accordance with Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451 (NREPA). There is no established Michigan Drinking Water Criteria or RBSL for Alachlor-ESA.

The state of Illinois has established state groundwater quality standards for "potable resource groundwater". Illinois Groundwater Quality Standards are state groundwater protection standards promulgated in Illinois 35 Ill. Adm. Code 620 environmental protection regulations. No Illinois state "Groundwater Quality Standards for Class I: Potable Resource Groundwater" have been established for Alachlor-ESA. The state of Illinois also has established "Groundwater Cleanup Objectives". Illinois Groundwater Cleanup Objectives include both Illinois state Groundwater Quality Standards and Human Threshold Toxicant Advisory Concentrations (HTTACs) established in 35 Ill. Adm. Code 620. No Illinois HTTAC has been established for Alachlor-ESA.

The state of Iowa has not established specific state groundwater protection standards. In accordance with Iowa Environmental Protection Regulations 567 IAC Chapter 133, Iowa uses established federal lifetime health advisory levels (HALs), negligible risk levels for carcinogens (NRLs) or drinking water maximum contaminant levels (MCLs) as "Action Levels" in their regulation of practices and activities that may adversely impact groundwater quality. No federal HAL, NRL or MCL has yet been established for Alachlor-ESA.

8. Summary of the factual data and analytical methodologies that the agency used in support of the proposed rule and how any related findings support the regulatory approach chosen for the proposed rule: In accordance with s. 160.07, Stats., the Department is required, for substances of public health concern, to propose rules establishing recommendations from the Department of Health and Family Services (DHFS) as groundwater quality enforcement standards. In accordance with s. 160.15, Stats., the Department is required to establish by rule a preventive action limit for each substance for which an enforcement standard is established.

The DHFS has provided the Department, in a March 2005 (revised August 2005) document titled *Scientific Support Documentation for Cycle 8 Revisions of NR 140.10 Groundwater Enforcement Standard & Preventive Action Limit Recommendations*, it's recommendations for state groundwater quality standards for Alachlor-ESA. In developing their recommendations for state groundwater quality enforcement standards for Alachlor-ESA, DHFS followed the applicable analytical methodologies required under ss. 160.07 and 160.13, Stats.

The Department has proposed rules establishing the DHFS enforcement standard recommendation for Alachlor-ESA as a ch. NR 140, Wis. Adm. Code, state groundwater quality enforcement standard. The Department has proposed rules establishing a ch. NR 140, Wis. Adm. Code, state groundwater quality preventive action limit for Alachlor-ESA in accordance with s. 160.15(1), Stats.

9. Any analysis and supporting documentation that the agency used in support of the agency's determination of the rule's effect on small business under s. 227.114, Stats., or that was used when the agency prepared an economic impact report: In it's determination of the effect of this proposed rule on small businesses the Department used analysis and supporting documentation that included information from the United States Department of Agriculture - National Agricultural Statistics Service (NASS) [NASS agricultural chemical usage reports from 1991 - 2006 and the NASS Agricultural

Chemical Use Database], the University of Wisconsin - Department of Agronomy [UW Dept. of Agronomy Herbicide Price List] and the Wisconsin Department of Agriculture Trade and Consumer Protection (DATCP) [results from DATCP well sampling database].

10. Effects on small business, including how the rule will be enforced: The Department has determined that this rule order will not have a significant economic impact on small businesses. Chapter NR 140, Wis. Adm. Code, currently contains groundwater standards for 122 substances of public health concern, 8 substances of public welfare concern and 15 indicator parameters. The proposed groundwater standard revisions would apply to all regulated facilities, practices and activities which may impact groundwater quality.

The enforcement of Wisconsin state groundwater quality standards is done by state regulatory agencies through their groundwater protection programs. State regulatory agencies, in exercising their statutory powers and duties, establish groundwater protection regulations that assure that regulated facilities and activities will not cause state groundwater quality standards to be exceeded. A state regulatory agency may establish specific design and management criteria to ensure that regulated facilities and activities will not cause the concentration of a substance in groundwater, affected by the facilities or activities, to exceed state groundwater quality enforcement standards or preventive action limits at an applicable "point of standards application" location.

Regulated facilities, practices and activities, which are sources of the substances for which groundwater standards are proposed are, for the most part, likely sources of substances for which groundwater standards already exist. Consequently, there will likely be few cases where the proposed standards will be exceeded where existing standards are not currently being exceeded. Additional monitoring costs may be imposed upon regulated facilities, practices and activities, but the extent of such monitoring and any costs associated with it - while too speculative to quantify at this time - are not expected to be significant.

The proposed revisions to state groundwater quality standards include new standards for Alachlor ethane sulfonic acid (Alachlor-ESA), a degradation product of the herbicide Alachlor. Alachlor is used in Wisconsin mainly as a corn herbicide. Use of Alachlor as a corn herbicide has decreased significantly over the last fourteen years. Usage of Alachlor on corn in 1992 was reported to have been 2,358,000 lbs., or on an estimated 30% of the state "corn acreage". Since 1992 Alachlor use in Wisconsin has steadily decreased. Alachlor use in Wisconsin in 2001 was reported as 215,000 lbs., or on an estimated 3% of the state "corn acreage". Use in 2002 was reported as on less than 1% of state corn acreage, and in 2003 Alachlor use was reported at 172,000 lbs., or on an estimated 3% of state "corn acreage". Alachlor use was reported "Applied on less than one percent" of state corn acreage in 2005, the latest year for which corn crop agricultural chemical use data is available.

There are a number of comparably priced corn herbicide products available to farmers in Wisconsin. Corn herbicide products containing Alachlor are marketed in Wisconsin for use as a preplant incorporated (PPI) or pre-emergence herbicide. The University of Wisconsin (UW) Department of Agronomy *2004 Herbicide Price List* contains price per acre estimates for herbicide products containing Alachlor listed at approximately \$12.80/acre (coarse soil application rate) and \$19.20/acre (medium soil application rate). The UW *2004 Herbicide Price List* contains estimated price per acre listings for 21 PPI/pre-emergence corn herbicide products. The price estimated for these 21 corn herbicide products range between approximately \$10.30/acre (coarse soil application rate) and \$22.30/acre (medium soil application rate).

Results from the Department of Agriculture Trade and Consumer protection (DATCP) well sampling database in July 2005 showed that approximately 20% of the water supply wells tested (historically, 256 of 1,288) were above the proposed Alachlor-ESA groundwater quality preventive action limit of 4 micrograms per liter (ug/L). The DATCP well sampling database also showed that approximately 1% of

the water supply wells tested (historically, 13 of 1,288) were above the proposed Alachlor-ESA groundwater quality enforcement standard level of 20 ug/L.

Because few water supply wells have tested above proposed Alachlor-ESA groundwater standards, and as use of Alachlor has decreased in Wisconsin to relatively low levels, and because there are comparably priced alternatives to Alachlor herbicide products available, the Department has determined that any management practice restrictions placed on Alachlor, to prevent exceedances of state groundwater quality standards for Alachlor-ESA, are unlikely to have a significant economic impact on Wisconsin corn growers.

11. Agency Contact Person: William Phelps, Wisconsin Dept. of Natural Resources, Bureau of Drinking Water & Groundwater, 101 S. Webster St., Madison, WI, 73707-7921; (608) 267-7619; William.Phelps@Wisconsin.gov.

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

SECTION 1. NR 140.10, Table 1 is amended to read:

[Drafters Note: For the sake of clarity only the addition of Alachlor-ESA, which is the subject of this rule, is being shown]

**Table 1
Public Health Groundwater Quality Standards**

Substance¹	Enforcement Standard (micrograms per liter - except as noted)	Preventive Action Limit (micrograms per liter - except as noted)
<u>Alachlor ethane sulfonic acid (Alachlor-ESA)</u>	<u>20</u>	<u>4</u>

SECTION 2. Appendix to Table 1 is amended to read:

[Drafters Note: For the sake of clarity only the addition of Alachlor-ESA, which is the subject of this rule, is being shown]

**CHAPTER NR 140
APPENDIX 1 TO TABLE 1
PUBLIC HEALTH GROUNDWATER QUALITY STANDARDS**

Substance	CAS RN¹	Common synonyms/Tradename²
<u>Alachlor ethane sulfonic acid (Alachlor-ESA)</u>		<u>Alachlor Ethane Sulfonate, MON 5775</u>

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on _____.

The rules 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.

Dated at Madison, Wisconsin _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Scott Hassett, Secretary

(SEAL)