

Johnson, Dan (Legislature)

From: Schuettpelz, Duane H
Sent: Monday, November 10, 2003 4:10 PM
To: Johnson, Dan (Legislature)
Cc: Baker, Bruce J; Heinen, Paul H; Ambs, Todd L; Reichardt, Rick N
Subject: Information on ammonia rule

Dan - Following is some information on the ammonia rule in response to your request to Paul Heinen the other day. I hope this will be helpful to Sen. Kedzie and other to understand the rule and the potential effects on some of the state's lagoon systems. I've also attached a file that contains a list of all the lagoon systems in the state. As noted in the following discussion, not all of these facilities will be required to make modifications to meet these limitations. If you have questions, please contact us. Thanks...

Based on input from a citizen Advisory Committee the rule as proposed contained a variance provision for communities with wastewater lagoons or ponds. Some changes were made to this provision in the final rule.

There are currently 224 WPDES permittees with ammonia limits in their discharge permits. In the past the Department has not included ammonia limits in permits for most wastewater treatment systems using lagoons or ponds. Many of these systems have been in operation for (20-30 years) or longer. Since lagoons/ponds are known to discharge toxic levels of ammonia during cold weather, the Department proposed to limit them similar to other types of treatment facilities. Considering the potential economic impacts that may occur to small communities, the rule contains a provision for a one (five-year) permit term categorical variance for communities that use lagoon/pond technology. Depending upon permit reissuance timing, many communities will have between 5-10 years before ammonia limits will be included in a permit. Considering typical construction compliance schedules, most communities which must significantly upgrade or replace their lagoons/ponds will have between 8 and 13 years before they must achieve ammonia limits.

The Department sent letters to approximately 180 communities that use lagoons/ponds for wastewater treatment to inform them of the public hearings on the rule. The locations of the hearings (Madison, Fond du Lac, Stevens Point, and Barron) were selected for their proximity to a large number of these communities. Representatives of 15 communities with lagoon/ponds attended the hearings. Three of these representatives, plus two private consulting engineers, and the Municipal Environmental Group (an association of over 80 municipalities throughout the State) provided oral or written comments regarding the proposed rule.

After each of the public hearings Department staff conducted informal question and answer sessions. At that time, staff discussed potential ammonia limits for a number of the communities. Many of the community representatives seemed more comfortable with the rule. Based on those sessions it appears that notably fewer facilities will require significant upgrading than the worst case scenario assumed in the Fiscal Estimate. This was also confirmed by a survey conducted by a consulting engineer working in the wastewater field.

In the days subsequent to the public hearings Department staff had discussions with the Municipal Environmental Group (MEG). Based on these discussions, language regarding the lagoon variances was expanded and clarified. MEG spoke in support of adopting the ammonia rule at the October 22 Natural Resources Board meeting.

Wastewater Facilities Sorted by Class of Treatment

Report for Treatment Class LAGOONS/PONDS

<i>FACILITY OWNER</i>	<i>SPECIFIC TREATMENT PROCESSES WITHIN</i>
ALMENA, VILLAGE	AERATED LAGOON(S)
ALMOND, VILLAGE	STABILIZATION POND(S)
AMANI SANITARY DISTRICT	FILL AND DRAW STABILIZATION POND(S)
ANDERSON SANITARY DISTRICT NO. 2	FILL AND DRAW STABILIZATION POND(S)
ARCADIA, CITY	AERATED LAGOON(S)
ARKANSAW SANITARY DISTRICT NO. 1	STABILIZATION POND(S)
ARROWHEAD RESORT CAMPGROUND	AERATED LAGOON(S)
ASHIPPUN SANITARY DISTRICT	AERATED LAGOON(S) POLISHING POND
AUBURNDALE, VILLAGE	FILL AND DRAW POLISHING POND STABILIZATION POND(S)
AURORA SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
BALSAM LAKE, VILLAGE	AERATED LAGOON(S)
BARNEVELD, VILLAGE	AERATED LAGOON(S)
BARRON WASTEWATER TREATMENT COMMISSION	AERATED LAGOON(S)
BAY CITY, VILLAGE	AERATED LAGOON(S)

Monday, November 10, 2003

Page 1 of 16

FACILITY OWNER**SPECIFIC TREATMENT PROCESSES WITHIN**

BELGIUM, VILLAGE	AERATED LAGOON(S)
BELL SANITARY DISTRICT NO. 1	FILL AND DRAW
BIRCHWOOD, VILLAGE	AERATED LAGOON(S)
BOAZ, VILLAGE	STABILIZATION POND(S)
BOSTWICK VALLEY MOBILE HOME PARK	POLISHING POND
BOWLER, VILLAGE	AERATED LAGOON(S)
BOYCEVILLE, VILLAGE	AERATED LAGOON(S) STABILIZATION POND(S)
BRAZEAU SANITARY DISTRICT NO. 1	STABILIZATION POND(S)
BRIGHTON DALE COUNTY PARK	POLISHING POND
BROWNSVILLE, VILLAGE	AERATED LAGOON(S)
BROWNTOWN, VILLAGE	AERATED LAGOON(S)
BRUCE, VILLAGE	AERATED LAGOON(S) FILL AND DRAW
BRULE SANITARY DISTRICT NO. 1	STABILIZATION POND(S)
BRYLEE CORP. DBA CRYSTAL LAKE CAMPGROUND	STABILIZATION POND(S)
BURNETT SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
BUTTE DES MORTS CONSOLIDATED S.D. NO. 1	AERATED LAGOON(S) Solids Settling Basin

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

BUTTERNUT, VILLAGE

STABILIZATION POND(S)

CAMP AMNICON

FILL AND DRAW
STABILIZATION POND(S)

CAROLINE SANITARY DISTRICT NO. 1

FILL AND DRAW
STABILIZATION POND(S)

CASCADE, VILLAGE

AERATED LAGOON(S)

CAZENOVIA, VILLAGE

STABILIZATION POND(S)

CECIL, VILLAGE

POLISHING POND
STABILIZATION POND(S)

CEDAR GROVE, VILLAGE

AERATED LAGOON(S)

CENTURIA, VILLAGE

AERATED LAGOON(S)

CHILI SANITARY DISTRICT NO. 1

FILL AND DRAW

CLARK COUNTY HEALTH CARE CENTER

FILL AND DRAW

CLARKS MILLS SANITARY DISTRICT

AERATED LAGOON(S)
FILL AND DRAW

CLAYTON, VILLAGE

FILL AND DRAW
POLISHING POND
STABILIZATION POND(S)

CLOVER SANITARY DISTRICT NO.1

STABILIZATION POND(S)

CLYMAN, CITY

FILL AND DRAW
STABILIZATION POND(S)

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

COBB, CITY

AERATED LAGOON(S)

COLFAX, VILLAGE

FILL AND DRAW
STABILIZATION POND(S)

COLOMA, VILLAGE

STABILIZATION POND(S)

CONSOLIDATED KOSHKONONG SANITARY DISTRICT

AERATED LAGOON(S)

COON VALLEY, VILLAGE

OTHER

CRANDON, CITY

STABILIZATION POND(S)

CRYSTAL LAKE SANITARY DISTRICT NO. 1

AERATED LAGOON(S)
FILL AND DRAW

CURTISS, VILLAGE

AERATED LAGOON(S)
FILL AND DRAW
POLISHING POND
Solids Settling Basin
STABILIZATION POND(S)

CUSHING SANITARY DISTRICT

FILL AND DRAW
STABILIZATION POND(S)

DALE SANITARY DISTRICT NO. 1

AERATED LAGOON(S)
POLISHING POND

DALLAS, VILLAGE

AERATED LAGOON(S)

DEER PARK, VILLAGE

AERATED LAGOON(S)

DODGE SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

DORCHESTER, VILLAGE

AERATED LAGOON(S)

Monday, November 10, 2003

Page 4 of 16

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

DRUMMOND SANITARY DISTRICT NO. 1

FILL AND DRAW
STABILIZATION POND(S)

EMBARRASS, VILLAGE

FILL AND DRAW
STABILIZATION POND(S)

EMERALD/GLENWOOD SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

EVANSVILLE, CITY

AERATED LAGOON(S)
Solids Settling Basin

FAIRCHILD, VILLAGE

FILL AND DRAW

FAIRWATER, VILLAGE

FILL AND DRAW
POLISHING POND
STABILIZATION POND(S)

FENWOOD, VILLAGE

FILL AND DRAW

FERRYVILLE, VILLAGE

AERATED LAGOON(S)

FIFIELD SANITARY DISTRICT

FILL AND DRAW
STABILIZATION POND(S)

FLAMBEAU CORRECTIONAL CENTER

STABILIZATION POND(S)

FLORENCE UTILITY COMMISSION

AERATED LAGOON(S)

FONTANA/WALWORTH WATER POLLUTION CON

OTHER

? Def.?

FOREST JUNCTION SANITARY DISTRICT

FILL AND DRAW
STABILIZATION POND(S)

FORESTVILLE, VILLAGE

AERATED LAGOON(S)

FACILITY OWNER**SPECIFIC TREATMENT PROCESSES WITHIN**

FOX LAKE WASTEWATER CONTROL COMMISSION	AERATED LAGOON(S)
FRANCIS CREEK, VILLAGE	FILL AND DRAW STABILIZATION POND(S)
FREMONT ORIHULA WOLF RIVER JOINT SEW. COMM.	AERATED LAGOON(S) STABILIZATION POND(S)
FRIESLAND, VILLAGE	STABILIZATION POND(S)
GALESVILLE, CITY	AERATED LAGOON(S)
GIBBSVILLE SANITARY DISTRICT	AERATED LAGOON(S)
GILLETT, CITY	AERATED LAGOON(S)
GILMAN, VILLAGE	AERATED LAGOON(S)
GLEN FLORA, VILLAGE	Solids Settling Basin
GLENWOOD CITY, CITY	AERATED LAGOON(S) OTHER
GLIDDEN SANITARY DISTRICT	STABILIZATION POND(S)
GOETZ ASSOCIATES TRUCKSTOP, INC.	AERATED LAGOON(S) POLISHING POND
GRAND VIEW SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
GRANTON, VILLAGE	AERATED LAGOON(S) FILL AND DRAW
GRANTSBURG, VILLAGE	AERATED LAGOON(S)

<i>FACILITY OWNER</i>	<i>SPECIFIC TREATMENT PROCESSES WITHIN</i>
GREEN LAKE SANITARY DISTRICT	AERATED LAGOON(S)
GRESHAM, VILLAGE	AERATED LAGOON(S)
HAMMOND, VILLAGE	AERATED LAGOON(S) POLISHING POND
HATFIELD SANITARY DISTRICT NO. 1	FILL AND DRAW STABILIZATION POND(S)
HAUGEN, VILLAGE	AERATED LAGOON(S) FILL AND DRAW
HAWKINS, VILLAGE	AERATED LAGOON(S) STABILIZATION POND(S)
HAYWARD, CITY	AERATED LAGOON(S)
HILLPOINT SANITARY DISTRICT	FILL AND DRAW
HIXTON, VILLAGE	STABILIZATION POND(S)
HOLLANDALE, VILLAGE	AERATED LAGOON(S)
HUB-ROCK SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
HUSTISFORD, VILLAGE	AERATED LAGOON(S) STABILIZATION POND(S)
HUSTLER, VILLAGE	FILL AND DRAW
IRON RIDGE, VILLAGE	AERATED LAGOON(S)
IRON RIVER SANITARY DISTRICT NO. 1	FILL AND DRAW STABILIZATION POND(S)

FACILITY OWNER**SPECIFIC TREATMENT PROCESSES WITHIN**

JAMESTOWN SANITARY DISTRICT NO. 3	STABILIZATION POND(S)
JUDA SANITARY DISTRICT NO. 1	STABILIZATION POND(S)
KEKOSKEE, VILLAGE	AERATED LAGOON(S) POLISHING POND
KELLNERSVILLE, VILLAGE	STABILIZATION POND(S)
KINGSTON, VILLAGE	AERATED LAGOON(S) STABILIZATION POND(S)
KNIGHT SANITARY DISTRICT	STABILIZATION POND(S)
KRAKOW SANITARY DISTRICT	POLISHING POND
L E PHILLIPS SCOUT RESERVATION	STABILIZATION POND(S)
LA VALLE, VILLAGE	STABILIZATION POND(S)
LACROSSE MOBILE HOMES BROOKVIEW	OTHER POLISHING POND
LADYSMITH, CITY	AERATED LAGOON(S)
LAKE HOLCOMBE SANITARY DISTRICT NO. 1	OTHER STABILIZATION POND(S)
LAKE NEBAGAMON, VILLAGE	FILL AND DRAW STABILIZATION POND(S)
LAKE WAPOGASSET-BEAR TRAP LAKE SANITARY DISTRICT	AERATED LAGOON(S)
LAKELAND COLLEGE	POLISHING POND

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

LAKELAND SANITARY DISTRICT NO. 1 (BARRON CO.)	STABILIZATION POND(S)
LAONA SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
LARSEN-WINCHESTER SANITARY DISTRICT	FILL AND DRAW STABILIZATION POND(S)
LEBANON SANITARY DISTRICT NO. 1	STABILIZATION POND(S)
LIBERTY SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
LITTLE SUAMICO SANITARY DISTRICT NO. 1	FILL AND DRAW POLISHING POND STABILIZATION POND(S)
LOGANVILLE, VILLAGE	STABILIZATION POND(S)
LONE ROCK, VILLAGE	AERATED LAGOON(S) POLISHING POND
LOWELL, VILLAGE	STABILIZATION POND(S)
LOYAL, CITY	AERATED LAGOON(S)
LUBLIN, VILLAGE	STABILIZATION POND(S)
LUCK, VILLAGE	AERATED LAGOON(S)
MADLINE ISLAND SANITARY DISTRICT	AERATED LAGOON(S)
MADISON METROPOLITAN SEWERAGE DISTRICT	OTHER
MAIDEN ROCK, VILLAGE	AERATED LAGOON(S) FILL AND DRAW

FACILITY OWNER***SPECIFIC TREATMENT PROCESSES WITHIN***

MAPLE LANE HEALTH CARE FACILITY	STABILIZATION POND(S)
MAPLE SCHOOL DISTRICT	Solids Settling Basin STABILIZATION POND(S)
MATTOON, VILLAGE	STABILIZATION POND(S)
MAUSTON, CITY	AERATED LAGOON(S)
MELLEN, CITY	AERATED LAGOON(S)
MELROSE, VILLAGE	AERATED LAGOON(S)
MERRILLAN, VILLAGE	AERATED LAGOON(S)
MILAN SANITARY DISTRICT	AERATED LAGOON(S)
MILLTOWN, VILLAGE	AERATED LAGOON(S)
MILWAUKEE METROPOLITAN SEWERAGE DISTRICT	OTHER
MINDORO SANITARY DISTRICT NO. 1	AERATED LAGOON(S) FILL AND DRAW
MINERAL POINT, CITY	POLISHING POND
MINONG, VILLAGE	AERATED LAGOON(S)
MISHICOT, VILLAGE	AERATED LAGOON(S) OTHER POLISHING POND
MONTREAL, CITY	AERATED LAGOON(S)

FACILITY OWNER***SPECIFIC TREATMENT PROCESSES WITHIN***

MUSCODA, VILLAGE

AERATED LAGOON(S)
Solids Settling Basin

NEW AUBURN, VILLAGE

AERATED LAGOON(S)

NORTH BEND SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

NORTH FREEDOM, VILLAGE

STABILIZATION POND(S)

NORTH LAKE POYGAN SANITARY DISTRICT

POLISHING POND

O'DELLS BAY SANITARY DISTRICT NO. 1

AERATED LAGOON(S)

OGEMA SANITARY DISTRICT

FILL AND DRAW

OXFORD, VILLAGE

STABILIZATION POND(S)

PALMYRA, VILLAGE

AERATED LAGOON(S)
Solids Settling Basin

PARDEEVILLE, VILLAGE

AERATED LAGOON(S)
POLISHING POND
STABILIZATION POND(S)

PARK FALLS, CITY

AERATED LAGOON(S)

PHELPS SANITARY DISTRICT NO. 1

AERATED LAGOON(S)

PIKES BAY SANITARY DISTRICT

AERATED LAGOON(S)

PLAINFIELD, VILLAGE

FILL AND DRAW

PLYMOUTH SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

POPLAR, VILLAGE

AERATED LAGOON(S)
POLISHING POND

PORT WING SANITARY DISTRICT

FILL AND DRAW
STABILIZATION POND(S)

POYGAN POYSIPPI SANITARY DISTRICT NO. 1

AERATED LAGOON(S)

PRAIRIE FARM, VILLAGE

POLISHING POND

PRINCETON, CITY

AERATED LAGOON(S)
POLISHING POND

REESEVILLE, VILLAGE

AERATED LAGOON(S)

RICHMOND SANITARY DISTRICT NO. 1 (STAR PRAIRIE)

STABILIZATION POND(S)

RIDGELAND, VILLAGE

FILL AND DRAW
STABILIZATION POND(S)

RIO, VILLAGE

AERATED LAGOON(S)

ROCK SPRINGS, VILLAGE

STABILIZATION POND(S)

ROCKLAND SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

ROSHOLT, VILLAGE

AERATED LAGOON(S)

ROZELLVILLE SANITARY DISTRICT NO. 1

FILL AND DRAW
STABILIZATION POND(S)

RUDOLPH, VILLAGE

AERATED LAGOON(S)

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

SAINT CLOUD, VILLAGE

AERATED LAGOON(S)
FILL AND DRAW
POLISHING POND

SAND CREEK SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

SANGER B POWERS

POLISHING POND
STABILIZATION POND(S)

SAUK CO. HEALTH CARE CENTER

AERATED LAGOON(S)
FILL AND DRAW
POLISHING POND

SAUK-PRAIRIE SEWERAGE COMMISSION

AERATED LAGOON(S)
POLISHING POND

SAXON SANITARY DISTRICT NO. 1

FILL AND DRAW
STABILIZATION POND(S)

SCANDINAVIA, VILLAGE

STABILIZATION POND(S)

SCHOOL DISTRICT OF SUPERIOR

FILL AND DRAW
STABILIZATION POND(S)

SEVASTOPOL SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

SEXTONVILLE SANITARY DISTRICT NO. 1

STABILIZATION POND(S)

SHELL LAKE, CITY

AERATED LAGOON(S)

SHERWOOD, VILLAGE

POLISHING POND

SIREN, VILLAGE

AERATED LAGOON(S)

SOLOM SPRINGS, VILLAGE

FILL AND DRAW
STABILIZATION POND(S)

FACILITY OWNER**SPECIFIC TREATMENT PROCESSES WITHIN**

SPOONER, CITY	AERATED LAGOON(S)
ST. BEDES MONASTERY	FILL AND DRAW
ST. CROIX MEADOWS MOBILE HOME PARK	AERATED LAGOON(S) FILL AND DRAW POLISHING POND
STAR PRAIRIE, VILLAGE	STABILIZATION POND(S)
STETSONVILLE, VILLAGE	AERATED LAGOON(S)
STODDARD, VILLAGE	AERATED LAGOON(S)
STONE LAKE SANITARY DISTRICT	STABILIZATION POND(S)
SUPERIOR, VILLAGE	STABILIZATION POND(S)
TAYLOR, VILLAGE	FILL AND DRAW STABILIZATION POND(S)
TELEMARK RESORT	POLISHING POND
THORP, CITY	AERATED LAGOON(S) FILL AND DRAW
TONY, VILLAGE	STABILIZATION POND(S)
TURTLE LAKE, VILLAGE	AERATED LAGOON(S) FILL AND DRAW
UNITY, VILLAGE	AERATED LAGOON(S)
UPPER MIDWEST ENVIRONMENTAL SCIENCES CENTER	POLISHING POND STABILIZATION POND(S)

Monday, November 10, 2003

Page 14 of 16

FACILITY OWNER**SPECIFIC TREATMENT PROCESSES WITHIN**

VESPER, VILLAGE	AERATED LAGOON(S)
VIOLA, VILLAGE	AERATED LAGOON(S)
WABENO SANITARY DISTRICT NO. 1	AERATED LAGOON(S)
WARRENS, VILLAGE	STABILIZATION POND(S)
WAUMANDEE SANITARY DISTRICT NO. 1	FILL AND DRAW POLISHING POND STABILIZATION POND(S)
WEBSTER, VILLAGE	STABILIZATION POND(S)
WESTBORO SANITARY DISTRICT NO. 1	Solids Settling Basin
WEYERHAUESER, VILLAGE	STABILIZATION POND(S)
WHEELER, VILLAGE	AERATED LAGOON(S)
WHITE LAKE, VILLAGE	STABILIZATION POND(S)
WI AIR NATIONAL GUARD	AERATED LAGOON(S)
WI DNR LONG LAKE RECREATION AREA	STABILIZATION POND(S)
WI DNR PATTISON STATE PARK	Solids Settling Basin
WILD ROSE, VILLAGE	AERATED LAGOON(S)
WILSON, VILLAGE	AERATED LAGOON(S) FILL AND DRAW
WILTON, VILLAGE	AERATED LAGOON(S) POLISHING POND

FACILITY OWNER

SPECIFIC TREATMENT PROCESSES WITHIN

WINTER, VILLAGE

STABILIZATION POND(S)

WITTENBERG, VILLAGE

AERATED LAGOON(S)

WOODVILLE, VILLAGE

AERATED LAGOON(S)

FILL AND DRAW

POLISHING POND

STABILIZATION POND(S)

WRIGHTSTOWN SANITARY DISTRICT NO. 2

AERATED LAGOON(S)

FILL AND DRAW

STABILIZATION POND(S)

WYOCENA, VILLAGE

AERATED LAGOON(S)

Total Number of 226

CR 03-050, relating to the regulation of discharges of ammonia to surface waters of the state and relating to other minor corrections to errors in chapters NR 105 and 106

*warmer water
ammonia more
toxic*

The rule adds ammonia criteria to NR 105 and implementation procedures to NR 106. NR 105 and 106 address the discharge of toxic substances to surface waters. The rule will update the discharge of ammonia from industrial and municipal wastewater treatment plants.

*Adopted
1999 EPA
Criteria*

APPLICABILITY

The rule could have an impact on small communities that use stabilization ponds or aerated lagoons for wastewater treatment. It is estimated that about 60 publicly or privately owned ponds or lagoons many potentially receive ammonia for the first time.

Thus, the rule was modified to include a one-time categorical variance for pond and lagoon systems, in order to address the potential impact on small communities. The variance will offer a 5-year period starting at the next permit re-issuance to allow the permittee an opportunity to evaluate the treatment system and methods to achieve compliance with the ammonia limits. After such time, the permittee will need to upgrade to meet the new limits or pursue an "individual variance" to the ammonia limits.

IMPACT

Under a worst-case scenario, the rule could result in an increase of costs for cities and villages anywhere from \$7.5 to \$9 million. However, that increase can be reduced wither through the variance process or through operational changes and retrofits. Businesses that send their wastewater to a municipal system for treatment may experience indirect rate increases if the municipality has to upgrade the system.

*nitrogen
eliminate
ammonia*

Domestic wastewater ponds biggest impact

HEARINGS

Several public hearings were held in July 2003 and seven municipal officials from various small communities appeared in opposition. Only one person appeared in support and about 15 or so appeared "as interest".

CR 03-067, relating to arsenic in public water systems

In January 2001, US EPA adopted a new drinking standard for arsenic of .01 mpl, replacing the old standard of .050 mpl. Public water systems must comply with the new standard by January 2006.

State law requires DNR to adopt rules at least as stringent as the federal rules. The proposed rules are consistent with the federal rules.

APPLICABILITY

These standards would apply to all regulated facilities, practices and activities that may impact groundwater quality. But, the DNR does not anticipate any significant additional costs to those entities.

IMPACT

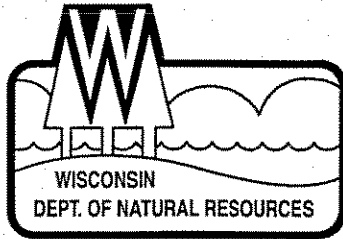
This rule will apply to non-transient, non-community water systems, which are currently not subject to standards for arsenic. There are about 80 water systems that could potentially have to take actions to reduce arsenic. The biggest impact of this rule will be on small systems.

\$3.4 million total cost to all systems

- \$262,000 to non-municipal
- \$3.1 million to non-transient non-community systems

HEARINGS

A videoconference public hearing was held in August 2003 and no one appeared in support or opposition. No modifications were made.



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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Testimony Before the Senate Committee on Environment and Natural Resources November 20, 2003

Good morning, I am Duane Schuettpelz, Chief of the Wastewater Permits and Pretreatment Section in the Bureau of Watershed Management at the DNR and am pleased to be here to provide information on Clearinghouse Rule 03-050. This rule package revises portions of chapters NR 104, NR 105, NR 106 and NR 210 of the Wis. Adm. Code pertaining to water quality standards for ammonia nitrogen. In addition, this package incorporates several typographical and editorial corrections to NR 105 and NR 106.

I have provided a copy of my testimony and will briefly summarize this information and then, along with other colleagues in the Department who have worked on developing this rule, be available to answer questions you may have. The Natural Resources Board approved adoption of these rule revisions at their meeting on October 22, 2003.

Background:

- Ammonia is a substance in many wastewaters, especially sewage from municipalities, and it is toxic to fish and other aquatic life.
- The Department has, on a case-by-case basis, been regulating ammonia in wastewater since the middle 1970s; 224 municipalities have ammonia effluent limits in their WPDES permit.
- Effluent limitations in WPDES permits have been based on U.S. EPA ammonia criteria (as adapted for Wisconsin in 1980) in conformance with the "no toxic discharge" policy in section 283.001(1)(c) of the Statutes and the narrative water quality standard requirement in NR 102.
- Formed Advisory Committee in 1995 (See member list attached).
- December 1999 - EPA issued Update of Ambient Water Quality Criteria for Ammonia.
- The Natural Resources Board authorized these rules for hearing in May 2003. Hearings were held in July in Barron, Fond du Lac, Stevens Point and Madison. The hearings were held primarily at locations that have proximity to a significant number of lagoon systems in the state. See later parts of this testimony. Thirty people attended the hearings and provided 4 oral comments; 3 additional written comments were received.

Final Rules:

- Incorporate the 1999 U.S. EPA Criteria; adjustments made to reflect Wisconsin species and our system for classifying waters under the water quality standards.
- Criteria are established for acute, 4-day chronic, and 30-day chronic exposures; current protocol has no acute and only a 4-day chronic criteria.
- Acute criteria are pH dependent; the higher the pH, the more toxic.
- Chronic criteria are pH and temperature dependent; the higher the pH and temperature, the more toxic.
- Criteria are determined for different waterbody categories (coldwater, warmwater, limited forage fish, & limited aquatic life).
- As established in the EPA criteria, more stringent criteria are proposed for periods when the early life stages (ELS) of fish are present, and alternative criteria may be established when burbot are present and spawning (this species spawns in the winter months).
- In general, the proposed criteria are less restrictive than present criteria, but provide the same level of protection.
- Under existing protocols for other toxic substances, we use 25 per cent of the low flow of the receiving stream or river as the mixing amount to calculate limitations for aquatic life protection. Because ammonia more readily decays or converts to other forms in warmer temperature, this proposal implements a seasonably variable flow from 25% of low stream flow in winter to 100% in summer.
- Most of the 224 facilities that currently have ammonia limits will be capable of achieving limits without modifications to the treatment facilities; in many cases, the limits are less restrictive.
- Treatment plants that are not lagoons and do not have limits under existing protocol will likely be able to achieve new limits with, at most, only minor upgrading.
- The rule contains a one-permit term "categorical variance" for domestic wastewater ponds and lagoons; evaluate the treatment system and methods of achieving compliance. The subsequent permit would contain a compliance schedule, if appropriate, for achieving limits within that second 5-year permit term. I would note that a site-specific statutory variance under section 283.15, Stats., could be granted at the time of this second permit.
- Implementation of the rule will be to incorporate new limits into WPDES permits as they come up for reissuance on a 5 year rotating schedule. This new rule will also be used to

establish limitations for all new permittees and permittees that propose to replace wastewater treatment facilities for other reasons (e.g., to increase flow capacity).

Significant Issues and Responses:

- Many small community permittees using stabilization ponds and aerated lagoons likely will not be able to achieve ammonia limits (approximately 150-160 such facilities in the state), although some lagoon systems may be able to meet limitations with operational changes.
 - Response: These systems have not been required to attain nontoxic levels since many of them were constructed 20 or more years ago. We believe it is time to bring these systems up to the standards necessary to protect fish and aquatic life similar to other wastewater treatment systems. Based on comments from some permittees, we believe that attainment of the limits can be achieved at a significant number of these facilities with operational modifications, rather than complete system replacements. The rule effectively allows a significant phase-in period for these facilities over the next 8 to 13 years.
- Concern has been expressed that attainment of the limits cannot be achieved without the addition of chemicals for pH adjustment, creating additional expense and risk.
 - Response: Most existing plants that practice pH adjustment use carbon dioxide for control which has less risk than acid addition. Additionally, high effluent values are lowered in the nitrification treatment process, thereby possibly eliminating the need for any additional pH treatment at all.
- U.S. EPA has indicated that new toxicological data indicates there may be a need for more restrictive criteria to protect certain types of mussels.
 - Response: This data has not been peer reviewed and, therefore, it is not appropriate to use in water quality standards at this time.

Summary:

We believe these rules close a significant gap in our current regulation of the discharge of toxic substances to surface waters. They incorporate the most recent scientific information on the toxicity of ammonia, as determined by U.S. EPA. They also establish consistent procedures for calculating effluent limitations and, thereby, provide certainty to permittees that have ammonia nitrogen in their discharges. The variance process we have created for lagoon systems will also provide an opportunity for potentially affected permittees to undertake the necessary review and planning for modified or new treatment facilities over a period of several years.

Thank you for the opportunity to provide comments.

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- Why such a
steep decline
50 ppt to 10 ppt

- What about Wankaha